A THEORY OF CONSCIOUSNESS AND THE SELF

Edward Moss
A THEORY OF CONSCIOUSNESS AND THE SELF

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CORRIGENDA

Lines Omitted or Repeated

On p. 80, after the third line of the section summary, insert:

"order predicative cycle and a higher"

On p. 219 insert section summary as follows:

"The mind appears to weight the alternatives with which it is faced with a positive or negative charge of emotion and to balance these weightings against each other."

On p. 337, after "it comes to the" at the beginning of the fourth line of the first paragraph, insert the following:

"conscious processes of decision, a man may find in the nature of Christ and the"

On p. 402 delete line 23, beginning "space and time", also lines 24, 25, 26, 27 and 28 up to and including "trajectory in".

Other Corrections

On p. 384 the short paragraph of one sentence beginning "Having made this classification..." should form the last paragraph of the preceding section instead of being the first paragraph of the section headed "Our Idea of the Natural World", which begins on this page.

On p. 404 delete the first seventeen words of the paragraph beginning "Having said this...", which should now start with the words "Let me now begin by taking..."
On p. 161 at the end of the first sentence of the paragraph beginning at the bottom of the page delete the words "considered as an object".

On p. 164 in the fourth line from the bottom of the page delete the words "or anthropology" and insert at the end of the line the words "including anthropology, ".

On p. 180 in the fourth line from the bottom of the page delete the words "external measurements" and substitute "different types of behavioural output".

On p. 415 amend the sentence beginning "It may therefore..." in the fourth line from the bottom of the page to read: "It may therefore be called a face or, as I have suggested earlier, a profile."

On p. 416 in the first line of the page delete the words "personality like a new mask" and substitute "Profile as an accretion to the shape it presents,".
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ADDENDA

On p. 96 insert the following footnote to the paragraph ending in the middle of the page (replacing the deleted footnote):

"1. Cf. Michel Foucault "Les Mots et les Choses" (Gallimard 1966) pp. 96 ff., including the statement on p.97 that: "General grammar is the study of verbal order in its relationship to the simultaneity which it has the task of representing. Its proper object is therefore neither thought nor language: but discourse understood as a succession of verbal signs. This succession is artificial in relation to the simultaneity of representations and to this extent language is to thought as that which has been the object of reflection is to that which is immediate."

On p. 107 insert the following footnote to the central paragraph:

"2. There is a link here to the arguments of Wittgenstein in the "Philosophical Investigations", for example his dictum: "Uttering a word is like striking a note on the keyboard of the imagination"; or again "... you can elucitate all the ramified associations struck by each of the words." ("Philosophical Investigations", Blackwell 1953, p. 4 and p.219.) A detailed examination and critique of Wittgenstein's views on language would however go beyond the scope of this study."

On p. 117 insert the following addition to the existing footnote:

"There is some experimental evidence that learning can take place at an unconscious level: for example the eye can be conditioned to blink at a light signal without any intervention of consciousness; similarly we can learn motor skills like playing a piano or riding a bicycle without necessarily being aware at any time of the precise details of what we are doing. (The evidence is cited and discussed in e.g. Julian Jaynes "The Origin of Consciousness in the Breakdown of the Bicameral Mind": 1976, U.K. edition Penguin Books 1979 pp. 31-36.) These cases are however covered, in my view, by the theory of focal attention and subordinate complexity developed in the section beginning on p. 122 below of this study. The learning does not take place without consciousness, though the consciousness is not isolated and explicit: our awareness of the relevant elements of the relevant predications of consciousness, as with all our awareness of qualities, involves a sense of the simultaneous precipitate of many contributing elements, none of which however are individually identified and brought to the focus of attention. We learn new skills by habituating ourselves to what "feels right", without any consciousness of the many details of our behaviour which contribute to the rightness or wrongness of a given "feel" in a given purposive situation."
On p. 130 insert the following at the end of the section, after "logical space."

"In effect it is round this metaphor that the space itself is synthesized and the number of its dimensions determined."

On p. 164 insert the following as a footnote to the sentence ending "... of reflection." on the ninth line from the bottom of the page:

"1. Cf. the definitions given by Sir Edmund Leach in the field of social anthropology. "In the language of social anthropology person is sharply distinguished from individual. The individual is a living biological animal who is born, develops to maturity, grows old and dies; the person is the set of offices and roles which attach to the individual at any particular stage in his life career." ("Social Anthropology", Fontana 1982, p. 149.)"

On p. 219 insert the words "or behaviour" at the end of the sentence at present ending with "... and information! on the eighth line of the page.

On p. 438 insert the following as a footnote to the first sentence ending on the page:

"1. The following sentences by Dr. John Polkinghorne (a particle physicist and F.R.S.) are relevant: "In very general terms it is not difficult to imagine that pattern recreated (the body resurrected) in some other world. If you like, the mathematical apparatus of projection from one space to another provides a logical basis for such a thought. In this way we perceive the possibility of continuity without material identity. Of course there are a great many puzzles of detail about this blithe suggestion... One might begin to grope at speculative notions which might provide some shadowy clues to surmounting these difficulties. I think that activity would almost certainly be a waste of time because we do not have enough knowledge on which to ground it." ("The Way the World Is: The Christian Perspective of a Scientist", Triangle SPCK, 1983 p. 93.)"

After p. 448 insert the following paragraph:

"The basic weakness in Mead's theory that the Self becomes "an individual reflection of the general system" is, I suggest, that he confuses the medium with the message. We take in from our social environment not only a verbal language, but also a macro-language, a whole set of ideas in terms of which we divide up the world and put together our understandings and intentions. Indeed strictly we take in not merely one macro-language - or thought currency - but many partially overlapping thought currencies, which correspond to the set of differentiated thought communities to which the individual happens to belong. These provide the terms in which an individual will think, plan and choose, creating himself in some sense as he does so. But they do not determine what he becomes. They help to define the range of what is conceivable and hence possible to him when he is faced with a decision in a given situation; but the decision and the resulting actuality is his. They provide the medium; he writes the message. Mead himself says that "all selves are constituted by or in terms of the social process"; but he seems to run these two alternatives
together: it seems to have escaped him that there is an immense difference between them."

On p. 6, after the twelfth line from the bottom of the page, ending "... its input is" insert the words "matter/energy and".
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Preface

My chief purpose in this study is to reach a clear view of what we mean by the Self. There are many ambiguities in our ordinary uses of this word, and it might therefore seem appropriate to begin the study with definitions and philosophical argument. However the approach I have adopted is rather that of a descriptive, phenomenalist psychology, an attempt to describe in as coherent and comprehensive a way as possible what happens in consciousness and where and how the Self emerges.

In practice this means that I have to begin with a description of the organism in its environment in order to provide a framework for the subsequent analysis of consciousness, and in particular to establish the key concepts of information, coding, behaviour and consciousness itself. Next I try to provide a broadly comprehensive account of the processes of conscious life — otherwise of the mind — including the central processes of purposive thought, decision and action. In the course of this exploration it becomes clear that a determining part in these processes is played by the idea which each of us forms of himself or herself. The three central chapters of the study are therefore taken up with a closer examination of this feature. The first of them deals with how it is built up and works, while the second and third deal with the question of how we can establish when it is working well or not. These two chapters represent an examination of the concept of coherence and wholeness in the idea of the Self, of how it is created and sustained, of the imperfections of this wholeness and of what can be done about them. This leads into the area of ethics, of healing, and of the psychological aspect of religion.

Finally, in the last chapter, "The Idea and the Reality", I try, on the basis of the preceding analysis, to deal with some of the philosophical problems which inevitably arise when any comprehensive
account of the Self is attempted. Can we equate the mind's idea of the Self, which is the subject of the central analysis of this study, with the true Self? If not, what is the true Self? In what sense, if any, can the Self be said to be free? If the Self is free, what can we say about the use of freedom, which is responsibility? And what ultimately becomes of the Self? I cannot claim to provide definitive answers to these profound and perennial questions, nor to review all of the immense literature which has gathered round them. But I try to present them in a framework derived from the preceding enquiry, and to suggest a possible approach to them which is coherent with the rest of the study.

Some of these questions go beyond science and natural philosophy into the field of religion. Insofar as I touch upon the psychology of religion, I do so from the inside as a believing Christian. I do not apologise therefore for the fact that in some of the later sections of the study I include some suggestions about a possible Christian interpretation of the nature and destiny of the Self. In doing so I am not departing from the rational and objective purpose of the study; rather I am trying to show how a Christian view can be seen to fit on to the preceding argument and, in its own fashion, to reinforce and complete it.
INTRODUCTION

A Comment on Theories and Models of Man

One of the most striking contributions to a recent symposium on "Models of Man" was a paper by D.E. Broadbent in which he attacked all attempts to build up wide-ranging models of human nature. Complex and detailed theories, he argued, do not get tested at the really crucial points; and if data are found that contradict them it is too easy to add yet a further complexity and to go on believing in the theory.

Anyone who tries to set up a detailed model at the present day is like a Babylonian trying to guess the details of Einstein's relativity theory in advance of the millennia of observations which have eliminated all kinds of other types of theory. Before setting up a highly complex model incorporating a large number of assumptions, it is better first to test simpler antitheses and see which class of model is more probable.

The state of knowledge at any one time is consistent with some models and inconsistent with others. The rate of reduction of the unknown set is fastest if every experiment decides between equally probable sets of models. "If the experiment can have only two outcomes, which is often true in psychology, this means that one can only test between two broad classes of theory, and this means that the theories are going to be very simple indeed. Such a procedure may look less sophisticated than the writing of a highly speculative model, it is however a quicker way to get to the truth in the end." It is an essential part of Broadbent's sceptical approach that we should expect to use different frameworks for different purposes so long as they are not contradictory. Admittedly each of us needs a wide-ranging philosophy of life; but in Broadbent's view "any claim to base a philosophy of life on current psychological knowledge is fraudulent, because our knowledge is still consistent with many models. We should look outside psychology for a viable philosophy."

Broadbent's view is powerfully expressed and it is one that must be faced if I am to justify the present enterprise, which is nothing if not an attempt to build up one part of a wide-ranging but unified theory.

of man. In defending a contrary position my first step must be a direct denial of Broadbent's suggestion that it is possible to have a viable philosophy of life which is outside psychology. Any viable and relevant philosophy must include important assumptions concerning human nature; and while it may well be impossible to derive such assumptions confidently from the body of knowledge that psychologists have accumulated so far, it remains essential, first of all, to reject assumptions which are inconsistent with carefully established facts, and, secondly, to be aware of the important constraining effect which any seriously held philosophy of life must have on the ways in which human nature can be conceived at all. It does not follow from this that a true scientist's philosophy is to have no philosophy; for as T.S. Eliot said — and I have used his argument in the opening paragraph of this study — "to understand anything is to understand from a point of view". As Martin Hollis puts it more controversially in his book also called "Models of Man"1, "we must know what is rational a priori before we can know what is actual". As Michael Polanyi says in the course of his exhaustive discussion of personal knowledge, "the formalisation of meaning relies... from the start on the practice of unformalised meaning".2 The scientist must have the humility to accept the facts when they seem to disprove his theory. But he cannot begin without a theory at all, since without some theoretical perspective he cannot identify the facts he is talking about; nor can he limit himself to mini-theories about relatively trivial problems; for even his mini-theories can only have their being in some wider intellectual perspective. The scientist is also a human being.

There is another fallacy, I would suggest, to be identified in Broadbent's argument, specifically in his view that a wide-ranging model is of little use because our knowledge is consistent with so many different broad models. It follows from this, he suggests, that only on the smallest scale is it possible to conduct a proper elimination contest between theories. Certainly there is weight in this view, particularly in the point that when a complex theory is confronted with unwelcome facts it is all too easy to keep it going simply by adding some further complexity to make it fit the new facts.

But Broadbent ignores a significant counter-argument, namely that a truly wide-ranging model must touch reality at a whole series of different points and the very fact that it can bring a whole range of disparate phenomena into a single, coherent set of relationships is evidence that it meets an important criterion of viability. If it proves possible to construct a general theory of grammar which, with appropriate adjustments, can cover both perception and thought on the one hand and music on the other, as well as language itself, the achievement is likely to be rather more than a trivial contrivance. When new facts are discovered, a model may indeed have to be adjusted, but even a major adjustment is not necessarily totally destructive. Einstein did not destroy the validity and practical usefulness of Newton's conclusions, at least over a very wide range of their applicability; instead he produced a totally new perspective which effectively included the Newtonian scheme of things, though with a new understanding of it and a new delimitation of its range. It is of course fair to point out that the state of our knowledge in the field of psychology is far different from what it is in the field of the physical sciences, but, as I have argued already, even as relative Babylonians we still cannot simply do without any broad perspectives.

In effect I believe Broadbent would be right to argue that it is delusive to try to create a single, highly elaborated model on a single level, capable of explaining all the phenomena of human nature; but what he fails to bring out is that in practice we use a hierarchy of models working on different levels but related together. Thus we can have a set of disparate models at the detailed level so long as they fit into more generalised models at higher levels. This goes beyond saying that they must be non-contradictory. Georges Thines, one of the contributors to the same symposium, remarks that "models may equally concern general frameworks and specific subfields within them"; but the link between the subfield model and the generalised, higher level model can be quite loose, while there need be no direct linkage at all between the models we use for different subfields.

This idea of a loosely integrated hierarchy of models is developed, though not quite in the terms I have used, by P.B. Warr
in one of his contributions to "Models of Man". Warr points out that "conceptual frameworks", "paradigms", "theories" and "models" (he could have added "hypotheses" as well) all act as conceptual sieves or moulds, excluding from thought a large number of options and at the same time guiding thought about the material that is allowed to pass. We tend, however, to reserve "conceptual framework" and similar phrases for the widest and most general principles of interpretation, while "paradigms", "theories" and "models" tend to represent conceptual sieves and moulds at descending levels of generality. (I have some reservations about Warr's use of "sieves and moulds" as the generic term; I prefer "models" in that role, since I would argue that to understand anything, including a sentence, involves bringing forms together in such a way that they construct a more complex form; but in the present context this is no more than a matter of terminology.)

Although the existence of these different words with different shades of meaning, particularly in specific contexts, does not imply that there is any sharp difference of kind between their referents, the fact that we possess such distinctions reflects, I believe, the fact that in any specific case, for good practical reasons, we tend to use conceptual tools of this kind in hierarchical linkage at different levels of generality. This is what Warr implies when he distinguishes theories from metatheoretical positions and notes that two limited theories within different metatheoretical structures (which are therefore, as I would suggest, not unified in a single hierarchy of generalisation) "can be quite incapable of interbreeding". He questions "how far one can generate comprehensive theoretical accounts merely by attempting to expand miniature theories... The gradual expansion of a restricted model changes its nature in ways which point up the wider inadequacy of both the original and the expanded model" (pp. 302-3). He notes that conceptual frameworks in science are generally not in themselves predictive and "this suggests that there is a gap between the miniature theory and the wide-ranging conceptualisation which cannot be bridged by ever-broadening inductive reasoning or empirical study" (p.304). Comprehensive metatheoretical structures "are not usually articulated", he says, "as potential explanatory systems in their own right. Such an articulation requires more detailed consideration
of the nature of wide-ranging frameworks and how they might be extended in top-down fashion to embrace miniature theories and their empirical referents" (p. 304).

This analysis suggests, I believe, the lines on which an adequate answer to Broadbent's challenge could be developed. I shall not attempt to develop it in detail here; but more relevant to my immediate purpose is the fact that such an analysis may also help to explain the pattern and nature of the present study. In the first chapter, "The Organism and its Environment", I present what Warr might call a conceptual framework, based on the general theory of living systems as developed by W.R. Ashby and James G. Miller, among others. In the second chapter, "A Model of the Mind", I develop what Warr would probably call a theory of the mind. This fits into the wider conceptual framework insofar as it is based on the idea of the mind as the regulator of a living system; but it is essentially an independent scheme at a much more detailed and specific level of generalisation. The third chapter, "The Idea of the Self in Construction and Action", develops yet a further model at a more detailed and specific level still, again taking one element of the theory established in the preceding chapter, namely the idea of the Self, and working out a scheme which fits into the higher level structure but is itself largely independent of it. It is significant that the model at the lower, more detailed level can in each case be abandoned without affecting the viability of the model at the level above; but the higher level theory or conceptual framework cannot be abandoned without destroying what has been constructed at the lower level - though no doubt something can always be salvaged from the wreck by reconstructing it to fit into some different metatheoretical structure.

These considerations will, I hope, serve to clarify the status of the theories developed in this study and to indicate the lines on which I would justify the value and relevance of attempting so elaborate and, in a sense, so speculative a task. As it happens, the ideas of the mind and the Self set forth in this study form part of a still wider-ranging enterprise, which consists of six related studies dealing
respectively with perception, thought, language, personality, social interaction and the just society, in a scheme designed to bring the phenomena of human nature into one unified perspective. Such an undertaking can make sense to me because, unlike Broadbent, I believe that it is possible to construct a rational, coherent philosophy of life which, while it is more than a theory of psychology, yet has deep roots in psychological reality.
To understand something and so to form a clear and distinct idea of it in the Cartesian sense, we need to know what it is made of, how it works, and how it fits in with other things. That is to say, we are concerned to establish its structure, its internal processes and its input and output. If we are dealing with something located but unknown, a black box, we need logically to begin with its input and output, the third of these requisites. We are concerned in this study with an organism in an environment and we need to establish first the terms in which we are to conceive of these two entities and the relationship between them. What kind of world are we dealing with and, within that world, what is an organism, a living system? These are the preliminary questions to be considered in this opening chapter.

As the foregoing suggests, this chapter is not part of my central argument, but rather a preliminary statement of assumptions, a necessary clearing of the ground; and this must be my defence if it seems to contain a high proportion of general statements without much detailed discussion of alternative views. It is not my intention to go into these matters in great detail, but I believe it is essential to establish the ultimate perspective within which we are working if later confusion is to be avoided. For we have to choose a perspective. In T.S. Eliot's words "to understand anything is to understand from a point of view". Beyond this, if we are to investigate how an adapting organism comes to be possessed of information about the world and to make use of it in purposeful behaviour, we have a requirement to establish the broad terms in which the world can be known and operated upon.

Regulation and Self-Regulation

An exploration of what we mean by rule and law in nature, by a regulated system, by possibility and actuality, by ideas, complexity, coherence, organisation, wholeness.

In the normal perspective of science the world that we see is that of nature under law, an objective world which is there for discovery.

1. R. Descartes: "Discours de la Méthode" (1637) Part II.
Within that world we discover objects and events and we can recognise objects and events precisely because they are defined by continuities, which we can also call regularities — that is, examples of the operation of a rule or a law.

What, then, do we mean by these words? I suggest that a rule or a law is a restriction of the possibilities of transition in time from one value, otherwise one state of a system, to another. The same definition is valid for both words, though we tend to use "rule" where the ostensible regulating agent is an individual and "law" where it is a political organisation or Nature herself. To put it another way, the world that we observe is one of limited possibility and of actuality (very approximately, I will suggest of space and of form — or information). But it is not an environment of "all possibility", it is one in which, to adopt the cyberneticist's term, there is a vast amount of constraint, otherwise necessity, otherwise restriction upon the possibilities of transition in time, otherwise law. To quote W. Ross Ashby, "As every law of nature implies the existence of an invariant, every law of nature is a constraint. Thus the Newtonian law says that, of the vectors of planetary positions and velocities which might occur e.g. written on paper (the larger set) only a smaller set will actually occur in the heavens... Science looks for laws; it is therefore much concerned with looking for constraints. (Here the larger set is composed of what might happen if the behaviour were free and chaotic, and the smaller set is concerned with what actually does happen.) ... A chair is a thing because it has coherence [which] corresponds to the presence of constraint... A world without constraints would be totally chaotic. The turbulent river below Niagara might be such a world (though the physicist would still find some constraint here) ... the organism can adapt just so far as the real world is constrained, and no further."¹

An important point which is implicit, though not explicit, in what Ashby says is that on any particular occasion we are dealing simultaneously both with a tightly constrained actuality (the smaller

(set) and with a more loosely constrained range of possibility (the larger set) as I have already suggested, we are not dealing at any time with "all possibility", since this would be inconceivable. This point is central to the idea of information, which we shall have to consider later in relation to the processes by which the organism adapts itself to the environment. And in this connection it may be worth drawing attention straight away to a related point which emerges here, namely, that the actuality with which we deal can be either a thing, which is spatio-temporally unique, because it is located in one trajectory across a unique cognitive map of the universe in time; or else an idea, which is logically unique - because it represents a definite class of possibilities or of organised (constrained, coherent) complexes of possibilities related together in a particular way. To put it in other words, our awareness is of facts of existence or facts of classification. Often these are combined, for we do not recognise a located object without classifying it; but the ability to process ideas in separation from things is one of the most distinctive of human capacities.

Any object in nature is a form insofar as it exhibits the coherence and continuity of a whole; but it is also a system or complex insofar as it can be analysed (and every form can be so analysed) into elements which stand in a relationship to one another. These elements are themselves subordinate wholes, which can in turn be analysed into further component elements; for hierarchical organisation appears, together with spatial and temporal extension, to be a ubiquitous characteristic of the constraints which we discover in nature.

As this implies, any object in nature that persists long enough to be observed is necessarily a regulated system, that is, a system constrained by law; the balance of physical forces (to use a different terminology, reflecting a slightly different perspective on the world) operates to maintain a particular object in being, typically as a closed system composed of the same atoms, sometimes with specific

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1. We can conceive of random variation within a restricted set of possibilities (for example the series of whole numbers below a certain figure such as 10) but we cannot conceive of a totally random variation of everything, if only because the "things" which we can observe or of which we can think are themselves constrained by the limitations of our perceptual and conceptual apparatus. They have to be constrained to be recognised as things.
additions or subtractions, from the beginning to the end of its identifiable existence. When change does take place in it, the object's form as a whole is altered, usually irreversibly. Heat will crack a stone, wind-blown sand will erode it, deposition will add to it; but these are once for all changes — the content changes and so the form changes with it. But an organism, by contrast, is an open system engaged in a process of continual exchange with its environment. Its body has a form with a continuous existence or trajectory in space time, but its chemical constituents, the components into which it can ultimately be analysed, do not share its continuity, they wander in and out. Only at death does this cease to be true; only at that point can the body be said to become fully analogous to a stone. To put it more briefly, if more roughly, in an inanimate object form and content are continuous over time, in a living organism form alone is continuous, content is not.

There is admittedly a class of inanimate systems, with large gaseous or liquid components, to which this statement does not apply without qualification. An example might be the basin which remains brimming at a fixed level even through considerable variations in the volume of spray falling from the fountain; or a geyser which throws up a regularly shaped body of spray and steam at intervals; or a whirlpool; or a meteorological system like a cyclone. These are all systems in which a form is preserved with a changing content and they can perhaps be said to represent a step beyond the entirely closed system. The geyser even shows a certain capacity for replication. But the forms they preserve are the unstable forms of liquids or gases, not the solid forms which plants and animals can perpetuate. They have neither the durability nor the capacity for transmitting mechanical force of solid forms; and evolution, at any rate on this planet, has passed them by.

Turning to animate objects, if we imagine a plant-like single-celled organism in a liquid environment, we can see that the development and maintenance of its form as a whole involves a complex interaction between the body and its environment, as a variety of molecules and larger wholes pass by or through the organism. Some have no effect upon it;
but others are taken into it and further interaction takes place within the organism, as a result of which molecules may be broken up or combined with others, and some or all of the components into which they are broken may be recombined. Part of what is initially taken in may be incorporated in the body itself, helping to renew or extend it, and a remaining part is expelled. The whole process is essentially one of selection, combination, disintegration and recombination, in other words of making and breaking connections.

Every step in the process is a step of regulation, an occurrence according to the rules imposed by natural laws of physics and chemistry. These restrict the possible making and breaking of connections which follow particular types of juxtaposition, and the particular types of juxtaposition possible are themselves dictated by the nature of the environment and the nature of the genetic material in the cell. The nature of the genetic material, in the presence of the right environmental conditions and materials, ensures that a certain limited range of interactions takes place in certain sequences, with the effect that the cell grows and maintains itself to certain limits and in a certain specific form, and that it proceeds in due course to divide in two in such a way as to reproduce itself.

This cell system is an open system and the regulation which applies the rules that ensure its growth, maintenance and reproduction is the genetic material operating in accordance with natural laws. A many-celled organism can arise from a single cell through continued division and coordination of growth which is made possible by the replication of the same genetic material in every cell; but this of course can happen only if the genetic material itself is such as to dictate this coordinated growth, operating in one cell differently from another because the cells mutually establish for each other different, though controlled, environments.

What has been said so far refers to a passive, plant-like organism which reacts to conditions and objects in its environment as they impact upon it, but does nothing except through these reactions to alter the
environment. (Whether an organism of such passivity actually exists in nature is not relevant to the present theoretical argument.) A different situation arises however with an organism which is actively self-regulating and, therefore, instead of relying on chance to provide the right materials and conditions for its growth and reproduction, actively sets out to find them or bring them about. This immediately implies, first, that it must have some means of getting information about objects or conditions around itself before interacting with them and, secondly, that it must have means of moving or changing either the whole or parts of itself in order to secure what it needs or to avoid what it finds harmful. The efficiency of the regulation achieved may then in an appropriate environment be greatly increased; but the complication of the process is greatly increased also.

Information

An examination of information as the resolution of possibility into actuality, of ideas as schemata, of our perceptual apparatus as yielding values in limited registers of possibility, of the hierarchies of knowledge, of the designated instance as the counterpart of the schema or class.

In order to make further progress we need now to consider the nature of information; for if an organism is a black box its input is information and its output is behaviour.

Information in the scientific perspective is the same as knowledge, in other words it consists of facts of existence (which include events) or facts of classification (which include classifications of events). In either case we are concerned with a range of possibility and an actuality. The actuality has no significance, no reality, except in relation to the range of possibility - indeed without this it is unperceivable and inconceivable.

Another way of putting this is to say that our knowledge of reality is always a communication in a code. The perceptual apparatus of the human organism is a highly complex, hierarchically integrated system,
of which the basic units may be considered as individual values in restricted ranges or registers of possibility, such as hue, brightness, pitch, sound timbre, loudness, quality of taste, intensity of taste, cold, warmth, roughness, weight, three-dimensional space, two-dimensional space, melodic space (with dimensions of pitch and time) and a considerable number of others. Each register represents a quite restricted range of possibility in which only values of appropriate types can be recognised; only colours can be recognised in the register of hue, only melodic forms in melodic space, only three-dimensional forms in three-dimensional space, only trajectories (like the path of an aircraft across the sky or the static presence of an armchair in a room over time) in a continuum of four-dimensional space-time. We do not at any time perceive such basic values in isolation; they are always combined in elaborate ways; but these combinations are themselves constrained by elaborate rules of combination and integration, or hierarchical organisation. For example hue and brightness must always be combined together, but hue and loudness can never be directly combined — though they may be integrated in a higher level perception, e.g. of a noisy red motor-cycle. Basic forms from a given register can be combined sequentially, as in the cumulative complexity of a ragged outline or a knobbly shape, but always subject to the stringent constraints of continuity; for a continuous complex form cannot break off here and start again there without losing its single identity.

So far as hierarchical organisation is concerned, it would appear that all perceptions are built up from basic cells, in each of which a container value for form is infused with a particular value for quality and a particular value for intensity; and that these cells in turn are integrated as components in higher level complexes. But there are

1. If we are to take perceptual cognisance of anything, it must exhibit either the same values for long enough for us to observe it, or change only to values continuous with the preceding ones in the same registers. Continuity itself may be movement to an adjacent step in an ordered scale, or a shift of one or more values in an ordered complex while the rest remain as before. Thus change with continuity in any dimension of three-dimensional space or of time is change to an adjacent value at whatever degree of resolution — whatever "grain" — the apparatus of discrimination can yield; while change with continuity in two successive musical notes, although it does not involve adjacency in pitch, does require instead (if it is to be a melodic continuity) that the two notes should be tuned to a common scale and consequently should have overtones in common; and similarly if one hue is to shade continuously into another this implies that not all the values in the underlying mix of primary colours change at the same time.
further constraints; not more than about seven discriminated components can be integrated in any one whole; and the number of levels of hierarchy, i.e. of component and whole, which the mind can grasp at once seems to be limited to no more than four. Finally we can basically only become aware of one unified complex at a time and we do so by relating a subject complex to a predicate complex in one predication over time at the focus of consciousness.

This is of course an almost absurdly compressed, and inevitably controversial, account of an exceedingly complicated process. But for present purposes it should be sufficient in order to indicate the way in which I propose that our perceptual apparatus should be regarded as fundamentally a coding apparatus. The basic values on basic registers represent the vocabulary of the code and the complex rules of combination and integration represent its grammar. In saying this I am not using a metaphor. For it is my contention that the continuous stream of consciousness is always built out of successive integrations of discrete experiences, whether of perception, thought or speech, and that the manner in which these "predications" are built up is always determined, literally and precisely, by rules of grammar. These are closely comparable for each of the three modes of experience, and in combination they form a single system, bringing all three modes of experience together in one consciousness.

The basis of my theory in this respect is that the fundamental category of experience is the category of ideas, or logical forms, which

1. See G.A. Miller "The Magic Number Seven" in "The Psychology of Communication" (Penguin 1968). This does not exclude an undiscriminated plurality (e.g. "several" or "many") which may retrospectively be shown to have more than seven components.

2. These ideas have been developed at length in three unpublished studies, "The Grammar of Perception" (1973), "The Grammar of Thought" (1973) and "The Grammar of Language" (1974 revised 1982). The idea that there must be some correspondence between the structures of thought and of language is of course far from new, but I do not think any comparably detailed and comprehensive theoretical model, bringing all three modes of experience together has been developed elsewhere.
corresponds to our classifications of the world. The continuous series of experiences of which we are aware during our waking life is essentially a series of predications built up of ideas. These predications are hierarchically complex systems, but at the highest level of the hierarchy each represents a diachronic step of the attention from the subject to the predicate, relating the two together into a synchronic whole, before the attention moves on to the next subject. They occur in space over time, but the ideas from which they are built are non-perceptual and the space itself is quasi-topological, which means that it is variable, it is a space of possibility rather than actuality. This corresponds to the fact that ideas are classifications, they represent ranges of possibility, not particular actualities. But then how do we grasp them, given that they are not perceivable and that anyway to receive information we need the message as well as the code, the actuality as well as the possibility?

The answer to this question is in two parts. Let us begin with perception. The answer here is simply that while the idea complex defines the possibilities in contemplation at a given moment, the input of the senses defines the perceived actuality. This interpretation is very close to that of Ulric Neisser in "Cognition and Reality".

1. I borrow the useful words diachrony and diachronic from Levi-Strauss and the vocabulary of structuralism.

2. I should make it clear that I do not use the word predicate to mean simply an attribute which is "ascribed" to a subject. In the grammar of thought, perception and language alike a predicate represents the ground against which the subject emerges, the object in relation to which it moves (or remains still), the agent which moves (or remains still) in relation to the passive subject, or the complement which is absorbed as an elaboration of the subject. The predication includes a relationship between subject and predicate (a copula in the terminology of some writers including, I understand, Frege), which is not always the same relationship but can take a number of different forms. In contrast to this usage "by the subject - predicate form Russell and most of his successors mean what could less misleadingly be described as 'the substance - attribute form" (John Passmore, "A Hundred Years of Philosophy", Penguin Edition 1968, p. 215).

Following Bartlett and others, he describes what I call ideas or idea complexes as anticipatory schemata. "Reading, listening, feeling, looking depend on pre-existing structures here called schemata which direct perceptual activity and are modified as it occurs... Remembering, imagining, speaking, thinking and every other form of cognition... are best understood as applications of the same cognitive structures" (p.14). Neisser suggests that all perception involves a cycle in which first a schema directs the exploratory focus of the senses, then sensory exploration samples the objective environment, then the results of the exploration modify the schema. "The function of the anicipated stimulus", he says, "is to initiate the cycle of perception proper".

"A schema is that portion of the entire perceptual cycle which is internal to the perceiver, modifiable by experience and somehow specific to what is being perceived. The schema accepts information as it becomes available at sensory surfaces and is changed by that information; it directs movements and exploratory activities that make more information available by which it is further modified" (p. 54).

Neisser's views in turn are close to those of Piaget, as set forth for example in his "Épistemologie Génétique" of 1970.1. Piaget also uses the word schema2 and describes the process of "the integration of the data (of the senses) into an anterior structure or even the constitution of a new structure under the elementary form of a schema" as one of "assimilation".

Broadly I can accept these ideas of Neisser and Piaget, though I would wish to develop them in two ways: by accommodating them to my elaborated theory of predications, and by insisting on the difference between the stored idea complex and the evoked idea: it is the evoked idea which provides the anticipatory schema used on a given occasion, but it is the stored idea complex which is modified after the event by the effect of experience (and from which in consequence a different evoked idea may be derived on a similar occasion in the future). I should also wish to demur at phraseology which appears to attribute a sort of will or power of direction to a schema; this issue, which touches on the nature of the Self, will be discussed on later pages.


2. The use of the word in this sense appears to go back at least as far as Kant (John Kemp "The Philosophy of Kant", Oxford 1968, pp. 30-31).
For present purposes, however, what is essential is Neisser's distinction between the anticipatory schema (which deals with a relatively generalised possibility) and what he calls the information pickup. "Information can be picked up only if there is a developed format ready to accept it. Information that does not fit such a format goes unused. Perception is inherently selective." (p.55). On the other hand "the cycle of anticipation and pickup links the perceiver to the world and can only develop along avenues that the world offers" (p. 66). Any attempt to measure quantities of information communicated is a dubious enterprise in the field of psychology and not necessarily useful; but in theory and principle I see no reason to doubt that the amount of information communicated by the completion of a given predication is a function of the number or range of possibilities which it resolves and thus quantifiable in "bits". I would argue that unless a predication is completed somehow by the mind no information passes at all; you have to construe what you see or hear in some way or other before you can understand anything — before indeed you can even identify William James's "blooming, buzzing confusion".

This reflects the fact, as I see it, that conscious understanding, even of a strictly perceptual kind, is always the understanding of an instance of an idea: if I look up at the sun and see sheer brightness and effectively nothing else, my consciousness of the event still involves the idea, the class, the possibility, as well as the sensory pickup, the instance, the actuality. This point relates to Bruner's emphasis on perception as a process of categorisation. "Inferring the categorial identity of a perceived object" is "as much a feature of perception as the sensory stuff from which percepts are made". But here we come to the second part of the question raised earlier. When what I realise is itself an idea, not a sensory input, how can the idea become an actuality, how can information pass? This is a puzzle which caused some difficulty to Bishop Berkeley. "Likewise the idea of a man that I frame to myself must be either of a white, or a black, or a tawny, a straight or a crooked, a tall, or a low, or a middle-sized man.

I cannot by any effort of thought conceive the abstract idea above described.\(^1\) But Berkeley's sentence gives us the clue: in Ashby's terms information is passed when a larger set of possibilities is resolved into a smaller set. We pick up the idea of a tawny man against the background of the wider range of possibility set by the idea of man in general, and we need the wider range of possibility before we can recognise the narrower. This procedure is itself possible because of the hierarchical nature of the constraints of the terrestrial environment and the consequent fact that all our classifications fall into hierarchies until, in Locke's words, "the mind proceeds to body, substance, and at last to being, thing and such universal terms which stand for any of our ideas whatsoever."\(^2\)

This is not in fact the whole story. To identify precisely what instance or plural set of instances of a class we are talking about we have to pick it out, and we do so in one of two ways: either by locating it definitely on a "cognitive map" of the world in time, or by locating it indefinitely, that is to say, numerically. In perception we use the first method automatically (our perception always has some directional focus), but in thinking we can also use it more indirectly by referring to some past context—what we were talking about yesterday morning, for example—which is itself located by an event in the world. The second method is adopted when we use the indefinite article or a word like "some", "many" or "seventeen", indeed whenever we distinguish singular or plural. Significantly we cannot think of anything without distinguishing whether it is singular or plural; for although an indefinite designation can be used on its own, a definite designation cannot. That is to say, a designation of number always underlies every definite designation of location. To go deeper into this matter we would have to enter into the complexities of the theory of language, which would be out of place in this context. But the thrust of the argument I have been presenting is that a process of designating—picking out the instance—is characteristic of all thought and perception as well as of language. It is the counterpart of the process of generating the schema. While the schema defines the range of classification or possibility, the instance defines the form in which actuality, information,

2. "An Essay Concerning Human Understanding" (1689), Bk. 3, Ch.III.
creation emerges into our consciousness.

Information and Space

A discussion of the hierarchy of geometries and the way it is used by the mind to relate instances to classes, actualities to possibilities.

One further point remains to be made in this connection. I have suggested that ideas are to be regarded as non-perceptual forms or complexes of forms, emerging in a quasi-topological space, while our perceptions emerge in a normal metric space, and the two are somehow brought together in the process of perception. This may seem a clumsy and complicated model; and it may seem still more so when I add that the images of visual memory or imagination are recognised in a Euclidean space in which magnification and diminution are possible, while melodic and many other types of perceptual form are recognised in affine spaces, of which the distinguishing characteristic is that units measured in one dimension are incommensurable with those measured in another (units of time and of pitch, for example, are incommensurable). I think however that such a criticism would be misplaced. For, as it seems to me, the conception of the superimposition of forms expressed in different geometries in fact provides us with an admirably simple way of understanding how the pickup of information can be related to the schema, the perception to the idea, the actuality to the possibility. The one is in every instance a special case of the other.

In these matters I have to tread carefully since I am no mathematician. But to explain what I mean I will quote from what seems to me a very clear account in layman's terms of Klein's theory of the hierarchy of geometries, which is given by Sir Peter Medawar in his book "Induction and Intuition in Scientific Thought". 1. "In this scheme of codification metric, Euclidean and affine geometries and topology may be said to form a hierarchy: we can pass from one to the other by progressively relaxing the conditions imposed by the rules of transformation, or (in the other direction) by making them progressively stricter. Metric geometry is the most highly restricted: the group of geometries-

operations that it defines consists only of translations, rotations and inversions. The invariant theory of this group of operations is the richest in geometric concepts: it will contain a superabundance of theorems to do with isosceles triangles, regular polygons and with degrees of curvature and angularity; it can make use of the idea of scalar distance also, for the distance between two points is invariant under the transformations of the metric group — transformations which conserve all properties associated with size and shape.

"The Euclidean group of transformations is a little more permissive: symmetrical magnification is allowed and the concepts of size and metric distance therefore disappear, though the notions of (for example) square and circle are retained, and indeed all properties to do with shape, which is invariant.

"Affine geometry is specified by a group of transformations which (in geometrical terms) allows for uniform magnification, but to different degrees in the three dimensions of space. The concepts of square and circle and size of angle are now meaningless, since the properties that define them are not invariant under transformation, but linearity and parallelism remain...

"Topology is the most permissive of the four geometries, for nothing is required of the transformations that define it except that they should be continuous and should bring the transformed points into a one-to-one correspondence with the points they replace. A topological transformation may be represented geometrically by an arbitrary plastic deformation, such as a geometric figure would undergo if it were drawn upon a sheet of rubber which was thereupon stretched or twisted in any way that did not tear it... Obviously all simple geometric notions have now lost their meaning, but certain very elementary properties remain, e.g. the order of points on a line, relationships of insideness and outsideiness of closed figures, the "sidedness" of surfaces...

"As we pass down the series, topology — affine geometry — Euclidean geometry — metric geometry we may note that: (a) each geometry is a special case of its predecessor, i.e. is derived by imposing special restrictions upon or defining a subgroup within the one preceding it;
(b) all theorems of one geometry are also theorems in its successors; 
(c) new concepts (e.g. of parallelism, circularity or shape) "emerge" 
at each level which have no meaning and cannot be envisaged at an earlier 
level; and (d) there is a progressive enrichment in the number and variety 
of concepts and the particularity and degree of detail of the theorems."

If I am not mistaken, this superimposition of geometries, or, 
perhaps better, this inclusion of one geometry within another more 
permissive one, not only suggests to us a way of understanding how the 
mind takes up information, but also helps to suggest how information 
taken up in one mode can be related to information taken up in another. 1. 
We cannot translate sounds into sights or sights into tastes; but we can 
and do translate them all into ideas - even if the ideas are somehow less 
detailed and precise than the full impact of the senses which they 
focus into consciousness. The arena of ideas (or schemata) articulated 
into successive predications is the arena of consciousness. To recall

1. Discussion about spaces in psychology seems generally to have 
revolved round the question whether there is a phenomenal space 
separate from physical space and perhaps of a somewhat different 
geometry. (See in this connection "The Two Spaces" by Michael 
Methuen 1979.) These arguments have little direct bearing on the 
suggestions made here. William James observed that "in reasoning 
I find that I am apt to have a kind of vaguely localised diagram 
in my mind, with the various fractional objects of the thought 
disposed at particular points thereof." (Principles of Psychology", 
Vol. 1, Macmillan 1891, p.390). But he does not seem to have 
developed the implications of this idea in regard to the connection 
between thinking and space. Much more relevant are Piaget's 
interesting discussion in his book "Le Structuralisme" (PUF 1968 
pp. 20-21) and his occasional references to spaces in his 
"Epistemologie Génetique" (PUF 1970). I suspect that Piaget's 
analysis could be accommodated without much strain to the scheme 
I have here described, though to show this in detail would take us 
well beyond the scope of the present study. It is of interest 
to note Piaget's view that "elementary topological structures... 
are from the psychogenetic point of view anterior to metrical 
and projective structures, in a way which is contrary to the 
historical order of the geometries but conforms to the order of 
their theoretical filiation". ("Le Structuralisme" p. 24.) In 
"Le Structuralisme" he discusses the group - defined as a set of 
displacements in space and corresponding in effect to what I have 
called a complex whole - and describes how through successive 
transformations into different spaces each group becomes a sub- 
group, a special case, of the more general group in the space 
beyond.
Neisser's words again, "Information can be picked up only if there is a developed format ready to accept it." The idea, the generalised anticipation, is a quasi-topological form, while the perceptual input is a metrical or affine form, but one which can be translated as a special case of the topological form — in other words as an instance of the class which the idea defines.¹ (I shall refer later to the view, which I have argued in detail elsewhere, that classification depends upon generalisation.)

The perception in all its detail shines through the idea, so to speak, but it is the less detailed idea which is consciously grasped and made our own as an instance of a still more generalised class of possibilities. As many psychologists have observed, we notice and grasp only a fraction of the information presented through our senses at a given moment — that part which fits into the format we have ready.

The translation involved in such cases may be radical. For values which in the perceptual scheme are recognised as qualities — such as colour or taste — become logical forms once they reach the arena of ideas. It is my contention that our mental predications are built up, like those of perception, from cells which consist of container forms infused with qualities and intensities of experience, but that the qualities and intensities which infuse our thought are emotions not sensations. In the present context it is not necessary to develop the detailed arguments for these ideas, nor to explore the interesting question of how it is that thoughts which are highly complex can nevertheless be expressed in the relatively impoverished quasi-topological space of consciousness.²

But one question which it is essential for us to consider is that of how we translate from one code to another. To this I will shortly turn. In order to do so it will be necessary first to develop a preliminary framework of ideas about the nature and causation of events.

¹ An example of topological form is what Berkeley called "the general inconsistent idea of a triangle". It cannot be perceived or imagined as such, but it is still a form emerging in a space. Any actual triangle — or the idea of any more limited class of triangles such as that of equilateral triangles — is a special case accepted by the more general format of the "general inconsistent idea".

² My thoughts on these points are developed in some detail in "The Grammar of Thought" and "The Grammar of Language".
Trajectories

A discussion of the different types of trajectories, otherwise of the forms we recognise as extended in space-time.

Here-Now is not a point but a place. It takes in a certain volume of space and a certain span of time, it represents a continuum of possibility within which actuality is encountered. What the actuality turns out to be, literally what form it takes, is constrained, as we have seen, by the registers of information available to us. But it is also constrained by the need for continuity in the Here-Now. The reality which our senses register is not random, things either exist continuously, or they change in a continuous way, otherwise we could not identify them at all. By definition form is a union of values on different registers; and in the Here-Now we take cognizance of forms which, as we have seen, may include forms in different kinds of spaces. Now the continuity of a perceptual cell or complex in time we may describe as a trajectory; and it will be necessary to distinguish a number of different types of trajectory.

Consider first the trajectory of a form which is continuous in three-dimensional space but also continuous (otherwise we could not recognise it) in time. If it does not move or change over time, we may call it a trajectory of no change. If it moves or changes in some constant way, for example by movement in a fixed direction at a constant speed, we may call it a trajectory of constant change. If it moves or changes erratically, like the trajectory of the fly on the windowpane or of the blush on the cheek, we may call it a trajectory of inconstant change. We need also to consider the trajectory of a form, such as a melody, which is continuous in an "analogical" space with time itself as a dimension. I have argued that we recognise such a form in an abstracted, and, as it were, synchronic time dimension (since both beginning and end are held together at the focus of attention before the form itself can be discerned), but with the form as a whole having a continuous trajectory in the further dimension of diachronic time. The true trajectory is therefore one of no change, since, although change does take place, it is encapsulated in a synchronic form which is recognised as a completed whole before it is recognised as having a trajectory of existence in
diachronic time.

It is to be noted that with separate steps of the attention we can divide a trajectory of no change or of constant change cognitively into sections, but the sections have a continuity such that when put together the joins between them disappear, as with successive moments in the existence of this armchair. A trajectory of inconstant change is however a different matter. The sections of the fly's trajectory on the window pane are linked by what we may call existential continuity - the same that links the different episodes in the lives of our own bodies. This is akin to the continuity achieved when we put together the sections of a trajectory of no change or of inconstant change; but whereas in those cases once they are put together the joins between them disappear, in this case the joins remain to mark changes of speed or direction or rate of change, though continuity across time is not broken.

So far we have considered only the trajectories of individual forms. But a conjunction of forms in space time not only has its own form as a whole, it also has a trajectory as a whole. The car is standing in front of the house. The cup is standing in the saucer. And in each case we recognise the whole as a contingency or situation in which the two existential trajectories of car and house or of cup and saucer are conjoined in a spatio-temporal complex. In such a case the whole complex has a trajectory as a whole extending in diachronic time; and this trajectory in its turn may be one of no change, or one of constant indivisible change (as with a boat floating down a river) or one of inconstant change. The trajectory of inconstant change in such a case can again be one like that of the fly on the window pane - as for example when all the people and things encapsulated in a motor car move together in unison but do so at varying speeds and in varying directions as the car itself changes speed and direction. But it can also be one in which the individual trajectories making up the trajectory as a whole move or change separately, even to the extent that some may leave the complex as observed and others may be added to it. As the car stands in front of the house, for example, the clock may strike four and another car may arrive; then the first car may drive off. Each of these elements are individual trajectories of inconstant change; but they can all be
accommodated within the continuous trajectory of the conjuncture or situation as a whole, provided always that not all values change at once; some have to remain constant at each stage if continuity is to be maintained. (If, for example, quite apart from the movement of the cars, the house began to move and collapse, the ground to quake, the cars to change shape and the sky to fluctuate, continuity would be lost and information would be replaced by its opposite, which is randomness.)

More generally we can say that this case, where some elements in the trajectory as a whole can change, but all do not change at once, is comparable to the trajectory of the blush on the cheek as distinct from that of the fly on the windowpane; for the changing value of the blush can be seen on analysis to be fundamentally a change in the blend of the elements that make it up. There are in fact two kinds of continuity, that of sequence and that of blend, though each is here emerging at a different level of hierarchy, corresponding to a different focus of observation. It is a matter of importance that the mind is able in this way to generalise a prolonged and complex trajectory as a whole, so as to grasp it as a single form, or even a single variable; and conversely in appropriate circumstances to analyse a trajectory grasped (like the blush) as a single form or variable into a much more complex system of forms related together in superposition or sequence or structure, or a mixture of these.

It is to be noticed however that we have yet to deal with a further type of trajectory as a whole. This is one in which the individual trajectories that make it up are linked not merely by the continuity of spatio-temporal contingency but by that of causal necessity. I push this domino so that the next one falls, and the next, and the next. This is a trajectory as a whole of inconstant change, but it is one which is also a trajectory of causal necessity, otherwise a change of cause and effect; and in order to deal with such trajectories we shall need to consider more closely the nature of causation.
Events and Reactions: Causation

A theory of causation expressed in terms of the preceding analysis.

Causation is concerned with events, and an event is a change or transition within a system from one state to another. In the case of a single variable each of its possible values is one state of its given register of possibilities. In the case of a form each discriminable combination of values for the variables which it unites is reflected in a change in the form itself from one value to another in the range of discriminable forms of its type - two dimensional, three dimensional, melodic or whatever. (The actual range available of a given type depends on the discrimination available and may vary from one occasion to another.) In the case of a perceptual cell or of a composite or dispositive complex of such cells, any change in the state of any one of the values it embodies, including any discriminable feature of the pattern of relationships in which the cells of a complex are agglomerated or disposed, is an event; and as such it signals a new state of the cell or complex.

It is an assumption of common sense, and also of science, at least at the atomic level and above, that no event is without a cause, which is a preceding event linked to it, as a matter of natural law, in the special relationship of cause to effect. The prototype of such a link between events is a push in which movement is transmitted from one thing to another through contact. In every case spatio-temporal contact is necessary for causation to take place. Every event, that is to say, is a reaction in a contingency. The causal event (itself in another framework the effect of other causal events) is the occurrence of the contingency itself, a bringing together of two or more systems in space time. The effect event is the reaction. The causal event takes place in a system which is external, environmental, to the system in which the change under consideration takes place, it is a change in value in its parameters. The effect event is internal to it. New contingencies or juxtapositions are always arising because physical objects are in motion in relation to other objects. When one thing encounters another, movement may be transmitted from the one to the other, but this is not the
only possible reaction. Some of the movement may for example be converted to heat, the boundary or structural form of one or other of the objects may be dented or fractured, or chemical or nuclear reactions may ensue, which in turn may involve the release of new energy. Broadly we may say that reactions - effect events - always involve the conjunction of trajectories and take the form of changes in trajectories, though always with a degree of continuity maintained across the change.

The world could thus be described as a network of complexes pursuing their trajectories in constant states, like roadways following straight lines or constant curves, but encountering each other at contingencies, like road crossings - which may be multiple crossings. Roadways lead out of each crossing, so that there is always continuity, which is sometimes that of the same road pursuing its way unaffected and in the same constant direction, but is sometimes only continuity through transformation, as when one main road splays into three different smaller ones. What is more, the kind of continuity that is found depends on which road the traveller is following and the angle from which he approaches the contingency. At one crossing the continuity of the main road may be in no way disturbed, but at the same crossing the side road irrupting into it may, in one perspective, lose its separate identity altogether.

Whether at any time we think of the trajectories of single elements encountering others, or of the trajectory as a whole of a complex within which elements are subject to conjunctures and changes of trajectory, is largely a matter of perspective - whether for example we are following out an individual road or considering an area of the road network as such.

More abstractly we can say that reactions may consist, first, of changes in the trajectories of the forms involved in a conjuncture without destruction of the forms themselves - as when one thing is pushed or pulled or deflected or accelerated or deformed by another. (This applies to any trajectory of inconstant change like that of a leaf pursuing an irregular course across the lawn under the wind.) Or, secondly, they may involve the aggregation or redisposition of forms, leading in each case to the emergence of new composite or dispositive forms as a whole. Or, thirdly, they may involve the disintegration of forms into component forms, with the accompanying destruction of the original form as a whole.
and sometimes the emergence of new combined forms. But there will always
be some degree of continuity through the reaction.

The forms themselves may be three dimensional boundary forms (surfaces) -
for example the forms of a piston or a catalysing molecule. Or they
may be forms of structural or systemic order - for example the lattice
of a geodesic dome or the relative disposition of electrons in motion
round the nucleus of an atom. Or they may be repetitive unbounded wave
forms. The nature of a reaction in accordance with natural law depends
largely on the forms of the things concerned, the way in which they are
juxtaposed (that is, the structural form of the conjuncture) and on the
energy or mass with which they are invested. The reaction will often
involve change in the shape or size or heat or mass or velocity or
direction of movement of the forms concerned, but it is to be noted that
a reaction is always an event, a step change of no definable duration,
at which one state of equilibrium of natural forms is broken and another
is found. A process of change, if analysed, can be broken into a series
of micro-events with states between them, but there is never an iden-
tifiable gap during which change takes place between states: this is the
paradox originally set forth by Zeno the Eleatic. The well-known fact
that the position and velocity of an electron can never both be deter-
mined simultaneously may perhaps ultimately be another reflection of this
same characteristic of our apprehension of reality.

It is possible for us to grasp any continuous chain of cause and
effect building up a macro-event as a single process over time, a
trajectory of trajectories, rather than a step; but this is analogous to
the way in which we can realise a series of short outlines as a single
outline provided one fits on to the next in the series; we are recognising
a form as a whole at a higher level of hierarchy - in fact the form of a
process, which is a causal form. Broadly when we can recognise a
continuous process over time linking an earlier event with a later one,
we can say that we think the first event causes the second; when we break
the process down into a series of steps from one state to another - each
transition taking place at a conjuncture of trajectories - we can say
that we have explained, given reasons, why the first event causes the
second. If we then try to explain each step we find that there is an
endless regress; but it is striking that we do have the capacity to recognise a series of steps with states between as a process having a form of its own; and this is important, first, because by giving an event some extension it enables us to think of change as a fact instead of leaving it as a durationless gap between facts; secondly, because it is this that establishes causal continuity which would otherwise be inconceivable; and thirdly because the fact which it establishes, namely a sequential form as a whole, is a new fact, different, as any form as a whole is different, from the components which build it up. (There is a parallel here with the way in which in language the mind can establish a great variety of discriminable verb forms reflecting transitions, even though the variety of discriminable transitions as such is comparatively small. This happens because the mind includes in the verb form some indication of the subject, object or agent of the verb. The effect of these selection restrictions is to create a generalised sentence form; and the form as a whole of a sentence depends on the nouns related as well as the kinds of link established between them. (These points are discussed in detail in "The Grammar of Language".)

It has already been suggested that if we try to go to the root of our own conception of causation it seems to lie in our experience of our own voluntary movements. If I push a small loose object, it usually moves; and if it moves against something else, this is likely to move too. I seem in this way to transmit movement; and this transmission of movement joins two events into one macro-event. Although this original paradigm of causality is a succession which begins with a voluntary movement, we can by analogy classify recurrent classes of successive events as causally connected even when the first in the succession is not a voluntary movement, for example, when we recognise that the melting of the snow in the mountains is followed by the swelling of the rivers in the plain. But if we do this we still have to assume some ultimate, unanalyseable source of movement or change, whether it takes the form of a river god or of an abstraction like the scientist's "energy"; and we have to assume some physical contact, even if only that of light or sound waves, through which the movement or change is transmitted or by which it is triggered. But how, in the complex confusion of life, do
we pick out particular causal chains? This is the question to which we turn next.

Prediction and Inference

A theory of prediction and inference growing out of the theory of causation in the preceding section.

The world we have just described is one of reactive steps or transitions arising out of contingencies; and when we define a rule (or a natural law) as a restriction of the possibilities of transition in time, these are the transitions we are talking about. Every transition, everything that happens, is in a certain sense information, the creation of new fact in time - creation not out of nothing but out of possibility restricted by natural law and past fact. Each new fact however itself creates a restriction of possibility for the future, that is to say, it is a potential cause of possible effects; it identifies one or more possible future transitions of restricted possible outcome, or it further narrows the possible outcome of a future transition or transitions already identified. If the world is a network of causal continuities, the past network is definitely established, though only part of it is known to any observer; and it projects into the future indefinitely. The determinist would say that the future network is already definitely established also; the creation is over. However that may be, the future is known to consciousness only as a continuation of certain past causal chains which encroach upon the randomness of possibilities to come by narrowing the range of what may happen - strongly and clearly in some cases for some limited distance into the future, more vaguely in other cases, but ultimately always dwindling into total unpredictability.

Now in any given situation, as we have already noted, the mind is usually capable of identifying an enormous number of variables. We can assume that none of them is without a cause or without some potential effect in the world; but we cannot take cognisance of more than a small fraction of all that is available to us, let alone try to follow out all the chains of cause and effect in which they may be involved.
If we take any one thing or system of things, there will usually be a vast number of variables in its immediate environment which can be described as its parameters; but of these usually only a few are effective parameters, that is, variables in which changes of value can lead causally to changes in the state of the system itself. It follows from this that in any situation where we wish to identify a series of smaller events that build up a larger one through a chain of cause and effect, we will have to be able to apply some method of selection to sift out the events which are part of the causal chain in which we are interested from others linked to it merely by spatio-temporal conjuncture. In this respect causal forms are no different from other forms whose recognition out of a welter of sensory data always involves a process of selection: this patch of colour is part of the whole I see as a house, while that is part of the sky beyond; this note is part of the melody, while that is accompaniment and that is the sound of a member of the audience coughing.

The fundamental criterion we use in this case is that of succession in time; when change in a parameter variable is followed by change in one or more variables in the system under consideration, the first event may be causally connected to the second. If we have never observed such a succession before, we may be doubtful about the connection; but if we have observed a connection like this one many times before, we shall be much more sure that it is a causal link. This implies two things: first that our recognition of causality requires some kind of memory; and secondly that it requires some means of classifying events and sequences of events as like or unlike.

As far as the processes of classification and comparison are concerned, in the present context I need only to observe that classification depends on generalisation: a class consists of instances of forms which on generalisation coincide with a paradigm form. The process of simple comparison is one by which one form A is "tuned" to another form B and pronounced to be identical with it, or like it (i.e. identical at a higher level of generalisation for either A or B or both), or unlike it. The

1. I am here using Ashby's terminology. See W. Ross Ashby "Design for a Brain" (Chapman and Hall 1960), Ch. 6.

2. I have set forth detailed arguments on these points in "The Grammar of Perception" and "The Grammar of Thought". Here I only ask the reader to accept this analysis on a provisional basis as an assumption for immediate descriptive purposes.
process of analytical comparison involves analysing both A and B into constituent forms, pair by pair, to establish whether they are the same or not. The constituent forms may be compared by simple "tuning", or may themselves be the subject of further analytical comparison at a lower level of hierarchy. Thus we might compare two chords by identifying whether they consist of the same notes or not, and then analyse the notes to see whether or to what extent they share the same overtones. Each analysis yields a series of answers to binary "whether or not", "yes or no" questions. In order to ask the questions rightly, however, it is necessary to enumerate the forms and order them in appropriate pairs - or establish where the appropriate pair does not exist.

We have seen that when a number of recurrent successions of events have been classified as like each other, the very fact of their recurrence and similarity makes us inclined to assume that each succession involves a causal connection and therefore that each succession is an instance of a class of which the defining paradigm is a generalised causal form. Any such form, once identified, can be used (whether or not with success) as a predictive or inferential rule, a restriction of the possibilities of transition.

A predictive rule applies when we recognise a conjuncture or series of conjunctures which exemplifies the first section of our causal succession and we predict that an instance of the rest of the succession is likely to follow. The inferential rule applies when we recognise an instance of the latter section and infer that an instance of the earlier section has already taken place; or when we recognise an instance of the whole and infer an instance of the part, or vice versa. What is unalterably past, insofar as it can be brought before the mind by memory or history, is already complete and so in a sense synchronic. Thus any conclusions we may draw about the past are inferences in the same way as conclusions drawn from analytic comparisons of synchronic forms. If I see part of a rainbow in the sky, I can "predict" where the arc should be continued and I can search for a fainter continuation in the predicted region. Similarly, I can "predict" that there may be a second rainbow concentric with the first and search for it - perhaps with success.
Strictly the "predictions" are acts of analytic classification.
The general class of rainbows includes relatively long and relatively
short rainbows, and also double rainbows. Having recognised an instance
of the more general class, I can try to see whether it falls into one
of these more particularised sub-classes. But much the same can be said
of true predictions which are themselves acts of analytic classification.
Having recognised an instance of the more general class of conjuncture
"pressing the starter button", I may consider whether it is in fact an
instance of the more particularised class of conjunctures in which
"pressing the starter button" is followed by "the engine fires". There
is a certain probability that an instance of the first class is in fact
an instance of the second, but it is not a certainty. If the engine
does not fire, we may ask why. And the answer to "why" is always a
more precise analysis. The conjuncture "pressing the starter button"
may be of the type which includes a particular further trajectory in
the conjuncture, namely "ignition switched off"; and experience shows
that there is an extremely low probability that such a conjuncture is
followed by "the engine fires". Why so? Because the battery will
not be connected to the starter motor and the causal succession required
for the transmission of change or movement will not be established.
There is no limit to the further particularisation which could ensue
in the attempt to particularise a conjuncture "pressing the starter
button" in such a way that "the engine fires" would invariably follow.
The button must be attached to a car or at least to some kind of
internal combustion engine; there must be fuel in the tank; the ignition
system must be in working order; and so on and so on. We can never
achieve absolute comprehensiveness and so absolute certainty.1.

Basically causation involves sequence in time whereas explanation,
in the sense of giving a reason why, does not necessarily do so.

1. In a somewhat different sense we use "reason" to explain why
a purposive agent such as a person or organisation takes a
particular action. We do this by stating the purpose in mind
and giving an account of the mental processes through which the
intention is linked to the achievement of the action. Because
such an account involves unobservable processes it can never be
absolutely objective; as Harre points out, it is always subject
to negotiation.
"Why does this drink taste different?" "Because it contains sugar."
There is no sequence of events here. Yet we use the word "because" to introduce our explanation; and clearly reason and cause are much less sharply distinct than might at first be expected. In effect a reason is why something is like this and not like that, whereas a cause is why something is followed by this and not that; consequently it could be held that every cause is a reason but not every reason is a cause. In both cases fundamentally we are comparing trajectories and identifying differences between them, though in the first case each trajectory is that of a synchronic form in diachronic time, a single existence or state, while in the second case each is a trajectory of trajectories, a sequence of states with transitions between. The second case includes much greater potential complexity because the sequence may project from the past into the future. A predictive rule is recognised as a model of a trajectory in which one kind of event is followed in sequence by another kind of event with a varying degree of probability: fundamentally the more often a given sequence has been exemplified in our experience and the less often it has been falsified, the more subjectively probable it is. that is to say (as I shall argue later in this study) the greater its conductivity to purposive thought.

Causal situations are complicated by the fact that causal forms can intersect. When several different causal forms meet in a contingency, like several billiard ball trajectories converging at a point, it may not be clear how the outcome is determined. Explanation in such circumstances involves what happens when several components of change operate, not individually, but in simultaneous superimposition, one upon the other; and this in turn may require recourse to some additional, more generalised causal form - a wider hypothesis - which makes it possible to order their interactions.

I do not propose in this context to elaborate a detailed theory of causation, prediction and inference, or to enter into the current controversies of philosophers in this field. My present need is to propose a method of description which fits into the conceptual framework developed in this chapter, and I hope that these two sections will be sufficient for that purpose. It may be worth adding, however, that the
account given here, although it is presented from a different angle and in terms of a different model, seems to me to be generally compatible with Sir Karl Popper's account as summarised, for example, in Section 28 of "The Poverty of Historicism". His "specific initial conditions" correspond to what I call the causal event (or contingency), his "specific prognosis" to what I call the effect event, his "universal statements" to what I call predictive or inferential rules. The corresponding terms used by Hilary Putnam are "auxiliary statements", "prediction" and "theory". As Putnam points out, we may be concerned in one context to arrive at a prediction from a given theory and given auxiliary statements (and then check whether it is true); in a second context to move from a given theory and a given fact which is to be explained to appropriate auxiliary statements; in a third context to move from a given theory, a given fact to be explained and given but insufficient auxiliary statements to additional auxiliary statements which complete the explanation. (His example here is the postulation in 1846 of a further unknown planet whose existence would complete the explanation of the known orbit of Uranus.) If a prediction is false, it is not necessarily the theory which is abandoned, and most "normal science" in T.S. Kuhn's sense is concerned not with discovering new general "paradigm" theories, but with "puzzle-solving" within the field defined by an accepted paradigm. If predictions fail, the paradigm itself is not abandoned, but a search is made for new auxiliary statements, which may include either supplementary contingent facts or supplementary theories or rules, that will have the effect of reconciling the facts with the paradigm. Such ideas as these can, I believe, be accommodated in my terminology of causal events (defined by what Putnam calls auxiliary statements), effect events and predictive or inferential rules.

Behaviour

An account of behaviour as the counterpart and response to information.

When one natural system encounters another in a contingency, the first system may be left unaffected, or it may be shifted in space, or it may be deformed (by mechanical or chemical or other action), or it may be informed. An act of deformation is a molar event - as it were a breaking of the rules, an overcoming of the balance of forces, through which the system maintains the form by which it is identified. Characteristically an act of deformation is irreversible. An act of information, by contrast, is a molecular event, a change in the form of a part or subsystem of the main system which of its nature, that is by its own rules, can accommodate a range of possible forms.

Characteristically this range of possibility can either be a repertoire of mutually exclusive alternatives, or a store of considerable, or even virtually unlimited, capacity, from which one form can be drawn at a time. In the case of a store new information can be added to the store (sometimes up to a limit) without affecting the retention of earlier information - though older information may decay, i.e. become gradually more generalised, over time.

The fact that a system is capable of absorbing an input of information characteristically means that it is also capable of an output of behaviour in response to the information. Behaviour is a second or reactive event, a change in the state of the system which again is characteristically a change of form within a range accommodated by the system's own rules. Correspondingly behaviour is often drawn from a limited repertoire of possible actions or sequences of action (possible roles or, perhaps better, routines), but may also be drawn from a store of possible actions or sequences of action which is developed during the life of the system and may be virtually unlimited in extent.

Thus the behaviour of a mimosa leaf which closes down when it is touched and opens up again when it is left untouched reflects the adoption of one of two possible actions in response to one of two
possible states of information. That is to say, the set of rules which
govern the behaviour of the mimosa leaf, while totally dependent on
the laws of physics and chemistry, is embodied in a particular con-
figuration of molecules and atoms forming the mimosa leaf and
characteristically capable of assuming alternative states of information
that in turn lead to the appropriate behaviour. On the other hand the
fact that a metal rod expands when it is hot and shrinks when it is cool
is not an example of behaviour, because the changes to which the
expansion and contraction are a response are external to the system,
not informational changes within it. Because there are two alternative
states here forming a repertoire we can say that the state of the rod
on a given occasion represents potential information derived from the
environment; but it is not actual information unless it is capable
of being used — as in certain control systems it may be used — to govern
as a subsystem an output of behaviour in a larger system. In short
behaviour that is not in response to information is not strictly
behaviour; while information that has no potential use in governing
behaviour is not strictly information. We could put it another way
by saying that information is a form assumed by a part or subsystem of
a whole which becomes effective (or potentially effective) as an
internal rule determining the output or behaviour of the whole by
restricting the possibilities of transition in time.

With an inanimate object every encounter in a contingency leads
either to movement or to deformation or to no change at all. With a
passively regulated organism like a plant or tree the same is also
generally true (the mimosa's capacity for behaviour is not common among
plants), but with the important difference that when its form has been
altered by an encounter the organism may react by growth (determined
by genetic information) in such a way as to restore and heal in some
degree and over a considerable period of time what has been altered.
An actively self-regulating organism however can react by movement or
change of one part of itself in relation to the whole without any
permanent change in its form; and this is what constitutes behaviour
proper.

Certain types of behaviour lead to locomotion of the whole organism,
while others lead to the initiation of chains of cause and effect outside the organism, as when a man pushes a stone with his foot and causes a landslide. While a tree will encounter the fire and get burnt, an animal may encounter the warmth before it gets burnt and react by retreating to safety. Such a response to the stimulus of warmth need not imply any knowledge of the possibility of fire. It may be a simple reflex, a result of the laws of physics operating in a direct sequence of causal transitions linking, for instance, sense receptors and muscles, within a particular biological form evolved by a process of natural selection so that it exhibits precisely this response. When it comes to a learned response, however, we are faced with something different. Here selection works by the elimination or non-reproduction, of the less well-adapted response without any elimination of the organism itself. This means, however, that selection of the response for elimination must occur before it has taken place and so caused or facilitated the disappearance of the whole organism. This in turn means that the response must be selected in some fashion which identifies whether its potential consequences are good or ill for the organism, that is, ultimately for the organism's survival and reproduction. The process must therefore include some model of the potential consequences - a model of the possible future, of what is not - and some method of assessing this for good or ill. Irrespective of whether the process is mechanically deterministic or not, and of whether it involves consciousness or not, the learning of even the simplest conditioned response must involve a model of the future growing out of the present and a means of selecting for or against that model.

Models and Codes

A discussion of models and codings and their relationship to reality. Models of the possible future as a prerequisite of behaviour based on learning.

What, then, is a model? It must be a separate representation of the form which an actuality might take without being that actuality - and

indeed without being a formal reproduction of it in all respects. We may
describe it as a coding, that is, a re-expression in a code of the actuality which it represents — or, better, a recoding, since we cannot take cognizance of reality except as already expressed in some code or other, whether of the senses or of thought.

What, then, is a code? It is a limited set of possibilities, ordered at least to the extent of being grouped or segregated; an example would be a sensory register or dimension. What is a message? An instance, or an ordered set of instances, of the possibilities in a code; thus space is a code, while anything recognised as exhibiting spatial form is a message in that code. In other words a message is itself a model. We have already seen that a material object can often yield messages — information — in a more or less endless variety of registers (codes); but that when we perceive or otherwise take cognizance of an object we actually take in only a limited amount of information in a limited number of registers which happen to be available and are relevant to our interests at the time. We unify those registers by recognising them as hierarchically subsumed in a single language or supercode; thus we recognise the information received through different senses as forming part of a single perceptual message about a single perceived world expressed in a single, though complex, perceptual language. (In passing we may emphasise again that the amount of discrimination, the number of possibilities available in any one register may vary according to the conditions, e.g. of light or environmental noise.)

What happens when a message is recoded, or decoded, is that a different instance or ordered set of instances drawn from a different ordered set of possibilities is substituted for the first. How does this happen? Through causal reactive transitions such as we have been examining: pressure on a key, for example, in a particular contingency results in the production of a sound. What then is meant by order in a set of possibilities? Fundamentally order is equivalent to rule, a restriction in the possibilities of transition in time. At the lowest, as I am using the word, it means that a number of possibilities are grouped together in a simple repertoire in such a way that each is a
mutually exclusive alternative to all the others. Three lights, one
green saying go, one yellow saying caution and one red saying stop,
constitute such a repertoire; but if we introduce rules of internal
grouping and sequence, as in the British traffic light code, we are
already bringing in a higher level of organisation and creating a super-
code.

In the case of perceptual registers, while it is arguable that the
basic elements of spatial form in two or three dimensions—such as
straight line and curve, build up simple repertoires, there are higher
level rules of continuity governing the ways in which they can be put
together in sequence to form complicated shapes. (My understanding,
drawn from Ashby, is that those rules have to do with the mathematics
of Markov chains, but I am not mathematician enough to make assertions
in such matters.) For the rest perceptual registers seem to fall into
three groups:

a) **scales**, where values are ordered in a particular sequence in a
dimension;

b) **spread repertoires**, where values are identifiably different and
mutually exclusive, yet shade into one another (though each does
not necessarily shade into every other). Examples are the registers
of colour, taste or sound timbre. Analysis suggests that in
spread repertoires we recognise values at two levels: micro-
values which form ranges of sequential possibilities and macro-
values like red or sweet which build up a simple repertoire for
each register.

1. At the lower level we distinguish limited ranges of values ordered
in sequence from zero to maximum, as when we distinguish shades of
red or green by their degree of saturation. No individual range of
micro-values covers the whole spread of a repertoire such as that
of colour or taste, but each range overlaps with its neighbour so
that a given shade of purple, for example, can be recognised
simultaneously on two ranges, both as reddish and as bluish. Each
range itself represents a macro-value, such as green, brown, blue,
sweet or salt; but it appears to be partly a matter of acculturation
or of the arbitrary direction and focus of attention which segment
of the whole spread is taken as a range on any particular occasion—
for example what we regard as brown or savoury may vary somewhat
on different occasions. (There is evidence that the accepted values
for colour vary from one culture to another. According to Berlin and
Kay, as summarized in "Semantics" by Geoffrey Leech, 1974, there are
11 basic categories of colour, from which each language takes only a
subset.) The macro-values are not ordered in relation to each other,
c) **polar spreads**, which are in effect spread repertoires that contain two macro-values only, such as hot:cold, wet:dry, or rough:smooth.

Broadly, the more complex the register, the greater the amount of information conveyed by the recognition of a single value in it. A continuum of space or space-time is an ordered union of two or more scalar sets of possibilities in which combined messages uniting values in each register simultaneously can be recognised. An idea, which is a classification, represents a register of abstract cognition affording a repertoire of two possibilities only, yes and no, though we may also identify logical dimensions which are abstract polar spreads (brave: cowardly, proud: humble, etc.) corresponding to the polar constructs of George Kelly's personal construct theory; while at a higher level complex rules of grammar make it possible to build up abstract predications or sentences which convey a considerable amount of information.

What, next, is meant by order in a set of instances of ordered sets of possibilities? Here we are dealing with the message rather than the code, that is, the order of the individual values put together to form a complex message. The basic requirement is continuity: the values must follow each other in at least one dimension of time or space — for example the words in a sentence, or, at a different level, all the different values of form and colour that build up the picture I see through my window, which are unified by the continuity of one space.

Now what happens, in more specific detail, when a message is recoded? In the simple one-to-one case a message consists of a value or a continuous set of values in one register such as that of spatial length, which is replaced, as the result of a series of causal transitions, by a value or a set of values in another register, such as that of temporal length; a set of continuous dots, dashes and short gaps on paper, for example, is replaced by a continuous set of short and long at least as phenomena of consciousness, whatever physical science may say; but they are nonetheless mutually exclusive values on a unified register. The micro-values, in contrast, are ordered together in a range which is a kind of scale, but one with a difference: the steps in it are not mathematically predetermined, but tend to be established *ad hoc* for each discrimination, according to the degree of resolution afforded by the sensory apparatus at a given focus of attention.
buzzes and short silences in time, in accordance with a definite rule or rules of transformation.

It has been noted earlier that we cannot in fact perceive anything in one register alone; there has to be a continuum uniting at least two. Thus we cannot perceive a line, or dash, of no width; nor a temporal length unsustained by any value in any other register than time — such as that of sound. This amounts to saying that a message has to be embodied in a form, which is its physical "marker", to borrow a term from Dr. James G. Miller¹, before we can take cognizance of it. But we can nonetheless extract a uni-dimensional message from a two dimensional form if the code we are using is itself uni-dimensional, as with the dots and dashes where it is the variable length which is significant. This exemplifies again the fact that the information we absorb on a given occasion is often derived from only a few out of the variables which affect our senses directly, let alone those which are theoretically identifiable through instruments or calculations or other means. It is easier to express a message in a code if we restrict the number of registers to be used, and hence the variables to be controlled, leaving aside as "noise" any variables transmitted to us in other registers; and similarly, though the world happening around us in time represents the continuous emergence of information — or actuality out of possibility — we can make sense of it only by identifying at any time relatively few variables in relatively few registers forming one system in one continuum. Our consciousness is of a succession of predicative systems which we can realise only one at a time. But this is to run ahead of our argument.

If we return to our example of the recoding of a message, we can say that the series of buzzes becomes a model of the series of dots and dashes insofar as it becomes a re-expression of the information, the values in certain particular registers, which we drew from it — a re-expression in a different series of physical markers. If the number of possibilities in the new register matches exactly the number in the original register of dots and dashes, we have a direct one-for-one re-coding.

If however it has fewer possibilities, then the message may have to be
generalised; the model may for example translate both dots and dashes
as the same value, with a different one (silence) for the gaps. It is
still possible in such circumstances to translate the whole message
accurately into the new form, but no longer by a direct one-for-one
coding; it would be necessary to adopt some different code, such as
that of equating a dash to two successive buzzes separated by one unit
of silence, a dot to a single buzz and a gap to two successive units of
silence. Characteristically however the transmission of the message
into a register of fewer possibilities - a channel of lower capacity -
involves more individual events and hence (other things being equal) a
longer time.

As this argument makes clear, recodings can be of two different
kinds. The first kind is a recoding on to different physical markers,
but with a one-to-one reproduction of the original code. The second is
a transformation, according to a given rule, of the code itself. (Some
writers would reserve the word "recoding" to transformations of the
second type.) Miller draws a further distinction between alpha, beta
and gamma codes. An alpha code is one in which the ensemble of markers
is composed of different spatial patterns of structural arrangements of
physical artifacts: "these are lock and key codes like those of DNA and
RNA". A beta code is one based on variations in process, such as
different temporal patterns of signals or different patterns of intensity
of signals: "such are codes used by neurons". A gamma code is "a
symbolic language" which involves "comparing the input to a stored
thesaurus of information and selecting the output from it. The relations
between the symbols and the input and output markers in such codes are
entirely arbitrary."1* We shall be considering in more detail later
how the mind uses codes of this kind.

If we are to achieve full control and the maximum of accuracy in
our model-making, it will often be worth while, or even unavoidable, to
transmit all the required information in digital values, that is, in
messages in uni-dimensional scalar registers, in which the total number

   (Behavioural Science Vol. 10 No. 4, 1965).
of possibilities in the register can be expressed as a cardinal number and each actual value can be expressed as an ordinal number. This is the normal procedure of science. As Eddington said in a famous remark, "The whole subject matter of exact science consists of pointer readings and similar indications." However, the conscious mind has only a limited capacity to grasp pointer readings directly. If a ruler is marked in equal divisions of more than five or so at a time the mind finds it difficult to grasp ordinal positions at a glance. The maximum it can grasp is probably about seven; if there are more possibilities than that in the register we have to begin to count. On the other hand the mind has a remarkable capacity for absorbing information in terms of forms which unite sequences of values in different registers but themselves emerge in new registers of their own, each appropriate to its own continuum. We normally think of a model as having a three dimensional shape, and indeed three dimensional shapes can resume a vast amount of digital information. But information coded in forms ("analogue forms") cannot by definition be quantified without recording, for to quantify it is to code it in digits.

Now I have suggested that we cannot know anything that is not expressed in a code. In other words we can only know information, that is facts, models, messages about the world. But if the same message can be expressed in different codes, is there not something underlying every such encoding of the same message which we can draw out as the true reality? I have already touched on this question in relation to facts of existence and facts of classification. It represents one of the abiding puzzles of philosophy, though it seems to me less a true problem, to which an intellectually satisfying answer can be found, than one expression of the inevitable finitude of the human mind. For what it is worth, my own position is broadly the Kantian one: I do not think we can know, at least with the clear and distinct force of a Cartesian idea, reality in itself, "das Ding an sich"; even to speak or think of it we have to make it singular or plural which is already to encode it. All we can know is facts about reality.


2. According to Gregory Bateson, it was Alfred Korzybski who "made famous" the principle "that in all thought or perception or communication about perception there is a transformation, a coding, between the report and the thing reported, the Ding an sich. Above all the relation between the report and the mysterious thing reported tends to have the nature of a classification..." (G. Bateson: "Mind and Nature", Fontana 1980, p. 37).
Piaget expresses a similar view with precision: "Indeed the object exists and objective structures exist themselves before one discovers them. But one does not discover them at the end of an operational voyage (in Bridgman's sense) in the way in which Columbus discovered America in the course of his voyage; one only discovers them by reconstructing them, that is to say, one can get nearer and nearer to them but without the certitude of ever simply touching them."¹

Against this we may set, as a resounding utterance of quasi-religious faith, Michael Morgan's statement that "No believing scientist can base a theory of perception on the proposal that the causes of perception are unintelligible 'things in themselves'."²

The argument becomes one of whether we perceive real objects in a real space or we perceive representations of an ultimately unattainable reality in a represented space. The issue comes so sharply in our present context that I have not felt able to ignore it; but in practical terms the answer makes no difference, and in theoretical terms the question is doubtfully intelligible. Underlying two different models or encodings of the same message there is a particular non-randomness, a particular set of regularities (instances of rules), a particular form, a particular information, a particular creation, a particular reality; these words are here virtually interchangeable, and what they refer to, being ultimate, is beyond us.

To return to more practical matters, we have noted that the capacity to behave in a way that is related to past experience must involve the capacity to form a model of the possible future. We can now perhaps say a little more about the processes involved. First the organism must take cognizance of the present contingency — otherwise encode it. But that does not get us very far. Next it has to find a model of a past sequence of events, or a model derived from many past sequences of events, in which the earlier part in time matches the present contingency and the later parts therefore correspond to a possible future. This implies a model in which the time dimension is recoded in some synchronic register; and further it implies a

process of matching by which the model of the present—recoded in the
same register—is matched against part of the model of the past and
found either to fit or not to fit. Not only this: a single model
predicting a single possible future event is of no value for regulation.
At least two models are needed, each including a movement or action or
abstention from action of some kind which is within the possible range
of behaviour of the organism. There must be some means of evaluating
one against the other, of adopting the one preferred, and of actualising
the appropriate behaviour at the appropriate time. All this within the
frame of the network of contingencies described earlier; every step in
the process as a whole must flow as a reaction arising out of the
preceding contingencies through the operation of natural laws.

Attention should be drawn to two points in particular. First,
the model need not be a mere reproduction, albeit in generalised form,
of events which have taken place in the past. Several such models or
predictive rules may be brought together in a modelled conjuncture, in
such a way as to create a model trajectory as a whole which, taken as
a whole, is a new creation; it does not reflect anything in the organism’s
past experience, although its component elements will have their
own roots in the past. Secondly, when it comes to the matching of one
model against another—or part of another—we find ourselves dealing
with a remarkable process of which the importance may need to be
elucidated and stressed. We can describe matching more precisely as
comparison leading to equation. It involves the juxtaposition of one
form with another and the recognition that the one fits in to the other
as the head fits into the gap, as the more particular fits into the
more general, as the instance fits into the class, as the actual fits
into the possible.

Equation is a form of classification and it always has a direction:
x = 3 means that x is a member of the class of triads, it does not
necessarily mean that 3 = x. Only in the special case of identity is
the equation reversible, when not only is x an instance of the class of
which y is the paradigm, but y is an instance of the class of which x
is the paradigm—at the level of discrimination, and hence of
generalisation, which is available in the circumstances. The establishment
of an equation is the passing of information, and if the equation is between the encoded present actuality and a model derived from the past, it is the passing of information about the actual world into the organism, information which remains there if in some recorded form it is fixed by memory. This is effectively the process to which Piaget refers as "adaptation", with its two components of "assimilation" and "accommodation". The particular is assimilated to the general, the general is accommodated to the particular. In a successful adaptation equilibrium (which I have called equation) is achieved. "It is by adapting to things that thought organises itself; and it is by organising itself that it structures things."¹ In Piaget's view adaptation is always accompanied by organisation, and it will be seen that the scheme that I am proposing is in accordance with this idea; indeed this study is essentially concerned with examining how the organism organises its self to cope with the world.²

In some cases the model derived from the past is in fact derived from the evolutionary past, as when an insect is programmed to recognise the fragrance of a particular flower it has never met before in its own brief experience; but this is no more than to say that the passing of information is required for a reflex response as well as for a learned response. For practical purposes the need is for a yes/no reaction in the particular type of contingency which the juxtaposition of the two forms in the same code represents. The result is either connection or no connection. As we have noted, the process of comparison may be either simple or analytic, that is, made up of an ordered sequence of simple comparisons. It can sometimes yield a value which is not yes or no (instance or not instance of the class in question), but like or unlike; and this indicates that the subject is an instance (or not, as the case may be) of a further class with a paradigm form which is more general than that with which the original comparison was made.


2. We are not far here from the concept of analysis-by-synthesis used by Ulric Neisser in his "Cognitive Psychology" (1967), following Eden (1962). Nor, as Flavell points out, are we far from Kelly's (1955) idea that to adapt intellectually to reality is to construe that reality, and to construe it in terms of some enduring construct within oneself. What I am perhaps
Our argument so far has brought us to a point at which we have enumerated some of the essential elements of any mechanism which could make it possible for any organism to achieve the more efficient type of regulation which involves learned responses and active, purposeful behaviour. The enumeration is far from complete, but it may be sufficient to indicate something of the framework of basic categories of randomness, regularity and possibility, information, causation, coding and equation within which any study of such a mechanism needs to be conducted. I do not propose now to attempt to follow out this argument with a progressive elucidation of the conditions and mechanisms needed for progressively more complicated degrees of regulation, from those of the simplest organisms onwards. I propose instead to make a leap to a rough but relatively comprehensive model of the working of the human mind. My ideas on this subject have been developed in some detail elsewhere, but for present purposes a single chapter may be sufficient, as my aim is no more than to provide a conceptual frame within which a coherent study of the Self can be undertaken.

1. So far as the respectability of the concept of purpose in scientific discourse is concerned, I would say only that I agree with J.M. Brener when he says that "the intentionality of purposiveness of behaviour is implicit in the evolutionary assumption that behaviour serves adaptive functions". (In Chapman and Jones ed. "Models of Men", British Psychological Society 1980) Such a view is also implicit in the work of Ross Ashby, the "bio-mathematician", on living systems.
II: A MODEL OF THE MIND

Miller's Analysis of Mental Functions

James G. Miller's account of the organism as an open system of 19 information processing and matter/energy processing subsystems. A consideration of mind conceived as the central regulating processes of such a system.

The mind is a regulator. It applies rules. By means of rules apparent randomness is construed, predictions are made, possibilities are narrowed down, choices are faced, action is taken.

We tend to think of our lives as journeys or pilgrimages across a landscape of historic time and universal space, in which it is we who move, while the world and its history are set in array around us. But it would perhaps be closer to the reality if we thought of ourselves, not the world, as set and fixed in an eternal Here Now, while the unceasing flow of the future comes at us and streams through and by us, changing as it goes into a past that hurries away from us again. It is only this Here Now which is directly real to our consciousness. The past influences us through our memories or through the facts that we have learned, but the effect is not that of any direct transmission from the past, like the light from a receding galaxy, it is something in ourselves Here Now which affects us, the present memory not the past event itself, even though it will have been originated by the past event when it took place. Still more is this true of our imaginations of the future; these may powerfully affect our minds, but it is the present prognostication that exerts the influence, not the future event.

These facts, memories, prognostications, affect us because they operate as rules restricting the possibilities of transition through ourselves. We are self-regulating systems whose activity is a series of steps of regulation which take the possibilities of the future as they come at us and reduce them to a narrower but more sharply formed actuality moving into the past. The general effect of the steps of
regulation is to enable us to survive, to keep us in being as persistent forms.

So far, perhaps, we may be carried by the analysis of Chapter I. But our next task is to come to closer grips with the notion of the mind as the part or subsystem of the organism that is responsible for these steps of regulation. It is curiously difficult to find a guide which might be relevant to this enquiry in the form of a reasonably detailed account of what the mind is and what it does. The philosophers, for their part, are nearly always concerned with the mind in relation to broad problems of knowledge, existence, the body, will, consciousness and so on. They are facing towards these general problems, not towards a description of the specific structures and processes of the mind. There is a chapter, for example, in Spinoza's "Ethics" called "The Nature and Origin of the Mind", but despite its promising title it is of no service at all to us here. Even Kant, though he does show a remarkable power to get down to psychological processes, is in effect looking in other directions; and so, for that matter, is Gilbert Ryle in "The Concept of Mind", a book which is concerned, to use Ryle's own words, with the examination of "the logical behaviour" of "mental-conduct concepts". "What is in dispute", he says, "is not how to apply them, but how to classify them, or in what categories to put them". That, certainly, is not what I am concerned with here. Wittgenstein criticises, perhaps with justice, the "conceptual confusion" of psychology, but, as this indicates, his interest is in elucidating concepts, not in building any coherent model of the mind. It could be said that in making these comments I am merely complaining unfairly at the philosophers for not being psychologists. But not many psychologists, either, seem to concern themselves with this subject. Most of them are reluctant to use the word "mind" at all, possibly to avoid any suggestion of the heresy of mind-body dualism; while modern experimental psychology is almost inevitably concerned with the relatively narrower and more specific aspects of the mind's functioning, rather than with broad constructions which are not so easily susceptible to the experimental approach. One exception to this generalisation,

however, is James G. Miller, whose massive study "Living Systems" includes a consistent analysis of mental functions and a detailed review of the relevant research; and it may be helpful to consider this analysis briefly as one way into the subject.

According to Miller's general theory all living systems are open systems composed of subsystems which process inputs, throughputs and outputs of matter, energy and information. He identifies 19 critical subsystems whose processes are essential for life; of these, eight process matter/energy, nine process information, and two (the reproducer and the boundary subsystems) process both. The list of information-processing subsystems is the following: input transducer (i.e. external sensory receptors), internal transducer (i.e. mechanisms sensing the internal state of the organism), channel and net (i.e. internal message distribution system), decoder, associator, memory, decider, encoder and output transducer. He identifies the 19 subsystems at seven hierarchical levels from the cell to the supranational system; but for our purposes we are concerned only with the level of the organism. Miller himself is one of those psychologists who avoid the use of the word mind. For our purposes it would be possible to consider all the information-processing subsystems as together building up the organism's mind, but this would, I think, stretch the word too far. It seems to me that in the terms of this analysis the mind, as we normally understand it, relates only to the three central subsystems, the decider, the associator and the memory. This at least gives us a starting point for our examination.

The decider is defined as "the executive subsystem which receives information inputs from all other subsystems and transmits to them information inputs that control the entire organism". "The decider is the only essential critical subsystem and it cannot be parasitically or symbiotically dispersed to any other system. The reason for this is that, if another system carried out the deciding functions everything

it controlled would, by definition, be a subsystem or component of it.¹

(This point becomes directly relevant only in the case of certain lower organisms or in the case of higher level systems such as human organisations; but it nevertheless is of theoretical importance.)

Furthermore "a decider differs from a node in a channel or net in the following way: The number of alternatives or degrees of freedom in the information output of the decider is smaller than in its information input." Here we identify the critical test of a regulator that it applies rules, it restricts the possibilities of transition in time.

Decision, on Miller's account, is a problem-solving process which has four stages: (a) establishing purposes or goals (always related to reducing "strains" within the organism); (b) analysis of the situation; (c) synthesis of a course of action (essentially by the use of logical processes to reduce the number of alternatives where possible to a single choice); and (d) implementing the decision.²

According to this theory the associator subsystem, as distinct from the decider, has the function of "carrying out the first stage of the learning process, forming enduring associations among items of information in the system. It synthesises a set of bonds or inter-relationships among them so that at some future time inputting item A into the system will elicit items B... N as outputs, each with its own probability which will be greater than 0 and less than or equal to 1. The synthesis formed is at least somewhat different for each individual system... consequently it constitutes a private organisation of knowledge... Evidence that the stochastic process of associating is occurring is obtained when the probability increases that one item of information will elicit another item."³ The theory is clearly shaped

1. "Living Systems" p. 67. According to this theory free-living cells, as distinct from aggregated cells (which form part of organisms or organs) possess all 19 subsystems; but aggregated cells and organs may lack certain subsystems "such as the associator or the memory or the decider which are 'upwardly dispersed' to the organ or organism which exercises control over them in hierarchical fashion from the higher level.

2. These stages may be compared to the four phases of the heuristic process distinguished by Polya, as reported in "Plans and the Structure of Behaviour" by G.A. Miller, Galanter and Pribram (Holt, Reinhart and Winston 1960). These are: (1) Understanding the problem; (2) Dovising a plan that will guide the solution and connect the data to the unknown; (3) Carrying out the plan; and (4) Looking back at the completed solution, reviewing, checking and possibly improving it.

to accommodate behaviourist ideas of learning, to which in his review Miller gives a good deal of attention; but it does not exclude others and allows specifically for varying assumptions about "what processes (or intervening variables) relate inputs to outputs" - that is, for cognitive maps, schemata, Gestalten, Nandler's "central analogic structure" and so on.

Memory, the third of the central subsystems, is described as carrying out the second stage of the learning process, specifically the reading of information into storage, its maintenance in storage, its loss or alteration in storage, and its retrieval. Because some stored information comes from the environment the memory is conceived as including a cognitive map of the environment which is constantly being updated; but it also includes inputs from inside the system, in particular the organisation of knowledge resulting from the processes of association.

Thus broadly, as Miller sees it, information from the environment and from within the organism, transmitted in various ways and in various codes, is eventually "decoded" into a "private" code used for the central processes of the system. These central processes consist of association, otherwise primary learning, which builds up an organisation of knowledge; of memory which stores knowledge; and of decision which uses it to establish goals, to select courses of action and to implement the chosen courses. Each of these three processes is the work or function of a specific subsystem within the whole. Finally the implementing signals are translated out of the central private code by the "encoder" subsystem into codes appropriate for the action to be taken.

Can we accept this account of the central processes of regulation as a first approximation to describing what we mean by the mind? I suggest that we can take it as broadly delimiting the subject matter and identifying its main elements in such a way as to establish what it is that we are talking about; but not as an altogether satisfactory approach to describing what happens. I have much respect for Miller's work and I share his estimate of the value of a systems approach. Moreover so bald a summary as I have given cannot begin to do justice
to the complexities of his treatment of the issues. Nevertheless in
this field the main value of his theory seems to me its usefulness as
a tidy receptacle, a means of ordering and relating in a coherent manner
the vast amount of research which has been done on various aspects of
animal and human information-processing capabilities. As a dynamic
model of the system working as a whole it is still vague and
unsatisfying. In criticism I would mention two points. In the first
place the theory finds virtually no place for consciousness (which does
not figure in the 30 page subject index of "Living Systems") and
consequently no place for a delimited sphere of mind, or mental
function, nor for any consideration, as such, of what is the character-
istic activity of the mind, namely thinking. In the second place the
division of the central processes among three separate subsystems, while
it tends to fit conveniently with the usual compartmentalizations of
experimental psychology, is I believe unsatisfactory as it stands, for
reasons which I hope to bring out during the course of this chapter.

The first of these criticisms is from one point of view unfair.
It arises because Miller sticks closely to theories which can be supported
by the results of research, and there is still a wide gap between the
models that can be useful in the laboratory and the intuitive categories
in which we tend to think about our mental life. In a sense I am
calling for a more speculative theory that comes closer to our intuitive
understandings and I shall try shortly to meet that call. As a first
step, however, it may be illuminating to pursue this criticism a little
further. In Miller's terms the decider is a subsystem with many
"echelons" or subsystems - some located in the endocrine system, some in
the autonomic nervous system, some in the spinal cord, some at various
levels in the brain. All of them take "decisions" in accordance with
genetic or other rules affecting the various functions which they control.
"Decisions are made at the level of the retinal cell when it either does
or does not respond to the light rays that bombard it; at the level of the
organ when the optic pathways either do or do not transmit an image, at
the level of the organism when the sentry decides whether friend or foe
is approaching."¹ Although the echelons are hierarchically integrated,

¹ "Living Systems" p. 68.
"characteristically information is abstracted or made more general as it proceeds upward from echelon to echelon and is made more specific and detailed as it proceeds downward... In some cases of decentralized decision-making certain types of decisions are made at lower echelons and not transmitted to higher echelons in any form."  

All this arises because every functional unit in the body from the cell upwards is itself a partly self-regulating system, though it is subject, at every level except the highest, to certain controls from the next level above. In this way the functioning of an organism of almost incredible complexity is effectively coordinated.

I would not wish to quarrel in any way with this admirably clear exposition; but it seems to me important to note that there is a distinction between decisions at the highest level and all others, not only because the former alone are not shared or controlled by a further echelon at a higher level, but also because the former alone are taken consciously. To introduce the concept of consciousness raises a difficulty because there is no current consensus about how it should be defined. Although we all know in our subjective experience what it is, we do not find it easy to say what it does; there is surely significance in the fact that Miller fails to identify any subsystem serving consciousness as a process. I suggest however that in the present context it is possible for us to recognize a straightforward and far from mysterious function which is connected with the process of self-regulation and belongs to consciousness. This is the function of ensuring that we think of one thing at a time and consequently are able to avoid the confusion of taking simultaneous but incompatible, uncoordinated decisions. Provisionally I propose to define consciousness by this function.

I shall not argue the case for this any further at the present stage, but I shall be returning to it later when I attempt to put together a general model of my own. In the meantime, before I make that attempt, I think it may help to establish a due perspective if I set against my discussion of Miller's ideas a brief consideration of the very different theoretical ideas of Jean Piaget and George Kelly about the working of the mind.

1. "Living Systems" p. 29.
Piaget's Theory of Psychological Structures

Thought as a quasi-dialectical process, based on sensorimotor schemata, which enables the subject to arrive at logical structures, necessary and timeless of their nature, that become the mediators between him and the objects around him.

J.H. Flavell in his book on Piaget\(^1\) complains that one has to work hard to understand what Piaget is trying to say in his theoretical writings; and in this respect his work is sharply contrasted with the careful clarity of Miller's. But Piaget's theories reflect a remarkably constructive imagination. It is perhaps fair to say that they come closer in some ways to our intuitive understandings than those of most Anglo-Saxon psychologists. Yet from the point of view of this study their usefulness is limited because they seem to stop short just when they should be getting interesting; and it may be of value to try to sort out why this should be.

In this enterprise I shall make use primarily of the two books of theory, "Le Structuralisme" of 1968 and "L'Épistémologie Génétique" of 1970, to which I have referred already, together with Flavell's exposition dating from 1963. For Piaget, as we saw in Chapter I, the basis of perception is a series of encounters between elements of the perceptual apparatus and elements of the environment, resulting in assimilation, which is "the integration of the data into an anterior structure" (as with the baby applying his innate capacity to suck) or "the constitution of a new structure under the elementary form of a scheme" (as with the baby learning to grab an object hanging on a string). Piaget's main interest is twofold: to trace out the stages of the development of mental capacity, and to draw out the implications of the processes and capacities he describes for the theory of knowledge. He is opposed both to the traditional empiricist who argues that "cognitive information emanates from objects" and to the "apriorist" or "innateist" who argues that the subject is equipped from the outset with "endogenous structures" which he imposes on objects. On the

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contrary what we know is derived, he says, from interactions half way between the two, originating in "a complete lack of differentiation". Consequently the initial problem is to construct "mediators" which, starting from the zone of contact between the body and the things around it, are progressively developed in both directions, inwardly and outwardly. From this "progressive double construction" grows our elaboration of both subject and objects.¹

The initial instrument of exchange, Piaget argues, is not perception but action itself. Perceptions play an essential role, but they are partially dependent on the action as a whole, with its much greater plasticity; in general "every perception ends in imbuing the perceived elements with significations relative to action".² The process of construction itself can only begin because the subject possesses from the outset the necessary minimum of "instruments of assimilation", which are the linkages common to all sensori-motor coordination. "In all these activities, of which the roots are innate and the differentiations acquired, one finds certain common functional factors and certain common structural elements."² The functional factors we recognise as our old acquaintances assimilation and accommodation. The structural elements are certain relations of order (e.g. in the movements of a reflex); embeddings (as grasping is embedded in the more complex schema of pulling); and correspondences (as in cognitive assimilations). These are essentially logical relationships used in the building of structures.

The concept of structures is central to Piaget's thinking, for logico-mathematical structures are the mediators between the subject and the objects round him. The progressive elaboration of conceptual structures in the subject makes possible a progressively more refined construction of the physical world. Even in perception the subject is "the actor and often even the author of these "structurations" which he adjusts in the course of their unfolding by means of an active equilibration, made up of compensations opposed to the external perturbations, and hence through a continual self-regulation."³

1. "L'Épistémologie Génétique" pp. 11-12.
2. "Le Structuralisme" pp. 51, 54-55.
Piaget’s somewhat unfamiliar use of the word structure is founded on the mathematical concept of the group and for a non-mathematician it is far from easy to grasp. Perhaps the key is that it is a whole involving not only relationships between elements but possibilities of transformation over time. The related ideas of equilibration and reversibility are also mathematically derived. "Every form of equilibrium", he says, "consists of a system of virtual transformations which constitutes a group". Equilibration is defined as "a process tending towards states of equilibrium, a process which takes account not only of the steps of regulation which mark its stages, but also of its 'final form which is operational reversibility.' Examples given of equilibrated structures at the sensori-motor stage of development are the permanence of objects through displacements and the "objectivised, spatialised causality" involved in the use of objects as tools. One could say that structures are schemata of actions (including the actions of perception and thought). Reversibility, as Piaget uses the concept, is central to any idea of a whole extended in time, which can only be recognised as a whole by virtue of the fact that "in my end is my beginning".

The development of mental capacity is effectively the development and clarification, through continual steps of regulation, of structures appropriate to coping with the world. After the initial stage of sensori-motor coordinations comes a second stage in which the powers of speech and imagination are developed; these permit the evocation of what is not perceived, "that is to say, representation or thought". Relationships of order integral to the sensori-motor schemata are abstracted to make possible a specific procedure of arranging or ordering; embeddings implicit in the schemata are abstracted to give rise to the procedure of classification; and correspondences are abstracted in such a way as to make possible systematic comparisons.

1. It may be helpful to have Piaget’s own definition (from "Le Structuralisme" p. 7): "A structure is at a first approximation a system of transformations which possesses laws of its own as a system (in contrast to the properties of its elements) and which conserves or enriches itself by means of the very action of its transformations without their having effects beyond their boundaries and without any appeal to external elements. In a word, a structure thus comprehends the three characteristics of totality, of transformations, and of self-regulation."

2. "Le Structuralisme" p. 96. We are close here to what I call equation.
element by element. Here, Piaget says, are the beginnings of logical thought, leading at a third stage to concrete operations which embody order recognised as fully reversible, transitivity, quantity and number. Finally comes a fourth stage of formal operations, of which the essential characteristic is that they set the real against the possible (a suggestion which clearly has affinities with the ideas about information discussed in Chapter I of this study). "What is astonishing", Piaget says, "is that the real is only effectively reached, not merely in its objectivity but also and above all in its intelligibility, when inserted in this way between the possible and the necessary, that is to say when it is intercalated... between possibilities bound together by links of deductive necessity."¹ Thus formal operations are characterised by a hypothetico-deductive cognitive strategy. They represent propositional thinking, in which the results of concrete operations are cast in the form of propositions and various kinds of logical connection are established between the propositions. Thus they are "operations to the second power"; and this in turn makes possible a combinatorial analysis, that is, an analysis which isolates for consideration possible combinations of propositions, otherwise hypotheses, which can then be empirically tested to arrive at the real. The logical connections established are identified as deriving from cognitive structures corresponding technically to a lattice of possibilities or a group of four transformations (Identity, Negation, Reciprocal and Correlative).

In epistemological terms the implication of this complex analysis is that a quasi-dialectical process based on sensori-motor coordinations enables the subject to arrive at a repertoire of logical structures which are necessary (though not pre-existing or predetermined) and timeless (insofar as they are reversible). In a sense the subject could be said to have arrived at Platonic structures "existing virtually from all eternity"; but Piaget is not prepared to accept this conclusion. Why, he asks, should it not be reasonable to think

should it not be reasonable to think "that the final nature of reality is to be in a state of permanent construction instead of consisting of an accumulation of completed structures?"\(^1\). And this is the epistemological conclusion to which he continually returns.

It remains to consider Piaget's views about the nature of the "subject". A large proportion of his extensive oeuvre is devoted to the development of mental capabilities and his approach to reality requires that this is conceived in terms of a reciprocal elaboration of known physical structures in the world and cognitive structures in the subject. But we do not learn progressively more about what the individual subject is, or what distinguishes one subject from others. On the contrary the structures with which Piaget is concerned are by definition public, necessary, timeless. They are to be found, he says, not in the consciousness of individuals but in their behaviour. The subject is explicitly dissociated from the ego and what the ego experiences, but he does not develop a corresponding theory of the ego (the "moi"). From his point of view the structures of the subject cannot be dissociated from his functioning, "and if the facts oblige us to attribute the structures to a subject, we are content to define this subject as a centre of functioning".\(^2\) And this is as far as he is prepared to go. The organism in its continual interaction with the environment is continually assimilating elements of the world about it as it accommodates itself to situations; but "on the plane of conceptual representation" this merely brings us back to "those general schemata which are structures". The subject remains a neutral and anonymous centre of functioning. This curiously empty conclusion perhaps owes something to Piaget's dogmatic opposition to any theory of innate characteristics that goes beyond the most rudimentary "instruments of assimilation".\(^3\) But it is also a reminder that the remarkable body of work which Piaget and his associates have achieved is nevertheless

1. "Le Structuralisme" p. 58.
3. In "Le Structuralisme" Piaget discusses linguistic structures in terms of a Chomskian transformational grammar, which indeed grows from mathematical roots similar to those of his own theory; but characteristically his chief concern is to replace Chomsky's hypothesis of the innate nature of certain grammatical structures with a hypothesis of progressive construction deriving ultimately from the coordination of sensori-motor schemata.
decidedly limited in its scope. There are risks in making such an assertion when the work is so voluminous and there is so much that I cannot claim to have read. But I do not think it is mere coincidence, for example, that there is no entry for memory or for emotion in the exhaustive index to Flavell's book.

George Kelly's Theory of Personal Constructs

A critical account of Kelly's general theory: a fresh and unified perspective over a broad field; but a view decidedly blurred at the edges.

"Man looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed... Let us give the name constructs to these patterns that are tentatively tried on for size. They are ways of construing the world... In general men seeks to improve his constructs by increasing his repertory, by altering them to provide better fits and by subsuming them with superordinate constructs or systems."¹

We recognise once more something very like the anticipatory schemata of Bartlett or Neisser or Piaget. But George Kelly, who wrote these words, was a different kind of thinker, not least because he was explicitly trying to develop a comprehensive general theory. He recognised that every theory had only a limited "range of convenience" and emphasised that "all our present interpretations of the universe are subject to revision and replacement"²; "the events do not belong to any system"³. But he was deliberately seeking generality: "The psychology of personal constructs ... is a theory of men"⁴.

For Kelly constructs are not merely ways of construing the realities of the world, they are means of prediction. "Since the universe is essentially a course of events, the testing of a construct is a testing against subsequent events. In other words a construct is tested in terms of its predictive efficiency."⁵ Hence the "fundamental postulate" of Kelly's theory, which is formulated as follows: "A

person's processes are psychologically channelised by the ways in which he anticipates events. This does not mean that some kind of energy flows through the channels thus provided, for Kelly rejects any concept of either "stimulus energy" or "need energy", he discards both "push theories" and "pull theories", which in his view treat the person as an inert psychological object animated in some way from outside. On the contrary he regards man himself as a form of motion, and in this no different from the universe. For "the world is not an abandoned monument. It is an event of tremendous proportions, the conclusion of which is not yet apparent. The theories that men employ to construe the event are themselves incidents in the mammoth procession. The truths the theories attempt to fix are successive approximations to the larger scheme of things which slowly they help to unfold... A theory is bound only by the constructive system of which it is a part - and of course the binding is only temporary, lasting only as long as that particular superordinate system is employed."1 Within this Heraclitean flux, of which he himself is part, what man does is to apply constructs to predict and control events. This is indeed the characteristic function of the scientist; but it is also characteristic of all men; this is a theory of man-the-scientist.

Kelly elaborates his fundamental postulate with eleven "corollaries". We anticipate events, he says, by identifying patterns of likeness in the world, which are "constructs of similarity and contrast". All constructs are thus bipolar, with a like end and a contrast end. Each embraces "elements" which fall within its range of convenience either as like or as contrasting. Everybody builds his own system of constructs which are ordered together through the subsuming of one construct by another as one of its elements. A person makes choices by placing different values on the alternatives represented by these dichotomies aiming always in effect to extend and clarify the capacity of his system to anticipate events. Actual experience tests the system and leads to constant development and change within it. Constructs may vary in their "permeability", that is, their capacity

to be stretched to accommodate new elements; and it is significant that unless a person's superordinate constructs have a considerable degree of permeability it is extremely difficult for him to accept major changes of outlook. Some inconsistency however can be tolerated between subsystems and, more specifically, the successive use of mutually inconsistent subsystems can be tolerated. Lastly, people in the same cultural group are likely to construe their experience in similar ways, but what is required for the social process is not that people should construe things in the same way, rather that one participant should effectively construe the other's outlook; the orderly weaving of traffic is an example of people successfully predicting each other's behaviour in this manner.

This is a therapist's theory. Kelly himself recognises that its "focus of convenience" is in the psychotherapeutic encounter. Its signal merit is that it provides a method by which we can attempt a rational and systematic exploration of the patterns of an individual's mind on its own terms, and without trying to force it into any standardised framework of traits or drives. With the aid of repertory grid and other techniques it has proved a useful practical instrument in therapeutic situations. Moreover its claim to be a general theory, reaching comprehensively across the spectrum of the human psyche, is not false. In this aspect it has a simplicity and straightforwardness which are attractive features. But as a general theory of the mind its simplicity is bought at a price. Difficulties are not so much ignored, as might be the case with a more partial and limited theory, rather they are elided or wrapped up in generalisation. Personal construct theory, for all the resourcefulness with which it has been developed, remains a systematization of the practical working assumptions of a gifted therapist. In this it bears some resemblance to the general theoretical views of Freud - though Freud never worked out his views in so formal a fashion. As a general theory it has important virtues, but it is open to the criticism that it simplifies too much. In Kelly's own

1. In his younger days, admittedly, Freud did attempt a major theoretical work, now known as the "Project for a Scientific Psychology"; but he was unable to bring it to completion. The ideas of the "Project" nevertheless exercised a lasting hold over his thinking. An account of it is given in Chapter 2 of Richard Wollheim's "Freud" (Collins/Fontana 1971).
terminology, its constructs tend to be over-loose. To develop this criticism in detail would take more space than is available here; but to give some substance to what I have said I will now add a few comments—necessarily brief and bald—on a series of particular issues.

Kelly commended Heraclitus, at the expense of Aristotle, for making "a pretty good start at construing an active universe". He is unusual in recognising the importance of the problem of what I would call structure (or form) and process, or synchrony and diachrony, in any analysis of human consciousness; but he deals with it by simply assimilating form to motion—an elision of the problem, rather than a solution of it. A construct is a synchronic entity, not a process, even if it is extended in a dimension of time (and it does not always have to be so extended). There is more to this problem than Kelly recognised.

We are left with a certain sense of vagueness, even of fudging; and the same is true when we examine his account of the construct itself and of construing. "A construct", he says, "is a single formulation of a likeness and a difference." Kelly insists on the bipolar nature of constructs—for example black versus white. "Conventional logic", he maintains, "would say that black and white should be treated as separate concepts. Moreover it would say that the opposite of black can only be stated as not black." But this conventional logic, he argues, is not the only way of seeing things; he regards his own assumption as more plausible than the conventional one, because it seems "to correspond more closely to observation of how persons actually think". But is Kelly's assertion about conventional logic correct? I am no logician, but my elementary textbook suggests that not-black is a negation or contradictory of black because if one is true the other must be false, while white is a contrary of black because it is possible for both to be false (the truth may be green). What seems on reflection to be clear is that, when people think, they are liable to use both negation and contrariety, both unipolar and bipolar.

2. Ibid. p. 133.
constructs. Even with a unipolar construct there is a distinction between X and not-X, but you cannot establish a scale of shades of grey between X and not-X as you can between X and Y. This criticism is not fatal because Kelly in practice applies his ideas with common sense. Moreover he is right to point out that we make our discriminations in context, by reference to the other things around rather than by reference to all the not-X in the world. Nevertheless it is fair to say that Kelly hardly sorts out the nature of constructs with the precision which might be possible.¹

Again with regard to the process of construing he gives no detail about how it is thought to take place. How do we build up, or invent, new constructs? How do we "try them on for size"? "The events of one's construing", he says, "march single file along the path of time." A

It may be recalled that Chapter I of this study offers what is in effect an alternative analysis, of which the main features are: (i) every idea represents a class, which divides the world into two, the instances and the non-instances of the class; (ii) our focal awareness is never of the class (except as an instance of another class) but always of the instance, singular or plural, or the non-instance as the case may be; (iii) beyond the focal awareness however we always have a peripheral awareness of the class itself as representing the range of possibility against which the actuality of the instance or non-instance emerges; (iv) in this aspect the class or idea may be described as a register of possibility — a yes/no register containing two possibilities only; (c) instances of ideas can also be recognised on other types of register (without losing their identity on their substantive class-register); these include what I describe as simple repertoires, scales, spread repertoires and polar spreads.

On this account polar spreads correspond to the dichotomous constructs of Kelly. The fact that we are not normally conscious of the register of possibility when we recognise the actuality corresponds to Kelly's idea that often the "emergent" pole of a construct is the only one of which we are directly aware, while the other remains "submerged". I would contend that what I have provided represents a more precise and useful analysis than Kelly's, one which recognises and accounts for the Kellian construct, but gives it a more accurate definition and location. It also brings in the concept of actuality emerging out of limited possibility which is important because of its relevance to the transmission of information. I should perhaps add that there are certain further complexities to be taken into account when we consider how ideas which are grammatically related together in predications mutually define a field of possibility for the predication as a whole; these issues are discussed in "The Grammar of Language".
good phrase, and I think a true one; but for me what it brings out is that a construing event is equivalent to what I call a predication, an event in which a number of ideas are brought together in a complex way to build up a new idea. Construing, as the word itself indicates, is fundamentally a grammatical process (even when words are not involved); but here no hint is given that there is a whole grammar of construing to be elucidated. We learn how one construct can subsume another in an "ordinal relationship" (which I would call a hierarchical relationship); but we do not learn of other possible spatio-temporal, classificatory, logical or grammatical relationships between constructs. The reality is more complicated than the theory allows.

A construct system may enable us to predict events, but how do we make choices, take decisions and act? Kelly's answer is that, within a system of dichotomies, "the person builds his life upon one or the other of the alternatives represented in each of the dichotomies. This is to say that he places relative values upon the ends of his dichotomies". Thereby "he involves himself in the selection". But what, in this context, is "himself"? Kelly says that the Self is a construct. "It refers to a group of events which are alike in a certain way... The way in which the events are alike is the Self". By what process does the Self get involved in choices? The answer is that "when the person begins to use himself as a datum in forming constructs... he finds that the constructs he forms operate as rigorous controls upon his behaviour".

Emotion is conceived not as a psychological push or pull but as an awareness that construct systems are in transitional states; thus the distinction between cognition and emotion is deliberately elided. Redefining emotion in terms of transition, process and change, Kelly develops the idea of a sequence of constructions involving successively circumspection, preemption and control, leading to choice. This comes close to the notion of a purposive cycle, but of course the idea of purpose (implying a pull theory), as distinct from anticipation, can find no place in Kelly's system. According to his theory, when a

2. Ibid. p. 131.
person faces a choice he chooses the alternative "through which he anticipates the greater possibility for extension and definition of his system" — a suggestion on which one can only comment that this is certainly not the way it feels.

Similarly with free will. "That which is subsumed by a construct may be seen as determined by it; that which subsumes the construct is free with respect to it." Thus a man may control his own destiny "to the extent that he can develop a construction system with which he identifies himself and which is sufficiently comprehensive to subsume the world around him."¹ This is a position reminiscent of Spinoza's and philosophically not easy to dismiss; but it is not of much assistance when it comes to dissecting out the processes by which men not only forecast events but make decisions and take purposive action in the light of their forecasts. It is, Kelly argues, a person's "seeking to anticipate the whole world of events and thus relate himself to them that best explains his psychological processes. If he acts to preserve the system (of constructs) it is because the system is an essential chart for his personal adventures, not because it is a self-contained island of meaning in an ocean of inconsequentialities."² Perhaps so. But then what are his personal adventures? Do they involve purposes? What does make him tick? These are difficult issues. Kelly may have a grasp of some important ideas; but his position is not convincingly worked out.

Finally, while personal construct theory, as I have suggested earlier, has the great merit of providing a means of exploring an individual's thought system on its own terms, it cannot be said to develop clear and distinct theoretical concepts of what we mean by such words as person, self or personality. So far as the formal statement of the theory is concerned, "person" is a given, defined merely as "the individual person rather than any part of the person, any group of persons or any particular process manifested in the person's behaviour". "Self" is used consistently to refer to a person's idea or construct of himself, but the nature of this construct is not developed in any depth. The

same could be said of the concept of a person's "bore constructs". In this context on the other hand the study of personality, as Bannister and Frensel put it, "would seem to be inescapably the study of the person", and so it is not to be separated from the theory as a whole. Some emphasis is placed on the idea of a person's "role"; but this is conceived as essentially a part of the social process, a pattern of behaviour that follows from a person's understanding of how the others who are associated with him in his task think; it is a way in which one person subsumes another person's way of seeing things. This is a valuable idea, but clearly a role in this sense is only one aspect of a wider unity.

In the upshot, over an impressively broad field George Kelly, as it seems to me, saw things in a fresh and unified perspective. But his theory is decidedly blurred at the edges and his fundamental concepts lack the firmness and interlocking precision they need to support the weight of a comprehensive system. He is always a stimulating thinker, but seldom a conclusive one. Personal construct theory is still a long way from providing an adequate general account of the way the mind works.  

U. Ross Ashby's "Design for a Brain"

A bio-mathematician's theory of how an organism, as a "machine with input" can learn from experience and adapt to its environment.

A strong contrast to the ideas of George Kelly, the therapist, is provided by those of U. Ross Ashby, who is perhaps best described

1. There have been some significant developments in the personal construct field since Kelly first propounded his theory, but I think it would be fair to say - as, for example, with Hinkle's "laddering" procedure - that they are developments in the application of the theory rather than in the basic theory itself. We may note that "laddering", which can be regarded as a development of Kelly's organisation corollary, makes use of the natural hierarchies of classification to which reference is made on p. 12 above, as these in turn are used by the individual's personal system of constructs.
by a word of his own coinage, "bio-mathematician". "Having experienced", he says in the introduction to his "Design for a Brain"\(^1\), "the confusion that tends to arise when we try to relate cerebral mechanisms to observed behaviour, I made it my aim to accept nothing that could not be stated in mathematical form... The aim proved achievable. The concepts of organisation, behaviour, change of behaviour, part, whole, dynamic system, coordination etc. — notoriously elusive but essential — were successfully given rigorous definition and welded into a coherent whole. But the rigour and coherence depended on the mathematical form."

Mercifully however for a non-mathematician like myself, Ashby goes on to say that "as the basic thesis... rests on essentially commonsense reasoning, I have been able to divide the account into two parts. The main account is non-mathematical and is complete in itself."

The mathematics may be relegated to an appendix, but the economy and rigour of the argument, expressed in an admirably clear prose style, remain. I do not propose to describe the ideas of "Design for a Brain" in any detail, partly because many features of the system developed in this book and its companion "An Introduction to Cybernetics"\(^2\) lie more or less submerged in my own approach to the definition and understanding of the world, as reflected, for example, in the first chapter of this study. But some brief reference at this point may still be appropriate.

"Design for a Brain" does not aspire to quite such heights as its title might suggest. Its aim is the limited, but still ambitious, one of establishing in strictly theoretical terms how an organism, an open system, existing in a particular environment can learn from experience and consequently adapt to that environment. It is a theory of the organism as a "machine with input". Adaptation in Ashby's terms is the maintenance of stability through changes in the environmental input; a form of behaviour is adaptive if it maintains certain "essential variables" "within physiological limits". An "ultrastable" system is one in which a primary feedback from the environment through sensory and motor channels is supplemented by a slower, second-order feedback which affects the values of the essential variables, with the result that if these pass beyond given limits they set off step-mechanisms which

produce a change in behaviour.

Ashby built an adaptive machine, the "homeostat", to demonstrate this basic mechanism for adapting to changes in the environment. His work goes on to examine the implications of applying such conceptions in the immensely more complex case of an organism in the real world. Of the gene pattern he argues that it provides one determinant of the living organism's mechanism for adaptation, but that the rest is supplied by the environment itself. Thus in the case of a kitten the genes provide "a learning mechanism and a tendency to play", but "it is the mouse which teaches the kitten the finer points of how to catch mice". He deals with recurrent situations and learning from trial and error; with the effects, particularly in terms of the time required for adaptation, of the degree of connectedness (and conversely the degree of isolation) between one variable or subsystem and another, both in the organism and in the environment to which it adapts; with local stabilities and "multi-stable" systems; with habituation; with the accumulation and the retroactive inhibition of adaptations; with problems of coordination, with sub-essential variables and sub-adaptations; and with the concept of learning as the amplification of adaptation.

Ashby develops his ideas within strictly determinist and behaviourist assumptions, but in context these are acceptable and useful because he does not pretend that they are more than assumptions. Throughout the book "consciousness and its related subjective elements are not used for the simple reason that at no point have I found their introduction necessary." But, as he himself says, this is not surprising, given that "the book deals with only one of the properties of the brain, and with a property - learning - that has long been recognised to have no necessary dependence on consciousness."1

What Ashby's theories offer, taking the two books together, is essentially a comprehensive, coherent and economical way of describing the world, including the living systems within it. Philosophically I believe that they have a good deal more importance than philosophers

1. "Design for a Brain" p. 11. He cites the way in which we unconsciously learn to make certain corrective movements when riding a bicycle as an example.
2. This point is put more precisely in the chapter on "Amplifying Regulation" in "An Introduction to Cybernetics". In mammals, Ashby says, "The gene pattern is used, in its action on the embryo brain, to determine the development at birth of some fundamental regulators ($R_1$) whose action is not immediately to the organism's advantage. From birth onwards, however, they act towards the cerebral cortex so as to develop in it a vast regulatory mechanism ($R_2$), which is of much greater capacity than could have been produced by the gene pattern directly. "Whence comes the supplementation? From random sources and from the environment itself... The quantity of design supplied by the gene pattern is supplemented by design (as variety and information) coming from the environment." These ideas show some interesting affinities with Piaget's theory of the development of cognitive structures through activities "of which the roots are innate and the differentiations acquired"; such developments culminate, on Piaget's account, in "formal operations", which are "operations to the second power"."
have generally realised — or indeed than Ashby himself probably thought. But in our present context the importance of his "Design for a Brain" is primarily that of a rigorous feasibility study, showing how a self-regulating, and hence purposive, mechanism is possible, and thus establishing and defining the concept of the mind as a regulator.

The Computational Metaphor

An account of Sloman's model of the mind as a computing system.

Ashby was one of the pioneers of a movement, growing largely out of military work in the Second World War, which led to remarkable developments in the new fields of cybernetics, information theory and systems theory, associated with such names as Shannon and Wiener. Closely linked in some respects with this work were the beginnings of research into artificial or machine intelligence, associated with the names of Newell, Simon, Shaw and later of Minsky, Boden and many others. As representative of general theories of the mind, to which this work has given rise, I propose to consider Aaron Sloman's "The Computer Revolution in Philosophy". As it happens, one of the themes of this book, subtitled "Philosophy, Science and Models of Mind", is that a major aim of science is to find out what sorts of things are and are not possible in the world, and to explain how and why — as distinct from seeking to discover and establish natural laws (though that is of course also a legitimate aim). Sloman's book is itself an exploration of the possibilities of what he calls the computational metaphor as a model for the mind. "A programmed computer", he says, "may include representations of itself, its actions, possible futures, reasons for choosing, and methods of inference, and can therefore sometimes contain purposes which generate behaviour". His work examines in impressive detail the ways in which mental structures can be represented in computer programs and mental processes represented in the execution of such programs. It is essentially a preliminary exploration of a potentially vast field of possibility, not a rigorous demonstration of any kind of theorem.

In Part I of the book there is a good deal of discussion of various philosophical issues, but what is most relevant in our context is Part II, consisting of a chapter entitled "Sketch of an Intelligent Mechanism", followed by further chapters on "Intuition and Analogical Reasoning", "Learning about Numbers" and "Perception as a Computational Process". In a final chapter he returns again to "Artificial Intelligence and Philosophical Problems".

Sloman distinguishes between structures, procedures (or programs) and processes which are generated when the procedures are executed. He also speaks of the computing system which uses and in some cases modifies the structures. The intelligent mechanism is specifically a mechanism to simulate purposiveness, flexibility and creativity. It is conceived as involving interactions between the following structures: an environment, a store of factual beliefs and knowledge, a store of resources (e.g. previously learnt procedures), a catalogue of resources, a motivational store, a process-purpose (or action-motive) index, and temporary structures associated with ongoing information-processing. These structures generate more or less temporary internal and external processes (an external process being an action); but there are also more permanent processes that link actions to current motives and make sure that relevant previous knowledge and new information are brought into play. These are (i) central administrative processes, (ii) monitoring processes and (iii) a process of retrospective analysis. Although the structures build up a mechanism, they are not conceived as interlocking parts which could exist separately; normal concepts of part and whole do not apply, since, for example, in a computer "list-structure" A may be an element in list-structure B, while conversely B may be an element of A. A program may even contain an instruction to run itself "recursively", provided some way of eventual escape from recursion is included in it. Correspondingly the relevant environment is part of the mechanism (a point which is more systematically developed by Ashby). The structures are not physically separate

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1. A structure is defined as "a complex whole with parts standing in various kinds of relationship". This happens to correspond exactly to what James G. Miller, following von Bertalanffy, defines as a system, namely "A set of units with relationships among them". The computer scientists go their own way over terminology and a degree of vigilance is needed to avoid possible sources of misunderstanding.
components, they are essentially "data structures" consisting of patterns of connections between data. Moreover in the last analysis "the distinction between data structures and programs has to be rejected in a system which can treat program steps as objects which are related to one another and can be changed."^1

What kinds of factual information are stored will depend not only on what stimuli reach the sense organs but on what codes and what kinds of perceptual analysis and monitoring procedures are available. If the store is to be usable it needs to have some form of catalogue (though this may be implicit in the organisation of the store rather than take the form of a separate sub-structure). Apart from the factual information store there has to be a store in which are coded and located all sorts of current purposes, negative purposes (i.e. situations to be avoided), sub-purposes, preferences, constraints and plans. The processes produced by the mechanism, that is, its internal and external behaviour, will be generated and controlled by reference to the motivational store. Effectively it is by means of such processes that decisions are taken, and on this point Sloman interestingly remarks that "in a complex world there may have to be a very large set of 'rules of thumb', including rules for deciding which rule to use and rules for resolving conflicts. This is almost certainly incompatible with assumptions made by economists and some moral philosophers about how (rational) people take decisions. For instance there need not be any overall tendency for the rules to optimise some abstraction called 'utility'."^2

In order to implement decisions it is necessary to have a store of resources, which can include tools and sources of information in the environment (e.g. books), as well as linguistic or symbolic abilities and established procedures (programs) for formulating problems, purposes, procedures and factual information. There has also to be a catalogue not merely listing these resources but identifying details about them so that they can be accurately matched to situations.

1. Ibid. p. 201.
2. Ibid. p. 120.
This catalogue may once more be partly implicit in the organisation of
the store, and partly also in the searching and matching procedures.

Beyond this again a more rapidly changing process-purpose index
is needed to store information about the reasons for various on-
going processes, and so to make it possible intelligently to plan,
control and coordinate their interactions. Also there may be a need
for temporary data structures associated with ongoing processes —
storing information about partial results, current values of variables,
next procedure step, where to send results, and so on.

The coordination of all these processes requires a central
administrative process which "will at various times survey the
motivational base and process-purpose index and select from the unful-
filled purposes a subset for generating further planning and action."1.
The selection may be governed by previously identified purposes, as
related to current information about possibilities, opportunities and
resources. At other times in a given situation a new purpose may have
to be identified and other purposes may have to be modified. The new
purpose can in some circumstances be simply to find a way of achieving
a given purpose to which at present no appropriate procedure can be
matched.

The "central administrator", that is, the program or programs
governing the central administrative processes, must be able to interrupt,
terminate, modify or restart current processes; and it must have in-
formation from monitors on which to decide when such action is needed.
These monitors include sense organs, which inspect the environment,
and perceptual procedures for analysing and interpreting in various
contexts the structural arrays they produce. The limits of these
structures, together with the limits of the sense organs and the current
store of information about the environment will define what the system
is capable of perceiving. In this respect Sloman is a good Kantian:
"There cannot be any such thing as perceiving things 'directly' or 'as
they are in themselves'. As Max Clowes once put it, we inhabit our
data structures."2. Human powers of discrimination are vast and it
seems necessary to postulate that only a selection of available

1. Ibid. p. 125. 2. Ibid. p.128.
perceptual programs is used at a time; but Sloman comments, in relation to the computer analogy, that there are serious problems in explaining how appropriate programs are selected. The mind would seem to have at its command a large number of monitoring programs, some general purpose and some specialised; and the one can trigger the activity of the other. Not all newly monitored information can be stored because there is so much of it, but often new information can be stored temporarily - usually in a 'raw' or only partly processed state - in case it turns out to be useful in some different context, perhaps processed in some different way. Monitors are needed not only to notice and interpret what is happening, internally and externally, but also to establish what progress is being made towards the achievement of current purposes, whether incompatibilities are developing, where success has been achieved and where failure must be registered.

Finally, for effective learning, the system will need to have a fairly detailed record of events, including information which is not obviously relevant to current purposes, and programs for searching the past, making all sorts of comparisons, relating new information, old information, current motives and possible future motives. This retrospective analysis will have to be done both in a general way and in a specialised way, to identify unsolved problems and relevant questions, together with ways of investigating them and drawing relevant conclusions. Without curiosity and a generalised drive to identify problems and look for answers the ultimate capacity and adaptability of the system would be much restricted.

By accepting the discipline of working out a system which in principle - if not yet in practice - could be applied in the programming of a digital computer, Sloman has made a beginning of a "systems analysis" of the human mind. He has produced, as it seems to me, a most useful dissection of the functions which any model of the mind must reflect. His model is developed in much more detail than my brief summary can indicate and his discussion brings out a number of significant features and problems. Here I can do no more than draw attention to two or three points of interest and in particular take up one fundamental issue, which relates to the adequacy of any digital
model of mental functioning and the possibility of finding an alternative.

The first point that I should like to stress is that Sloman's work, far from suggesting that the mind's capabilities are at least in principle easy to match and understand, continually runs up against the quite remarkable "computing" capabilities even of very young children: "I do not believe that anybody has even the beginnings of explanations for most of the things we know they can (sometimes) do; all we find is new jargon for labelling the phenomena." He argues that work like his in Artificial Intelligence shows up the inadequacy of many philosophical ideas about such matters as the nature of concepts and knowledge, varieties of inference, and the nature of numbers; and he suggests that it will be helpful to think of mathematical discovery by analogy with a program which discovers new facts about itself by a combination of executing parts of itself and examining some of its instructions. A program which builds its own programs can be a means of elaborating and generalising from existing procedures.

In regard to perception Sloman stresses the importance of being able to grasp a 'Gestalt' in a complex of noisy data; this ability is constantly needed, even for the understanding of speech; in this field it is difficult with a computer to do more than begin to match the most ordinary human, or even animal, capacities. The use of relatively unambiguous fragments, he says, "to activate prior knowledge which then directs attention fruitfully at more ambiguous fragments seems to be required at all levels in the visual system"; but then how is it decided what prior knowledge to store; how, once stored, is it retrieved; and how do you stop too many things being retrieved? One process of particular importance and value here appears to be that of "mutual disambiguation" whereby "different ambiguous fragments somehow all 'communicate' with another in parallel, to disambiguate one another" — a process which it has proved possible in a limited way to reproduce on a computer.

Recent work on vision in the field of Artificial Intelligence has

1. Ibid. p. 213. 2. Ibid. p. 227
achieved some success but perhaps its chief value so far has nevertheless been to show up the inadequacies of existing theories and the need for better ones. The discrepancies "arise mainly because of huge differences in the amount and organisation of practical and theoretical knowledge and the presence in people of a whole variety of computational processes to do with motives and emotions which have so far hardly been explored."1 However, in principle, it is clear to Sloman that "sensory input is like a complex computer program which activates all sorts of different kinds of stored knowledge and abilities, which then interact to generate a process of interpretation which, in turn, may generate other processes... That is, we are programmed by whatever impinges on us."2 Here, we may note, Sloman reflects in a somewhat different context one of the most important of the principles which Ashby sought to establish.

Unlike many philosophers and psychologists, Sloman does not sidestep the problem of consciousness, though it is fair to say that he does not get very far with it. His main thesis here is that "what the system is currently conscious of includes all the information available to the central decision-making processes, whether or not decisions are actually influenced as a result. The system would be self-conscious to the extent that the information available to these processes included information about the system itself - e.g. information about its location, its current actions, its unfulfilled purposes, or even about what it is currently conscious of."3 He emphasises that there would be no need for centralised processes if there were no possibility of conflict between purposes, but that there are many processes which can and do carry on without any interference from the centre. He discusses the reasons why some processes should be accessible to the "central administrator" and others not, but he is no more successful than anyone else has been in coming up with a theory to explain what consciousness is and precisely what it does. He concedes frankly that "we are at present nowhere near an adequate analysis of the concept of conscious experience, and related concepts."4

1. Ibid. p. 240.
2. Ibid. p. 259.
3. Ibid. p. 244.
4. Ibid. p. 252.
Limitations of the Computational Metaphor

An argument suggesting that the computer can only reflect reasoning without consciousness, focal without subsidiary thinking. It cannot reflect forms in space, it can only specify them by means of coordinates; and this limits its capacity to match the flexibility and learning power of the mind.

I turn now to Sloman's chapter on "Intuition and Analogical Reasoning", in which he raises in one aspect what I believe to be a crucial issue for the understanding of the way in which the mind works. First he points out that there is a distinction between what he calls "Fregean" (or "applicative") and "analogical" ways of making inferences by manipulating symbols of "representations". In the former the basic method of constructing complex symbols is by applying function signs to argument signs. It rests on a propositional logic in which all propositions are expressed in a subject-predicate form (which, as Passmore has suggested, is more accurately described as a substance-attribute form). In this type of language relations are reduced to properties of the terms between which they hold, and the logical compatibilities and incompatibilities between them. Much mathematical and logical notation and many of the constructions of natural language are Fregean. But Sloman's argument is that valid reasoning is not restricted to Fregean methods; it can also be undertaken by manipulating representations that reflect relationships which are not logical in the narrow sense, but "analogical" - and by that term I think it is fair to say that he means pictorial or diagrammatic. It is entirely possible, he says, to give a computer program the ability to reason in that way, though to do so it is necessary to formulate precise specifications of the significant properties and relations in the diagram and the rules for interpreting them. "Unlike a Fregean symbol an analogical representation has a structure which gives information about the structure of the thing denoted, depicted or represented."¹ - though, as he makes clear, the two are not precisely isomorphic. Often there are good reasons for preferring the analogical to the Fregean representation; it is more specialised, but it can often, for example, store information in a more economical way.

¹. Ibid. p. 165.
In all this it is important to note that Sloman is still referring to digital representations of analogical relationships. He specifically rejects the suggestion that analogical representations are continuous, while others are discrete. Although it is possible, he says, for analogical reasoning to take place entirely in the mind "when we imagine manipulating a diagram instead of actually manipulating one", it is not at all clear what actually happens in such cases. On the other hand "we can understand what is going on in the mind of a computer"; and by that he means a digital computer. He refers in this connection to the use of "two-dimensional arrays" to represent two-dimensional images in a computer; but, as he points out, "there is not really any two-dimensional object accessed by the program, rather a linear chunk of the computer's memory is organised in such a way that with the aid of suitable programs the user can treat it as if it were a two-dimensional configuration addressable by a pair of coordinates. (Actually the physical memory of the computer is not really linear - but it is interpreted as a linear sequence of locations by mechanisms in the computer.)"1.

Here we face the critical issue. My analysis of consciousness identifies the basic elements of awareness as forms emerging in a space. Sloman's analysis leads him to find a place for "analogical" representations derived from spatial diagrams, but it is significant that they have to be digitalised by the formulation of "quite precise specifications of the significant properties and relations in the diagrams and the rules for interpreting them" before they can be "manipulated". And the manipulation is essentially a digital process, a kind of sequential or programmatic application of rules which "generate" appropriate transformations step by step. This sort of digital process is basic not merely to Sloman's thinking, but in some sense, as Eddington saw, to the modern scientific view of the world, based as it is on measurement, quantification, "pointer readings". Moreover the same is true of the philosophy which, since the seventeenth century, has grown up with modern science. In some curious way the requirement for clear and distinct ideas, to which Descartes gave such memorable expression, has led men to substitute

1. Ibid. p. 175.
numbers for forms. The ancient concept of form seems to have disappeared from the modern philosophical vocabulary (though not from everyday language or experience); and similarly modern psychology, though it will talk of elements and structures and processes, drives, patterns, configurations, constructs, even Gestalten (hiding the word "form" in German) not to mention the lexical entries and semantic components of theorists in linguistics, seems to have lost sight of the idea as the basic unit of thought.\(^1\)

Why should this be? After all forms, not numbers, are what you see and feel and hear. They come first. Digits, which, as I would describe them, are instances of classes of forms, come second. An adequate answer to this question might well require a separate study; but I believe that the elements of an answer are already implicit in my earlier study, "The Grammar of Language"; while many of the relevant arguments have been developed in the opening chapter of this work or will be developed in subsequent chapters. Here I will attempt no more than a brief summary of what I think I am talking about.

All consciousness, all thinking, is predicative, and every predication involves both a number of synchronic relations between the elements which build up the subject and the predicate and one diachronic transition between the two. The former however are implicit, in a sense indeterminate, they represent tacit knowledge as Michael Polanyi defined it. For what we recognise in this implicit way are forms, comprehensive synchronic wholes, which are unified, not divided. What defines a form is the old motto "in my end is my beginning": it unites in one value what we can only retrospectively analyse as several values with relationships between them; and it exists in a space which unifies two or three or more dimensions or registers of possibility. Now we cannot effectively go behind space and form to something more elementary; for when we try to do so we merely embark upon an endless regress: if I observe my end end my beginning separately, as elements

1. It is true that Sloman writes of the "form" of the world, as distinct from its "contents"; but on examination it emerges that he is making here the same distinction as I make between "facts of existence" and "facts of classification" (see p. 4 above). He is not using the word form in a way which corresponds to its ordinary language meaning. Incidentally our word "idea" comes from a Greek word meaning, according to "The Oxford Dictionary of Etymology": "look, semblance, form...".
with a relationship between them, the end and the beginning simply themselves become forms uniting their own ends and beginnings. As Polanyi puts it, "the focal observation of the workings of someone's mind dissolves our knowledge of his mind so that in this sense these workings are certainly not his mind. On the other hand a comprehensive awareness of these workings constitutes an observation (or reading) of the mind, which may appear to vindicate Professor Ryle, but does not in fact do so. For Ryle does not have the concept of subsidiary awareness and his identification of the mind with its workings can therefore only mean that the two are identical in the usual sense, i.e. as focally observed facts, which is false."¹

It is true that it takes a measurable time to recognise a form; if the wheel is revolved beyond a certain speed, I will cease to recognise the spokes. But this does not mean that we can dissolve the object of conscious awareness into more primitive elements which have a more basic reality. So far as consciousness is concerned, forms are primitive; and we must not forget that even the most remote and abstract constructions of the human mind, such as the theories of particle physics, ultimately derive from the data of consciousness; we have no other access to reality.

Predications, however, are not a matter of forms only, the synchronic element. There is also the diachronic element, a step or transition in time by means of which we relate one form (usually a complex form-as-a-whole built up from other forms) to a second form, and so end up with a

¹ "Personal Knowledge" (Routledge & Kegan Paul 1958, corrected edition 1962, p. 372. The italics are Polanyi's.) "Subsidiary or instrumental knowledge", as Polanyi points out elsewhere, "is not known in itself but is known in terms of something focally known, to the quality of which it contributes, and to this extent it is unspecifiable." Polanyi, unfortunately to my mind, did not use the concept of form in this precise context, nor did he establish the distinction of synchrony and diachrony in the process of the mind's working. In a sense he lacked the terminology to make his arguments as sharp and clear as they might have been. He does however refer, in the context of biological morphogenesis, to "the unspecifiable knowledge of true shapes" and mentions in a footnote the "powers of morphogenetic integration have long since been acknowledged by some investigators as essentially akin to the powers of comprehension to which Gestalt psychology has drawn our attention." (p. 338). His book is an important one; he had a firm grasp of some original and vital ideas.
third. And whereas our synchronic knowledge of the relations between the elements of a synchronic form-as-a-whole is implicit and tacit, our diachronic awareness of the step of predication is explicit and sharply focussed; it is concerned with one binary relationship only, and that one expressed in a sequence over time. There can be no explicit diachronic awareness without an implicit synchronic awareness, nor, conversely, can there be any synchronic awareness of forms without a diachronic transition. In other words there is no consciousness without a completed predication. By a change of the mind's focus we can bring what was an implicit relationship to sharp awareness as an explicit relationship at the centre of attention (as we see with the end and the beginning); but we cannot do so without a certain see-change; what was implicit and synchronic and bound up with other relationships here becomes explicit, diachronic and isolated at the apex of a predicative hierarchy.

Now the relationships of which we become aware, either explicitly or implicitly, are relationships between forms; and it is my contention that these are either spatio-temporal relationships (of which there is a finite and relatively restricted range of discriminable types) or logical relationships (which again fall into a relatively restricted range of types). Logical relationships depend on classification which in turn depends on the mind's capacity for the generalisation of forms; and a class automatically represents a yes/no register of possibility—instance or non-instance, 1 or 0. Logical relationships include those of equation and resemblance (fundamentally links of classification or reclassification), of grouping (e.g. addition and subtraction, ways of taking two numerical classes and arriving at a third) and even causality (which in some sense depends on the classification of cause events and effect events under a 'causal form' or hypothesis). A digital computer proceeds by steps in time and what it can do is essentially to simulate the diachronic steps of mental attention. Sloman has made it clear that it is not restricted to simulating logical relationships in the narrow sense; by means of careful specification it can also simulate what he calls analogical or diagrammatic, and I call spatio-temporal, relationships. But it still proceeds by sequence and rule—a rule, it will be recalled, is a restriction on the possibilities of transition—
even though it may be able to accommodate many sequential processes going on simultaneously but separately. It can build up a great store of information and can handle very complex ideas; but the "idea" at the focus of its attention is always the latest transformation "generated" by the sequential application of the program of rules to the store of digital data; it is the cumulated answer expressed in a digital code, not a synchronic complex expressed in a code of forms in space. As Sloman points out in a passage already quoted, it may represent images in a "two-dimensional" array, but there is no "real" two-dimensional object in the computer.

In passing it may be worth emphasising that it is no help to turn our attention to an analogue computer, based on the continuous fluctuation of a given variable, rather than the alternative of a digital computer. In both cases we have two dimensions of possibility, that of time and that of the fluctuating or alternating variable; but in neither case is there any scope for recognising a complex synchronic form in a space; and this is because you need a space of more than two dimensions in which to recognise a two-dimensional form. I have to be distanced from a diagram in a third dimension of depth before I can see it; and I have argued elsewhere that even to hear a sound in time we need to be able to distance it from ourselves in what is effectively a dimension of temporal depth.

On the other hand this "cumulated" answer is very much what the conscious mind is left with after a predication is complete. A space or a spatio-temporal continuum is essential to predication and hence to consciousness (though of course I have taken the view that it is a quasi-topological, not a Euclidean or metric space); but as a predication is completed the whole complex of the subject elaborated by its predicate is collapsed, as it were, into a single complex form, which we can best imagine as a superposed wave form, a virtually extensionless Fregian representation of the substance-attribute type.

1. In saying that it is virtually extensionless I mean that, like a wave, it is defined by sequential change in the value of one variable in time; it loses the synchronic nature of a form uniting different values simultaneously in a three-dimensional space.
but one which is already slipping beyond consciousness into the inaccessible store of memory. For consciousness cannot reach into memory, it can only retrieve a copy, an "evoked idea", from the memory store, which is then fitted into a new predication in a new logical space.

As these arguments imply, the complexity of complex forms can be of two types, (i) the superposed (or Fregean) kind, in which attributes are superposed without extension on a substantive form, as in a musical note overtones are superposed on a fundamental tone; and (ii) the organised (or in Sloman's sense "analogical") kind, in which elements are related in spatio-temporal ways. In consciousness both are always present. In language this is mirrored by the structure of grammar, which includes both adjectival superpositions and prepositional clusters. In language the central transition between subject and predicate is always spread out diachronically to form a sort of binary spatio-temporal link; but it can nevertheless represent either a relationship of superposition linking substantive and attribute, or a relationship of spatio-temporal organisation linking substantives in space and time. Once completed, on the other hand, as I have indicated, the predication becomes a Fregean complex, superposed but without observable extension, like a complex sound wave; and the possibilities or impossibilities of further superposition between such complexes are the possibilities and impossibilities of propositional logic.

Fundamentally what I am saying is that at present the computer appears only to be able to reflect reasoning without consciousness; it cannot reflect forms in space, it can only specify them by means of coordinates. No computer can yet create a spatial arena; but the conscious mind does create such an arena, specifically it thinks in space, even if no one can yet understand how this happens. A computer thinks diachronically, sequentially, not synchronically, spatially; while the mind does both at once. And this relative limitation of the computer, as it seems to me, is one reason why computer scientists find it difficult to match the immense flexibility and learning power of the mind of even the youngest baby. For by means of forms the mind can assemble and present synchronically an astonishing amount of implicit
or "subsidiary" information in a single space of possibility. Only those
details which are relevant and useful in the context are actually extracted;
nevertheless they are all to hand if needed. Somehow the operation seems
to remain remarkably economical of effort, since what is not needed is
not taken out of its implicit, "tacit" state. The computer, on the
other hand, is tied to diachronic generative processes. It has to
perform a serial plod around its world, even if it does so at fantastic
speeds; and it runs into extreme complications over the serial indexing,
cataloguing and retrieval of information. For all its ultimate power
and capacity, I do not think that the processes of the digital com-
puter in its present form are likely to be able to model in more than
partial ways the working of the human mind. Nor, incidentally, for
closely related reasons, do I think that Chomskian generative-
transformational grammars, which are also based on the sequential
processes of the digital computer, will ever model effectively our use
of language. But in saying this I am far from denigrating the usefulness
of work on Artificial Intelligence or the value of Aaron Sloman's book,
which seems to me of importance not only for the significant degree of
success in explanation which it achieves, but also for the difficulties
it encounters and the questions and possibilities which it opens up.

What I think is shown by our consideration of the ideas of Miller,
Piaget, Kelly and Sloman, selected somewhat arbitrarily as widely
contrasting thinkers notable for their interest in constructing broad
theoretical models of the mind, is that every psychological thinker builds
or adapts his own tower of theory from which he can survey the terrain
of interest to him. The areas of interest to different thinkers may
overlap, but they are seen from different angles and the map that each

1. It is necessary to add here that recent work on "alternative
architectures" by Igor Aleksander and others, as reported in
three articles by Piers Burnett in the "Times" of September 5,
6 and 7, 1983, has resulted in the production of machines based
on the principle of an artificial "neural net", which have no
program as such and are/not tied to the serial plod of conventional
machines. Because they can operate in a sense synchronically
they have remarkable powers of pattern recognition and - perhaps
still more important by my criteria - they can identify
relative degrees of likeness between patterns. This is clearly
a promising avenue of research which may prove of great value for
the exploration of the mechanisms of the human mind.
man draws is on a somewhat different projection. As a result, even when the areas overlap - and often they do not - the maps do not closely interlock. The time may come when all these maps will be reconciled on a single projection, but that time is still far off. Meanwhile here and there patches of experimental rock, precisely triangulated by the surveyors, emerge and grow, and are sometimes linked up with each other; but there is no way yet of fitting them together into a wider, all-embracing frame. We could now proceed to climb further towers - Freud's, or Skinner's, or Gibson's or Goffman's, or Laing's or Eysenck's; the list could be indefinitely long. But we would not thereby attain to any coherent totality. It is noticeable that some of the highest towers with the broadest views are those of psychologists of an older generation - a James or a McDougell - or else those of maverick thinkers such as Gregory Bateson, or perhaps Arthur Koestler. But the broadest views are not necessarily the most relevant. My conclusion has to be that I must use my own tower, with its own perspective over the terrain in which I am interested, and from it I must draw my own map, recognising from the outset its inevitable and inherent limitations. In doing so I shall crib bits of map from Miller, Piaget and anyone else who seems able to help; but if one thing is clear it is that I do not find to my hand any suitable product ready-made.

A First Sketch of the Mechanism of Mind

The outline of a model (to be developed further in subsequent sections) consisting of a structure, in which processes take place in two cycles, a lower-order purposive cycle, together carrying out the function of regulation on behalf of the organism.

My field of interest is consciousness and the idea of the Self. My chief purpose is to arrive, if I can, at clear and distinct ideas about them. The tower from which I propose to look over this terrain is the general theory of the grammatical structuring of

conscious life in perception, thought and language developed in the three earlier studies to which I have already referred. I will make no attempt in the present context to present the steps and arguments by which the theory is built up, or even to describe it in any detail. But I will use it as a vantage point from which to set forth in very general terms a speculative account of how the mind works. This will be my own idiosyncratic account and much of the area that it covers does not seem to be systematically covered by anyone else; but I will try to tie it in, as far as I can, to the work of Miller, Piaget, Kelly, Neisser, Sloman and others, and so to connect it with existing maps of more familiar territory.

I share with Miller a strong predilection for "concrete systems", that is, systems with units located in space and functioning in time, as against "abstracted systems", which are essentially systematisations of abstract classifications (such as traits, instincts, drives or roles). This might suggest that I ought to adopt a strictly physiological model; but in spite of the remarkable advances achieved by physiological psychologists in recent years and the considerable amount of physiological detail into which Miller, for example, goes, it seems to me still entirely impossible to construct a model of the mind in physiological terms that is adequate for my present purposes. For the basic elements of consciousness that I want to put together are the forms, patterns, structures, qualities and intensities of perceptual life and of the life of thought and feeling; I want to bring into focus our desires and aversions, our purposes, decisions and actions. These are the materials of experience Here Now; and I think it is clear that, although any account of them that we construct must take account of what the physiologists can tell us, we are not yet in a position to identify precise physiological correlates for such elements or for the processes by which they are woven together into the stuff of conscious life. At the same time I do not want to go in for an exercise in mere classification; I am not particularly interested, for example, as Piaget is, in the development of intellectual capacities; I want rather to describe mental

1. See the discussion of concrete and abstracted systems in the chapter on "Basic Concepts" in Miller's "Living Systems". I think this distinction probably corresponds at the root to a distinction between systems based on what Aaron Sloman would call "analogical" and "Fregean" relationships respectively.
actualities, what happens from moment to moment; and to do this I need
to establish a model with *structures* consisting of *elements* at least
notionally separated and related in space, and serving *processes* that
go on within the structure and are related to changes of state in the
system and subsystems that build it up. Finally the process as a
whole must be seen to provide for the execution of a specific *function*
(that of regulation) on behalf of the organism as a whole.

The model that I propose has three main structural elements:
(i) the sensory apparatus (with receptor and processing subsystems);
(ii) the arena of attention or consciousness; and (iii) the memory
store of mind-manifold. The process (which I identify as the process
of thinking) consists of two cycles: (i) a lower order *predicative cycle*
and (ii) a higher order *purposive cycle*. Every completed predicative
cycle, or *predication*, finds its place within a purposive cycle of
predications at a higher level. The predicative cycle consists in the
first place of information from the environment, including an input of
information about the internal state of the organism; the *recoding and
integration* of this information; and its *transmission* into the mind-
manifold; the *selective evocation* from the manifold of reflections or
echoes derived from its record of the organism's previous experience
(and these include echoes of echoes, producing together a complex
*resonance*); and a further procedure of *selection and organisation*,
which draws on this resonance and on the recoded sensory input to
produce a *recognition* in consciousness of a succession of subjects of
attention. These subjects are related in space over time to predicates
Now after Now after Now throughout the organism's waking (or dreaming)
life. The predicate in each case represents the ground against which
the subject, as figure, emerges, the object in relation to which it
moves (or remains still), the agent which moves (or remains still)
in relation to the subject, or the complement which is absorbed as an
elaboration of it. In a grammatically intransitive transition ("the
blush fades", "the strike continues") the predicate coincides with
the subject itself at a later stage in time. Both subjects and
predicates are recognised as forms emerging in various alternative
kinds of space and infused with qualities and intensities of sensation
or emotion.
As this suggests, a subject or a predicate, even at its simplest, has the complexity of what I have called a "cell" of thought. But in practice both subjects and predicates are as a rule much more complex than this, consisting of many cells organised together in subsystems and sub-subsystems of components and wholes, while the substantive forms at each level may also be elaborated by the superposition of other forms. The analysis of the different roles and relationships involved in this process is the study of accident and syntax, otherwise grammar. It includes not only the roles of subjects and predicates themselves, and the relationships of predication holding between them, but also the complicated roles and relationships that emerge at lower levels. Grammar, as I have argued, reflects the structuring of consciousness, both in our use of language and also in the processes of perception and thought.

The purposive or regulative cycle is one through which the organism identifies goal images, elaborates possible courses for attaining them, chooses between these courses, takes action accordingly, and finally monitors the result and assimilates it into the memory store. Every predication forms part of some phase of some purposive cycle. The progress of each is related to the progress of the other; for the nature and state of the purposive cycle affects the procedures of evocation, selection and organisation that help to determine the nature and shape of each predication, while the nature and shape of each predication affects the course of the purposive cycle and may lead to a switch to a different purposive cycle.

This description may seem complicated, but it gives no more than the briefest and sketchiest preliminary account of what is a formidably complex process. It purports to do no more than say very crudely what happens in you and me from moment to moment. I may not have got it all right, but something roughly on these lines, and something certainly not less complicated, is necessary to describe what goes on. I shall proceed now to elaborate the model in some degree; but before I do so it may be relevant to make two points. First, it is clear that, although there are similarities, a model on these lines cannot easily be accommodated to Miller's three...
subsystems of the associator, the memory and the decider, each responsible for separate sub-processes; and this is why I think his analysis in this respect is inadequate. Secondly, while we may tentatively identify physiological structures and processes which correspond to certain elements in this description, we are in no position to match it all in physiological terms, least of all the arena of consciousness where forms infused with qualities and intensities emerge in space over time. Here Now. How to represent this in any model which is itself a formal structure in some kind of space-time is a puzzle to which, I suspect, no swift solution is to be found.

Structure and Process (1)

My aim in this section is to establish the terms in which I propose to deal with experience, and in particular to establish how the mind translates continuous diachronic processes into discrete synchronic forms which it can then proceed to store and manipulate in various ways.

I shall now try to describe more closely what actually happens in the process of experience, as possibilities are evoked, information is assembled, courses of action are hypothesised and action is taken.

A living system is constituted by a set of rules or constraints - what Miller calls its template, genetic input or charter - which largely determines the substantive values of its elements and the syntactical values for the relationships between them. (An example of such a syntactical value is the relationship of time sequence between two musical notes. The counterpart of any syntactical value is a pair of values of accidence - in this example 'earlier' and 'later'.) These rules can however allow for variations between limits of value, and all elements and relationships to which this applies can be called variables. The variable elements may themselves be subsystems which may in turn be composed of sub-subsystems, and so on. The value yielded by a variable which is a subsystem, like for example a man's heart, is determined by the state of the subsystem, which is itself a
combination or vector\(^1\) of the values of its own variables. Any change of value at any level constitutes a change of state at that level and at all levels above, including the system level. All values are drawn from limited ranges of possibility, and in the case of living systems the constitutive rules of each system impose major constraints upon the values or combinations of values that are acceptable if the system itself is to remain stable, i.e. is not to fall into dissolution.

To put the central point another way, any organism is a living self-regulating system, a homeostatic machine which operates in interaction with its environment, through behaviour determined by information feedback loops, in such a way as to keep what Ashby calls the essential variables between certain critical values. These are the values which must not be overstepped if the organism is to grow in accordance with its genetic rules to a broadly predetermined form, and to maintain this form, within narrow limits of variation, continuously in being.

The structure of a system is constituted by the internal spatial relationships between its elements at a given time. (Here I am using the word structure in Miller's sense, which corresponds to that of ordinary language, not in Piaget's more esoteric sense.) A structure must emerge in some kind of space, even if it consists of no more than a sequence of dots or dashes. Therefore the values which specify a structure at a given time include, as we have seen, syntactical as well as substantive values. As Eddington once remarked, "We take as building materials relations and relata. The relations unite the relata; the relata are the meeting points of the relations. The one is unthinkable without the other."\(^2\) By definition a particular structure is unchanging; if the spatial organisation of the elements of a system changes, then we have a new structure. In other words the structure of a system reflects the state of the system so far as its spatial values are concerned. Any change of state in a system over time (affecting any of its variables, not merely spatial ones) represents a transformation of that system, the new state being a transform of the old; and any sequence of such transformations is a process.

1. Defined by Ashby as "a compound entity having a definite number of components... A vector is essentially a sort of variable, but more complex than the ordinary numerical variable..."

To examine further what we mean by process let us begin by considering an extremely simple system consisting of a lamp post carrying three lampholders, one above the other, equipped respectively with red, amber and green glasses, and with one lamp in each. The spatial distribution of these elements constitutes the structure of the system, which is unchanging during the period under consideration. The only elements which change in value are the lamps, each of which has a repertoire of two alternative values, on and off. Any change in the value of any lamp constitutes a change in the state of the system, and any series of changes results in a succession of states of the system, otherwise a process.

From one point of view every shift in value is a unique event, and the process consists of a unique, irreversible succession of transformations, which cannot be characterised just because it is unique. From another point of view it is possible to detect repeating patterns. At the subsystem level the lamps change value in the sequence on - off - on - off ad infinitum. There are only two values and logical necessity compels this sequence and no other. At the system level, even if the lamps change value at random, the combinations of states possible are still quite restricted in number (eight in all) and these eight possible combinations together form a closed repertoire. We find ourselves with a structure in Piaget's sense, "a system of transformations which possesses laws of its own as a system (in contrast to the properties of its elements) and which conserves or enriches itself by means of the very action of its transformations". This system is reversible in the sense that it is always possible to go back to one of its earlier states, drawn as they are from a small repertoire. Again at the system level, however, we may find that the transformations in fact take place under greater constraint. If they are British traffic lights, they will use only four of the possible eight combinations and they will use them in a fixed sequence forming a loop. The process is repeatable and so in a sense reversible.

1. See W. Ross Ashby "An Introduction to Cybernetics" (Methuen reprint 1964) p. 127.
An important point to notice is that when we detect repeating patterns, we are only able to do so because we are able to break the basic irreversible process up into sections which we then consider as wholes, bringing both earlier and later elements into relation simultaneously. In other words, as was argued in Chapter I, we extract a limited span of the process as it develops in irreversible diachronic time and extend this extract at right angles as it were to the diachronic flow, so that it forms a span in a synchronic time dimension, recognised as one of the dimensions of an analogical space in which we see the patterns as trajectories. The sequence in time becomes a configuration or form in a synchronic space-time. Without this we should be buried in the diachronic flow, we should not be able to look either backwards or forwards, and therefore we should not be able to recognise anything at all as extended in time. Apart from this it remains true that every new state is unique. It is the same as a previous state only as a matter of classification: because it is an instance, though a different instance, of the same class as the previous state. Without classification there would be no link, and no sense in dividing up the irreversible flow or effective means of doing so.\(^1\)

In the present context what is significant is that in order to recognise anything of what is going on we have to take a copy of it and develop it, as it were, in the analogical space. It is not the original process, for that is irreversible and still goes on diachronically as we look at our synchronic patterns. Once more we are back with the schemata which, according to Neisser and Piaget, have to be matched to the input and are then modified in the process of assimilation/accommodation, otherwise adaptation. The original process is in a wider perspective the trajectory of the system (here the lamp standard) in physical space-time. What then is the copy? In some sense a series of transformations occurring temporally has been translated into a form. But to what structure in physical terms does this form correspond? If we regard it as information, what is its marker?

1. Kelly refers to this point in his Construction Corollary: "A person anticipates events by construing their replications." He goes on to remark that: "only when a man attunes his ear to recurrent themes in the monotonous flow does his universe begin to make sense for him." ("A Theory of Personality" p. 52).
A transformation has to be of something; at least in our normal experience that is so and the principle of parsimony requires that we stay with that assumption unless and until we are pushed off it.

I shall not try to deal with this question conclusively at the present stage; but I shall assert provisionally that we are dealing with a form, which I shall call a logical form or idea, emerging in a flexible, multi-dimensional space. We can also say that it is more generalised than the actual diachronic process, to which it is accommodated in what I have called a cap-fitting relationship; and we can say further, though perhaps more tentatively, that it must be a negative, a reversal of the positive initial form, as the concave form of the cap reverses the convex form of the head. (But in this connection we have to note that if we use the alternative image of tuning one wave form to another, this necessity can be avoided.) It is a synchronic form, a recoding of a span of the process of experience in time as a generalised configuration in space. What is most important about it is that it can be stored and brought out again to make possible the identification of a second instance of the form, otherwise of the class which as a generalised paradigm the form defines and identifies. This brings us to the threshold of the phenomenon of memory; but, before we try to deal with memory, we need to develop a little further our ideas about what it is that we remember. The model of the traffic lights has been useful in helping us to establish necessary definitions and distinctions, but it is too simple to reflect adequately the process of experience which we have in mind.

The Hierarchies of Process

An attempt to show how we come to grasp the unique unrepeatable process of living by matching it with models built from repeatable elements which are essentially classifications derived from past experience.

Let us now go back a few steps. Any organism possesses in store,

1. Cf. the phrase "a flattening of the past into the present" used by D.R. Hofstadter and D.C. Dennett in "The Mind's I" (Harvester 1981.).
through genetic inheritance or learning or a combination of the two, a number of repeatable processes such as digesting, breathing, grasping, pulling, talking and so on, which are reversible in the sense that they are built into loops such that the organism, after completing a given process, can return by another process to the state in which it was before it started. Some of these processes, like those which control the digestion or the level of blood sugar, are not perceptible to a normal observer; but many others are perceptible to observers, including in appropriate cases, the conscious organism itself; and these we normally call acts or, with longer sequences, routines of behaviour. However, as we have just seen, no act of speech or locomotion or even digestion is quite identical with any previous act, and no state of the organism is quite identical with any previous state, if only because it happens at a different time from its predecessor. As Heraclitus remarked, "You cannot step twice into the same river; for fresh waters are ever flowing in upon you". When we say that the state of an organism is the same as it was before, we mean more precisely that its new state is an instance of the same class of states as the preceding one. Thus from one point of view all the successive states of an organism are aspects of one unique sequence, even though many of its states will be similar to preceding states.

Next we may note that the states of the matter-energy processing subsystems of the organism, together with the information feedbacks which specifically control them, are typically always instances of a quite limited number of possible classes of states. Our repertoire of classes of arm movements is considerable but nevertheless far from infinite, and all our arm movements, in whatever context at whatever time they occur, fall within this repertoire. Even our repertoire of words and idioms is limited, and much more so our repertoire of patterns of grammatical construction; so that all our utterances can be said to be examples of repeatable processes. So again, a Piaget would argue, with the basic logico-mathematical structures which we apply to the codification of experience and to the logical transformation and interrelation of the coded messages which result.

On the other hand individual instances of repeatable processes are
in reality, as we have already seen, not existentially identical with other instances of the classes to which they belong; each actual instance is in fact unique and part of a unique irreversible process which is the unfolding of the lifetime of the organism as it interacts with the unfolding of the environment around it. We can register this uniqueness by saying that it occurs at one time and place and no other; but this is another way of saying that it fits at a particular point into a wider spatio-temporal sequence, which in turn we take to be part of the unique sequence of nature or creation in universal space and historic time. We take all nature to be one sequence basically as a corollary of the fact that we have all acquired as one of the interpretative structures, the logical constraints, with which we order our experience the rule that two things cannot be in the same place at once; or more precisely that any two observed things or events can always be related to each other in space or time or both. This recognition leads to the establishment by each of us of a cognitive map of the world in time on which all things and events can potentially be mutually related. Significantly it is a quasi-topological map on which I can relate today with 1066 A.D. as easily as with yesterday, and this house to a house in China as well as to the house next door.

Here we can make a connection with our earlier discussion of information and behaviour in Chapter I, where we noted that the acquisition of information was always the acquisition of a particular form drawn from a limited range of possibilities; and that this range would characteristically consist either of a restricted repertoire or of a store to which forms learned in the course of experience could be added successively, without any practical limit of store capacity. Correspondingly behaviour consisted of actions or sequences of actions (routines) drawn in every case from a similar repertoire or store. We can now see that this earlier account was incomplete, since it dealt essentially with the repeatable processes, and not with the irreversible ones. And we can also see now that the link between the two kinds of process appears to be hierarchical. In effect we use instances of repeatable processes (like the sound of an oboe) as

1. I am using the word sequence here to cover spatial as well as temporal ordering and neighbourhood.

2. The acquisition of such a map appears to be of great importance in the development of the individual human mind, since a location on this map would seem to be what distinguishes the real from the imaginary.
building blocks of information with which to construct our one-off models of unique actuality (like the sound of this particular performance of Beethoven's Fifth Symphony); and correspondingly we use instances of repeatable processes (like the walking movements of our bodies) as building blocks with which to construct unique, one-off instances of behaviour (like my walk to the station this morning).

There can be several levels in this hierarchy. When I look out of the window, every cell of my complex perception consists of an area of colour enclosed by a container form. (Whenever I distinguish two different colours I am dealing with two different cells.) There is nothing unique about these colours which are drawn from a comparatively small repertoire; nor is there anything unique about the basic shapes or outlines that I perceive; indeed it is arguable that the basic elements of form in visual perception are only (i) straight lines and planes at various angles of tilt, and (ii) curved outlines or surfaces - i.e. segments of circles or spheres - at various levels of magnification and resolution. But even at the cell level the container forms of cells are much more complex than this, because they consist of basic forms fitted together in continuous sequence to build up cumulative forms of greater particularity - like, for example, the shape of an oak leaf. Yet, as this example shows, we can learn and classify these cumulated shapes, just as we can learn and classify melodies, which are cumulated shapes of a particular kind extended in time; and when we recognise them we identify them as instances of classes, not (or not merely) as unique, one-off forms encountered for the first and only time in our lives.

At a higher level still, however, we reach forms constructed uniquely for this occasion of perception. I may have the capacity to recognise tiger lilies and oak trees and several different varieties of rose; and particular different components of my perception as I look out of the window may be identified as instances of these classes; but there is no doubt in my mind that the whole complex system in front of my eyes is a unique garden recognised on a unique occasion in time. I may still recognise it as an instance of the class of gardens, but
it is a unique instance anchored in a unique feature of the cognitive map extending in both space and time. Grammatically, to recall a point made in Chapter I, it is definitely, not indefinitely, designated. Although my recognition is of synchronic values in space, it must occur over a span of time, and consequently it is the recognition of a process, not of mere form and colour, even if there is no wind and every leaf is still; and as a process it is in the irreversible category.

A similar analysis could be made of the way in which we compose or understand a sentence. We take standard, re-usable words, idioms and grammatical structures — sometimes even standardised sentences — which are not unique, to build up particular sentences or sequences of sentences which are unique to an occasion and part of the irreversible process of the unfolding of life. Or rather, as I would prefer to say, we take the already learned and standardised logical forms which are the correlates of words or word-groups and put them together, with the aid of standardised templates that correlate with the cues of accidence and syntax, to build up new and unique complex logical forms which are the correlates of sentences.

The uniqueness in both cases, we may note, lies not only in the fact that the process in question is anchored in the wider process of the irreversible unfolding of life, but also in the fact that repeatable processes, whether innate or learned, are always relatively short or spatially simple. Western music, for example, does not ordinarily use tunes more than 16, or at most 32, bars long; and even then the longer tunes usually incorporate several repetitive features which aid our memory. But our simpler cognitions, like our simpler actions, are usually part of much longer, or spatially more extensive or complex, sequences. As soon as we take the longer or wider span we end up with a process which is unrepeatably unique as a combination of elements, even when the elements themselves are familiar.¹ There may be

¹. William James drew attention to this point, making a comparison with wave-crests in the sea. "What can hardly come twice is an identical combination of wave forms with all their crests and hollows reoccupying identical places. For such a total combination as this is the analogue of the brain-state to which our consciousness at any moment is due." ("The Principles of Psychology", Macmillan 1891, Vol.1, p. 235).
nothing unique about what I see when I glance briefly out of my window at a familiar view. But as soon as I spend half a minute looking carefully at the various elements in my field of vision as they are related together, or as soon as I link what I saw in that glance with what was at the focus of my consciousness over a brief span before and afterwards, I arrive quickly enough at an unrepeatably complex combination, a process which I have never experienced before and will never experience again. Characteristically my mind is using classifications to construe, once off, the unclassifiable.

Why, it may be asked, do I labour these matters so? The reason is that what we are talking about is the very process of thinking, the basic activity of the mind, process within process, repeatable within unrepeatable. But in describing it thus, merely as a sequence of events, we have still not dealt with the aspect of information as actuality emerging from possibility. To this I now turn.

Process and Possibility

In this section I examine how our grasp of experience reflects the passing of information and thus the resolution of limited possibility into actuality.

We have said that from one point of view all of a man's life is a single unrepeatable, essentially indivisible process. But if we look at it in this way, or indeed if we look at a single day's or hour's experience in this way, we gain little information. For, as we have already seen, to receive information requires more than a mere input of experience, it requires the mind to produce some format of limited possibility within which the specific actuality can be caught; and even then we never quite catch the actuality in itself; rather we select, organise and construe from the input coded representations or models of reality; we build facts:—literally 'made things'—about reality. It is in a sense artificial to "carve time"—or space—"at the joints". Yet our argument has suggested that it is essential if we are to grasp anything of the world. I can think of a day's or a life's experience as a whole, but only by delimiting its beginning and end, vastly generalising all the detail in between, building a vague model out of
what remains, and recognising the form-as-a-whole that results against
the background of an even more general, but still limited range of
possible similarity. I cannot catch the continuous input to the life,
I have to break it up in order to reconstruct it. And the same is
true even of my experience Here Now. After all, my realisation a
moment ago, such as it was, of a lifetime's experience as a whole, was
itself a realisation Here Now.

Insofar as the mind is able to grasp highly complex perceptions
or ideas it does so by following a progression of perceptions or a train
of thoughts which is continuous in space or time; it generalises the
earlier parts of the experience as it goes, building them into the later,
until the final experience reflects a unified grasp of the whole. Thus
I can walk round a cathedral, taking in a series of visual perspectives,
until finally I grasp a unified impression of the whole, fitting
generalised recollections of what I saw at each step into a generalised
spatial framework built up from the superimposition and logical
reconciliation of groups of preceding impressions. So too I can read
a book, building up and generalising logical forms, sentence by sentence,
paragraph by paragraph, chapter by chapter, until I arrive at a final
impression of what I have read. Again, in listening to a symphony, I
follow a similar procedure until the whole experience is somehow
resumed in the final cadence. The process is certainly hierarchical,
as we can see if we imagine reading a book with no paragraph or chapter
divisions; this is a daunting prospect, because we get no help in
creating the hierarchical structure that is necessary if we are to
grasp the whole, and we have therefore to face the task of establishing
it for ourselves as we go along.

It is significant that generalisation is an important factor at
every step in this process; for the mind's capacity to absorb
information in any one gulp, or predication, remains limited; we have
to generalise if we are to grasp very complicated wholes and the mind's
capacity and flexibility in generalising is one of its most remarkable
attributes. At the same time memory may enable us to track back and
recall individual "frames" of a prolonged experience with a good deal
of particularity, all the more so if there is a permanent record in
the shape of a book or tape-recording or picture to help us.

Just as the actuality of our experience has to be divided up and reconstructed before we can grasp it, so too with the moving penumbra of possibility against which the actuality emerges. We recognise successive actualities (or rather our own representations of them) without any conscious awareness of the successive ranges of possibility within which they emerge. Yet both are needed if we are to move from blind, endless process towards information and meaning. And just as the actualities are structured in hierarchy and extension, so too are the ranges of possibility.

We can think of the latter as falling broadly into four categories: first those basic registers of possible discrimination (for example: the registers of colour and taste) which are innate in us as part of our sensory apparatus, though they may perhaps be in some degree adjusted and calibrated through experience; secondly, those more complex patterns of sensory values extended sequentially in space or time which we have learnt to know through experience (for example familiar movements of the body, or tunes, or familiar shapes like those of spoons or oakleaves or Rolls Royce radiators); thirdly, more abstract ideas or procedures which we have learnt to know through experience and which we normally identify through individual signs or symbols, in particular through words (for example +, −, =, forgetfulness, chaos, insofar as, politics, exploration); and fourthly the complex unrepeatable ranges of possibility evoked as the accompaniment of complex unrepeatable sequences of experience. We may note that the first three categories are all relatively simple classifications - which is what we would expect if, as was suggested on an earlier page, the actuality is to the possibility as the instance is to the class. The fourth category is one of complex ad hoc combinations of possibility against which we recognise complex ad hoc combinations of elements of actuality.

All combinations of possibility are subject to the constraints of general necessity: and these take three forms: the rules of general grammar (as distinct from the additional grammatical rules idiosyncratic
to particular languages), the rules of logic and the laws of nature. To begin with the rules of general grammar, these, as I see the matter, are the rules by which we put together — and must put together — the predicative systems through which we assimilate or express reality. Traditionally grammar is divided into accidence and syntax, the former specifying the roles which components can play in different possible relationships, while the latter specifies the relationships themselves. The role is the relationship as it affects the component — it is the accidence of the component. Correspondingly the relationship is the pair of roles as they fit together — the distinctive syntax of their conjunction. Every predication hinges upon the relationship between subject and predicate which is a transition recognised in real time, while other subordinate relationships between the subcomponents build up the subject and predicate themselves. On this view the logical forms which are built up through the process of predication are multi-dimensional and much of the diverse complexity of the grammars of our languages is due to the fact that words are spoken and written in a one-dimensional, linear order; the grammar has to be capable of specifying how components delivered in a linear order are to be reassembled in a multi-dimensional syntactical order.

The rules of general grammar are those by which we build up complex forms, not merely with words but in other ways. They could be said to include the grammar or logic of perception, by which I mean the rules of category and combination under which we perceive the world; for example the limitation of the number of channels of sense perception and of the scope of each; the necessity for hue and brightness to occur together; the impossibility of perceiving a pitched note as having a taste, but the necessity that it must have a certain timbre; the fact that attention cannot move backwards in perceived (as distinct from remembered) time, though it can move both left and right in perceived space; and so on. These constraints, to which I have referred already in Chapter I, are so obvious that we take them for granted in spite of their arbitrary nature, and hardly

1. This is to some extent a controversial view of grammar. I have argued the case for it in detail in "The Grammar of Language".
give them a thought. Beyond the logic of perception, however, there is the deductive logic of classification, grounded in what Locke called "the similitude of things", defining the ways in which we can classify the features of the world, identify instances of the classes we thus create, and link classes or instances together by processes of re-classification and redesignation. Finally there is the logic of cause and effect, by which we recognise how possibility is pre-empted by historic and present actuality, and how this both creates and constrains the scope of future possibility.

These various constraints define the total envelope of possibility within which, by a process that we have yet to analyse in detail, a moving penumbra of possibility is evoked during consciousness, to provide the background against which actuality can be recognised, information can be passed. I shall not attempt to discuss or argue these complex matters in any detail here; it is sufficient in the present context to indicate broadly what I mean by combinations of possibility, without attempting to set forth and justify a particular account of their nature and ramifications. At this point, having given some initial account of the process of experience, we can return to the question of how knowledge that has been gained from past experience is stored, retrieved and used in the present.

The Mind-Manifold

In this section I attempt to identify some of the characteristics of the mind's memory store.

We begin with ideas, which we have identified as forms "equilibrated", to use Piaget's word, through the interactions of input and schema. They are images of bits of the irreversible diachronic flow of experience which are floated off, as it were, into a kind of limbo where we build them into predications, and so become conscious of them. We have not identified the physical markers on which they are borne, but our provisional assumption is that there must be such

1. The characteristic step of reclassification is a link of resemblance, the characteristic step of redesignation is a link of addition or subtraction. The issue of the relationship between grammar and logic is discussed in considerably more detail in the opening chapter of "The Grammar of Language".
It is reasonable to assume that the central events described take place in the brain. The external experience of the organism, however, is monitored by sense receptors elsewhere in the body and translated into the on-off digital signal codes of innumerable neurones feeding ultimately into the brain. The whole central nervous system represents a vastly complex process of sub-processes and sub-sub-processes and so on, going on simultaneously, so that to describe the state of the system at one time by the state of its variables would be a task of fantastic immensity. Over time the whole is a unique procession of multitudinous unique events in an irreversible complex flow. As Schrödinger emphasised: "The world is given only once. Nothing is mirrored." But the relation and classification of bits of the flow begins at the sensory receptors themselves and continues at many intermediary processing levels. Every neurone firing is in Miller's sense a decision, and every decision, as we have seen, requires the matching of an input to a schema and of the schema to an output; that is to say, it links information to behaviour, as in the case of the mimosa leaf.

In a sense this might seem already to involve memory, the storage of the schema as one state of the system, a state which is part of a closed repertoire, a loop of possible states; but this is memory locally inbuilt into the system itself, it follows from the constitutive rules of the system which is (for example) the mimosa leaf; nothing is copied and floated off elsewhere, nothing is retrieved. In fact it is not memory as we think of the word, since there is no link between one repetition and the next. So far as the system is concerned, each event is a unique succession of unique states; and this is true even of highly complicated activities so long as they are genetically determined and involve no learning. They draw on a memory encapsulated in the gene pattern, but it is a race memory (if such a phrase is permissible), it is nothing to do with memory of the organism's own life.

As soon as we come to learning, however, it is clearly necessary in some way to float off images of bits of experience (or patterns in some way derived from them), to store these somehow and to retrieve them somehow when they become relevant. These are the processes we now have to investigate, the reading of information into memory and its subsequent retrieval.

To begin with, can we say anything more about what these ideas are? My suggestion is that we must assume they are synchronic forms of a quasi-topological nature — that is, forms accommodating a certain amount of flexibility, a certain range of generalisation, like Berkeley’s general inconsistent idea of a triangle — emerging in a quasi-topological space which is flexible even as to the number of dimensions it uses (for we can think alternatively in two, three or four dimensions). It follows that they are entirely non-perceptual and that they represent classes rather than instances of anything. The idea is the schema not the actuality, though it is the schema as modified by accommodation to the actuality. Moreover, being a quasi-topological scheme, it is normally more general, less detailed, than the actuality it reflects. This still leaves us with formidable question marks. How are ideas physically embodied? Where is this topological space to be located? How can we think of anything which is a class, not an instance? But for the moment I shall leave these questions aside. Let us consider first what we do with such ideas.

One thing we do with them is to choose them. Before indeed they are even formed or conceived, there has to be a severe process of selection. If every step of the process of experience and every possible span ("chunk") or combination of these steps was copied and recorded as a detachable unit, the amount of information in store would rise rapidly towards infinity. Basically however we remember only the ideas to which we pay attention; we pay attention only to those ideas which are built into predications; and we build into predications only ideas which are relevant to one stage or another of the purposive cycles of our thinking. But once an idea is built into a predications, as the form of the completed predications as a whole, or of the subject, or of the predicate, or of identified components
of either, then it seems that it will be remembered. Even after this, however, there is a further severe process of selection, because there is no lack of evidence for a short term memory which is relatively comprehensive but soon fades, while only an excerpt from it eventually reaches a longer term memory store.

A great deal of experimental work has been done on the physiological and other aspects of memory, which is reviewed in some detail by Miller in "Living Systems". It has been suggested that short term memory involves storage in large protein molecules; but the field is still controversial and speculative. My aim here is not to begin from the experimental end, but rather, with a due awareness of the experimental evidence, from the functional end; that is, to establish a view of the way in which the mind works as a whole in regulating the organism, and to derive the structure of a model of the mind from the functions to be performed.

How then are ideas, which I conceive as synchronic logical forms, likely to be stored? Clearly in such a way that they can be identified and retrieved. How then do we identify particular things or events in the real world (i.e. anchored, definitely designated ideas)? The answer is by locating them uniquely in a physical space and historic time by reference to other uniquely located things and events. How do we identify general ideas (i.e. those which are not uniquely located, those which are indefinitely designated)? The answer is by classifying them, saying what they are like, identifying classes of which they are instances. The grammatical rules of definite and indefinite designation mentioned in Chapter I seem in fact to be connected with the two basic ways in which we identify ideas in order to think about them.

The possibility of definite designation seems to imply that forms corresponding to all uniquely located things and events are spread out in a single quasi-topological cognitive map extending in time as well as space. We cannot envisage the map as a whole except perhaps when we are thinking on a cosmic scale, but when we locate any individual thing or event, like the French Revolution or the nearest service station
or New York or my child's birthday or the apple tree in the garden, we
do so by reference to other located things or events, including always
the eventual reference point Me Here Now; and the relationships involved
are those of sequential order or neighbourhood; direction; and relative
distance in space or time.

To identify even a particular located thing however we need to
know not only where it is, but what it is; we have to classify it as
well. So if the memory must include a cognitive map, it must also
include some way of registering classes or ideas. Indeed, as we saw
earlier, every definite designation has to be superimposed on an
indefinite numerical designation, even if it is no more than the
classification of what we are thinking about as either singular or
plural. The difficulty here is that any one thing that we think about
may be classified in several different ways - often, as in the case of
an idea like "man" or "city" or "complication", in an immense variety of
different ways. We can discover a principle of order in this field of
classification in the fact that every class can be recognised as
belonging to a wider, more general class, and that again to a still
wider class, in a hierarchy extending, in Locke's phrase quoted earlier,
to "body, substance and at least to being, thing and such universal terms
which stand for any of our ideas whatsoever." "Object", "idea", "event",
"relationship", "singular", "plural", "form", "quality", "intensity";
these are perhaps the most general categories under which all ideas can
ultimately be subsumed. Nevertheless the hierarchies of generality1 are
not sufficient as a means of ordering our ideas, mainly because the
substantive ideas which are the elements from which we start in any
occasion of thought are normally themselves classifiable in several
different ways simultaneously.

To investigate these phenomena in detail would lead us deep into
grammar. But for present purposes it may be sufficient to say that an
idea can be complex because it is a superposition or because it is an
organisation of different forms. The first type we can describe as
an adjectival superposition, because if we dissect it in words we end

1. These are the "ladders" of Hinkle's development of Kelly's
type of personal constructs.
up with a series of adjectives qualifying a noun — qualifying it, not composing together with it, as parts, some larger whole. It is reflected in music by any tuned note, which is always a superposition of overtones from the harmonic series upon a fundamental tone. The second type we can describe as an organisation or configuration of different forms. It is represented, for example, in music by a melodic phrase, and in language by any cluster of words linked by a preposition, a conjunction or a verb. It is of the nature of any form that from one view (as it were from above) it is an undivided synchronic unity, while from another view (as it were from below) it is analysable into constituent forms — at least until we reach the very highest level of generality already mentioned. It is analysable, as we have suggested, sometimes into a superposition of other forms, sometimes into an organisation of other forms. Every predication in our experience is by definition an organised form or configuration; but some of the elements from which it is organised will themselves be analysable as superpositions or subordinate organisations; and the predication itself, when it is once completed, will be recognised as a single complex form. The process of predication is essentially that of assembling such a form, which can then be remembered as a single whole. For example if you read the sentence "You can lead a horse to the water but you cannot make him drink", you can in retrospect hold it in mind as a single form, and you can then refer to it at the beginning of the next sentence with a single pronoun: "This...".

We do not remember all the predications of our experience, owing to the mechanisms of selection which we considered earlier. But what we do remember often consists characteristically of complex forms representing organisations and superpositions of experience — the events we live through, the actions we take or are taken by others, bits of the panorama of the world. And my proposal is that fundamentally the way in which our indefinitely designated ideas are ordered in the mental storehouse is that they form idea-complexes built up by the accretion of ideas derived from experience which fit on to each other because they are similar to each other.
Now ideas can be similar to each other in three different ways. One idea as a whole may be similar to another as a whole - in the way in which a football is similar to an orange or to the round earth. Or part of one idea may correspond to a part of another idea, as all houses with flat roofs, or all conditional clauses, are similar to each other. Or part of one idea may correspond to the whole of another idea: as part of the idea of a university corresponds to the idea of teaching. What this means is that the ideas brought together by accretion in one idea complex may themselves be very different from one another, and some of them may import a whole variety of apparently extraneous ideas as components into the mixture. Any one idea added to the accretion will always be similar in a significant way to at least one of the ideas already there, but the effect of this process is that the same idea-complex may include widely different component ideas within its family - even though ultimately some indirect link can always in principle be traced between them. Thus the idea of running, which is rooted in the reciprocal motion of a man's legs, can without difficulty be made to accommodate within its complex the rapid rotary motion of a steam turbine, completely different though this motion is.

It follows that as a result of this effect the number of idea complexes identifiable as separate main features of the mental storehouse can be kept relatively within bounds, but each individual idea-complex is liable to be of a seemingly unmanageable complication and heterogeneity. How, then, can such complexes be ordered? My suggestion at this point is that broadly the idea-complexes in any human being's mind correspond to the separately identifiable signs and symbols - especially words and standardised constructions or word groups - in every symbolic language or code known to him.¹ They are

¹ As so often, we find that William James has been here ahead of us, though, again as so often, without developing the implications of his insight in detailed ways. "In short, the only things which we commonly see are those which we preperceive", (He is referring here to 'anticipatory schemata', though he did not use this terminology) "and the only things we preperceive are those which have been labelled forms, and the labels stamped on our mind. If we lost our stock of labels we should be intellectually lost in the midst of the world." (Principles of Psychology", Macmillen 1891, Vol. 1, p.444).
ordered by means of this vocabulary; indeed the vocabulary exists for the
purpose of ordering them and so making ideas retrievable."

In the upshot therefore I find myself envisaging the mental store-
house as an immense manifold (to use a Kantian word\(^2\)), a terrain shaped
by the impact of experience throughout our entire life, with identifiable
main features which are themselves complex agglomerations of lesser
features. Our knowledge is ordered on this manifold in two ways: under
known markers in a sort of internalised map of universal space and time,
which is topological in the sense that distances and angles, though
represented, are adjustable to the relativities of the occasion; and
under known signs and symbols in the codes or languages with which we
are acquainted. Thus our knowledge (as we saw in an earlier context)
consists of facts of existence and facts of classification. Without
jumping to misleading physiological conclusions it is fair to draw
attention to the analogy of the extensive, many-folded cerebral
cortex, divided as it is into two hemispheres, one predominantly
concerned with abstract linguistic cognitions and coordinations, and
one predominantly concerned with physical cognitions and coordinations.

This picture of the mind-manifold brings together, I believe, some
of the elements which must find a place in any model of the way in
which the mind makes use of memory. But it is still a long way from
explaining how the model can work, how this more or less static
structure can be involved in the living process of thought. In the
next section I will turn from structure to process and try to suggest
how this may happen.

1. There are certain limits to the number of symbols the mind can
store, which may bear some relation to the number of words in a
normal person's vocabulary. So far as particular hierarchical
groupings or ranges of classifications are concerned, Lévi-
Strauss comments that "in the present state of knowledge the
figure 2000 seems to correspond, as an order of magnitude, to
a sort of limit in the neighbourhood of which are located the
capacity of memory and the power of definition of the ethno-
zooologies and ethno-botanies" (i.e. the numbers of known
animals and plants) "founded on oral tradition". ("La Pensée

2. See the opening section "Of the Possibility of the Manifold
Representations given by Sense" in Section II of Part 2 of
"The Critique of Pure Reason".
The Resonance of Association

A discussion of the way in which items may be added to memory and recalled from it.

According to our model discrete logical forms or ideas, derived from predicative systems at the focus of consciousness, are in some way transmitted so that they make an impact on the mind-manifold and, in at least a proportion of cases, make a lasting change in it by adding new features or by adding accretions to existing features. Conversely, when further predications are being constructed at the focus of consciousness logical forms or ideas are evoked in some way from the manifold to contribute to the new predications. How can we describe this process of accretion and evocation? The most obvious analogy is that of some kind of resonance. What I am suggesting is that as we move through our waking life the ideas floated off from our experience sweep across the manifold and awaken a multitude of reflections, the resonance of association.

The manifold can perhaps broadly be compared to a holographic fixation of wave-forms in a complex superposition; thus the reflections evoked from it are themselves forms, ideas. As the original form — itself a copy of experience floated off from the irreversible flow — crosses the manifold, it wakes into sympathetic vibration all sorts of forms in the manifold which are similar to it, in whole or in part; thereby it stimulates the features (whether of the cognitive map or of the symbolic ordering) to which these forms belong, and consequently evokes a response — a new form added to the resonance — from all these features. Thus to the reflections floated off from the input of experience are added reflections from the manifold, and then reflections of reflections in an immensely complicated synchronic resonance, constantly changing its character and intensity, not by steps but by an endless shifting in the blend, as new strands are added and old ones die away. (Anyone who has heard Tallis's prodigy, the 40-part motet "Spem in Alium", will perhaps understand the analogy that I am invoking.) Meanwhile the features of the manifold themselves that have been affected by the impact of new or reflected forms
are liable to permanent change as a result, whether through the addition of something new, or through the reinforcement or negation of something already there.

This picture does not result in any model of coherent thinking processes, rather it is a model of a confused shifting roar. To deal with coherent thinking we need to undertake some further construction. But before coming to that it may be helpful to draw out a few additional points about this initial process of retrieval or association. First we may note that there are two kinds of links between ideas, those of direct similarity of form, and those of association in some past conjuncture: links of resemblance and links of organisation. I am reminded of the moon by this bicycle wheel because there is a formal similarity between them, they are alike in being round. But the moon in turn reminds me of Cape Canaveral, not because they are like each other, but because they have been associated in past conjunctures in my mind. To put it more precisely, there is a link of organisation between them because the geographical feature Cape Canaveral has been associated previously in my mind with rocket flights to the moon, and is thus indirectly linked with the idea of the moon itself because both are components of another idea-complex concerning rocket flights.

This example also illustrates the close relationship between the ideas located on the cognitive map (which are themselves classifications) and the idea-complexes of the symbolic ordering. The ideas on the cognitive map are made unique by their location; but as we grasp them they are not unique in themselves, for we float off copies of them, images, when we need to do so. We cannot know anything by its space-time location alone; we still want to know what it is, how it is to be classified. Even proper names are unique only in a special sense; as Lévi-Strauss has argued, they define a class beyond which "on ne fait plus rien que montrer" 2, a class which in this context has only one

1. These correspond to what Lévi-Strauss calls relationships of homology and relationships of contiguity (e.g. "La Pensée Sauvage", p.288). Correspondingly William James speaks of association by similarity and association by contiguity.

2. See the chapter "L'Individu comme Espèce" in "La Pensée Sauvage" (Plon 1962).
possible instance. Thus the resonance between the located forms and
the classifying idea-complexes is crucial to our understanding of the
world.

A further point which should be emphasised here is that the form
evoked from an idea-complex on a given occasion - what I call the
evoked idea - is normally a simple affair by comparison with the
virtually unlimited potential of the complex itself. Consider the
following quotation from Erwin Schrödinger:

"There is of course an infinite variety of ways of striking
a given body, say a bell, by a hard or soft, sharp or blunt
instrument at different points or at several points at a time.
This produces an infinite variety of initial deformations and
effectively a truly infinite variety of shapes of the ensuing
vibration... But in every case, however complicated the
actual motion is, it can be mathematically analysed as being
a superposition of a discrete series of comparatively simple
'proper vibrations', each of which goes with a quite
definite frequency."\(^1\)

It is important to avoid an over-literal translation of this metaphor
of the evocation of sounds from a bell into the association of ideas
from a hypothetical idea-complex, the physical form of which I cannot
begin to describe. Nevertheless, the comparison may help to convey the
point that there is no question of grasping all at once the full
potential content of any one idea-complex, particularly one which
represents a prolonged trajectory across the map of my own life (for
example my idea of myself or my wife or my country), or one which
represents the family of ideas unified round one of the major symbols
of human language (for example, man, city, life, mathematics,
organisation, plant).

What is evoked depends on the nature of the surrounding stimuli
in the particular conjuncture of the moment; although in practice a
succession of differing forms may be evoked from one idea complex, no
one evoked form can be of very great complication. The process may be
compared with the way in which we evoke the shape of a mountain when we
look at it. There can be no question of taking in all the variations

1. "Are there Quantum-Jumps?" from "What is Life and Other
Scientific Essays" (Doubleday Anchor 1956) p. 137.
with which nature has defined the total shape of the mountain, down to the grains of sand upon its face, all the way round in three dimensions. What we see or recall depends on the distance and angle from which we view it, on the visual conditions and also on what we are interested in at the time — though what we see still stands in our minds for the mountain as a whole. It is important that a single glance can take in only a limited amount of information; the limiting number of variables unified in any one form is perhaps connected with George A. Miller’s “magic number seven”, to which reference has been made earlier.¹ The mind can indeed rapidly discriminate very subtle differences between complex visual forms, as it does every time it recognises a face; but then, I suspect, it is scanning for difference, moving down from the broader scale to precise discriminations in a narrowly circumscribed field; moreover much of the discrimination is a matter of automatic processes below the level of consciousness, the details of which do not load the field of attention. When in speech we use a word like “man” or “city” comparable constraints apply; what is evoked is a relatively simple form, the face, as it were, which the idea-complex offers in this particular perspective, one which depends enormously on the character of the surrounding resonance generated by the other ideas in stimulation at the time.

The form evoked from an idea-complex does not have to be one of those which by successive accretions built it up in the first place. Nor, so far as I can judge, does it have to be built up by a superposition of a relatively small number of “proper vibrations” as in the case of Schrödinger’s bell — though here there may be some room for doubt. There is little direct evidence that idea complexes have constituent “proper” forms of this kind, but it could be argued that every definition of a general idea seeks to pin it down by producing

¹ Cf. the experiment reported by Kaufman, Lord, Reese and Volkman in which subjects were asked to report on the number of dots varying from 1 to 200 in flash displays: above seven they began to estimate rather than count and errors increased. There is room for argument whether even below seven they counted dots successively in time or, as I believe, grasped synchronic configurations of up to seven elements. (Amer. Journal of Psychology 1949, 62, 498-525, cited by James G. Miller in “Living Systems” p. 137).
a list of essential attributes which, when put together in superposition, produce a complex paradigm form to which the idea as evoked in any particular context can be accommodated by generalisation. However that may be, any major feature of the mind-manifold is such that in any number of different perspectives, of wide and narrow focus, from different angles, at different levels of generalisation, it can yield any number of different "reflected" forms; and few of these will correspond exactly to any particular one of the accretions and mouldings by which the feature was built up in the first place. Yet, having used a pictorial image, I have to emphasise at once that the world of these forms is non-perceptual, its space is quasi-topological, and the forms are capable of superposition like wave forms as well as of organisation in space. We have to use images to grope after the processes of thought, but that does not mean they can be clearly visualised. There has to be an element of the paradoxical about these constructions - as indeed there has to be about the paradoxical images of modern physics.

Finally we have to note that in this resonance, if every conceivable association were evoked on every possible occasion, we should have not a confused roar but a total uproar. The subject would be in permanent epileptic fits. There is a large amount of selectivity in the response from the manifold to the stimuli of the passing moment; and this appears to be determined by a series of cumulative constraints which I call the constraining rules of association. Some of these can be identified, though we cannot exhaustively enumerate them all or quantify their effects. The following is a partial and tentative list of them:

a. Idea complexes seem to be associated with thresholds of stimulation which have to be exceeded before any response is evoked. (Exactly what should constitute an idea complex in this context is arguable, since it will be recalled that these features are agglomerations of lesser features which are in turn composed of lesser still. The most convincing interpretation seems to be that the manifold itself is to be regarded as a single continuous "surface" like, for
example, the surface of the earth, and that the scale and nature of the features which emerge as relevant in a given context depend on the scale and nature of the forms which provide the stimulus.)

b. The threshold is lower for idea-complexes frequently or recently stimulated, and in the case of links of resemblance when the resemblance is simple and close.

c. The threshold is lower for an idea-complex on which several active lines of association may converge more or less simultaneously.

d. Nevertheless, once stimulation has taken place, the threshold of resistance begins to rise again. The mind is impelled to move on from the first idea even though it may come back again after a short delay.

e. The threshold is lowered for ideas of what is pleasurable and raised for ideas of what is painful. This is Freud's pleasure/pain principle.

f. Nevertheless it is lowered for associations predicting future events that will affect the subject, even if they are unpleasant. This applies particularly to predictions of movement. If any objects, including the thinker's own body, are moving in the field of vision, the brain automatically plots their relative courses, and as a result reflex actions may be triggered off before the conscious mind has taken note of the situation at all. This constraint is close to Freud's reality principle.

g. General states of body or mind (whether I am hungry, for example, or panic-stricken, or depressed) can lower the thresholds of association in some directions and raise them in others.

h. The same is true of the purposes of the mind. We are inclined to be reminded of things which are relevant to the current
activities of our conscious minds. Indeed this is where pleasure, pain and reality come into the equation. Intense sensation appears to raise the barriers in all directions other than that of the sensation itself and of any purposive thoughts to which it may lead; and much the same is true of intense emotion.

Such constraints as these affect the mind's selection from the sensory input which pours continuously through the sense receptors of the body, and still more to its selection of the associations which the sensory input will bring to mind, and so the ways in which it is interpreted. Highly elaborate automatic procedures for encoding, comparing, selecting, integrating and recoding the input of the senses and the associations of the mind take place below the level of consciousness and these may include procedures acquired by learning which have subsequently become matters of habit. But the general resonance of which we have been speaking in this section is a sounding of many ideas together and so a consciousness of none. It represents in Freudian terminology the unconscious mind. It may powerfully affect the quality and intensity of our conscious experience - of that I shall have more to say shortly - but it is to be distinguished from the recognition of specific forms in specific relationships to other forms, which is the hallmark of consciousness and of the mind itself. To this process of conscious predication we now turn.

Attention and Predication

An attempt to show how from the input of the senses and the resonance of association is condensed the series of particular cognitions which emerge at the focus of consciousness.

The process of predication is the means through which the organism regulates itself; and this includes even steps of regulation which are reflex or habitual responses, taking place below the level of consciousness. The core of predication is recognizing something and relating it over a span of real time to something else. This process
creates a new contingency (a "touching together" of things). The new contingency in turn may be stable, in which case nothing further happens; or it may be unstable, in which case its creation becomes the cause event of a sequence of one or more further events which are effects of the cause event. Even in the case of a reflex response ¹, or of an act of cognition which has no consequences in behaviour, we still have to do with a predication, because we are still concerned with biting off as it were a finite span of time within which a synchronic contingency can be recognised as existing or changing. No sensing apparatus can take cognizance of even a spatially synchronic form in zero time; there must always be a span, though its length may vary from that of a flash of light to that in which continental drift may be observed. This applies to the response of instruments as much as of organisms. A thermostat cannot register and react to a change of temperature that does not occur over finite time. The recording pen of an instrument like a barograph may draw a continuous line; the strength of the current in a river or a wire may vary continuously; but neither a man nor another instrument can respond to such identifications except by biting off a discrete finite span of the continuous trace and relating it to something; in other words without making a predication.

We can distinguish however between the reflex or habitual responses in which the interlock of cause and effect is no more than the activation of a given switch (often below the level of consciousness) and the step of decision or choice. In the latter case the mind moves from a set of comparable possibilities to one out of the set - one which includes the behaviour that actually follows. This is the creation of a new constraint or rule (i.e. a restriction of the possibilities of transition in time), not the exemplification of an old one; for the pattern of behaviour which is adopted may be entirely new, even though it must be built ultimately of known component ideas; it represents the arrangement of a pattern of switches ad hoc to match the pattern of the possibility selected.

¹. Or a TOTE unit. See note on page 32 above.
It is important in this connection that there are limits on the amount of information that the human mind can handle at one time. The argument that the human mind is a limited capacity channel was elaborated by Broadbent in 1958 and in general terms it is hardly to be disputed. All attention involves selection. Beyond this, however, as I have argued earlier, the limitation is not a simple quantity; the subjects of the predications at the focus of attention are usually themselves complex, that is, built of related component parts, and the complexity may involve more than one subordinate level of hierarchy. The number of separately recognised components at the first level of subordination appears to be limited to about seven, while the number of subordinate levels of hierarchy seems to be no more than three; moreover there are trade-offs between hierarchical and associative (component) complexity. Although it seems likely that components can be numerically identified only at the primary level of subordination (the level of the direct components of the subject and predicate), a complex which has been recognised at that level can be integrated again, with the aid of short term memory, at a lower level in an immediately subsequent predication (as when the house which I see with separately identified doors and windows is next seen as one in a whole street of houses). The mind, we may note, is able to bring together as ideas at the focus of consciousness the complexities of synchronic three-dimensional shapes with four-dimensional trajectories of movement and patterns of sound in time, as well as logical equations and causal predictions; but broadly the more disparate elements have to be integrated, the greater the strain on the mind's limited capacity.

The experimental analysis of these processes would be an enormous task, so far hardly even begun. However, for our present purposes the details are not significant, so long as it is accepted that complex constraints of this general kind exist.1 We need perhaps to make three points. First it is easier to integrate in a complex way perceptions recognised in the same space through the same sensory channel; here it is relevant that much of the selection and organisation of the visual input may well be carried out before the result is

1. These matters are discussed in considerably greater detail in "The Grammar of Perception" and "The Grammar of Thought".
translated into the logical forms built into predications at the focus of consciousness; the integrated outcome of prior processes enters as a single element into the field of consciousness. Correspondingly it is more difficult to integrate disparate things, for example to carry on a conversation while trying to watch television. Thirdly, however, just as a complex perception grasped at the focus of attention can subsequently be integrated at a lower level of hierarchy (though the individual will no longer have the same distinct and determinate awareness of it), so a complex procedure, once made familiar and habitual, can be integrated into a wider procedure (with a similar loss of determinate awareness); thus gear-changing, once learnt, can be integrated into the process of driving a car. All hierarchically complex perception or thinking involves a primary or determinate level of component - which extends normally to the major components of the subject and predicate as well as to the subject and predicate themselves - and lower indeterminate levels (like that of the bricks which we recognise only in a general way as we look at the main features of a house); and this process of integrating a procedure into a wider procedure means in effect pushing it down a level in the hierarchy of consciousness. What I am referring to here is the process of "modularisation" as discussed by Jerome S. Bruner. As he says, "Given modularisation and the reduction in attention necessary to regulate an act, that act can then be incorporated into a higher-order, longer-sequence act without requiring so much attention as to disrupt regulation of the higher-order act."

Whereas one reflex or habitual response is independent of others and various such responses can take place simultaneously or overlap with one another in the same organism, the same is not, on the face of it, true of responses involving choice or potential choice. These seem to take place one at a time as part of the continuous series of conscious predications at the focus of attention. The ordered series also includes many predications which do not involve active response, but even these involve the response of noticing, with a

potentiality for consequent action, and it seems to be inescapable that we can notice or pay attention to only one thought at a time embodied in one predication (though it will normally itself be a complex thought built up of many component ideas). We cannot for example read two sentences at once. We may be able to take in both the sentence we are reading and a spoken sentence which we hear at the same time, but only with difficulty and only, as Broadbent has suggested, with the aid of short term memory which preserves one coding long enough to enable us to hold it and turn back to it when we have finished with part or all of the other. At the end of the process we reach our actual understanding of the two in series and not simultaneously.

This assertion is admittedly open to question. Neisser, after reviewing experimental evidence about what he calls "dual attention tasks", concludes that the performance of such tasks depends on the skill of the observer; practised subjects, he says, can do what seems impossible to the notice. The skilled driver of a car pays attention to several different things at once; the practised typist can talk while she goes on typing. Up to a point these facts can be accommodated by reference to the mind's capacity, which we have just considered, to integrate a habitual response, once learned, at a lower level of consciousness. When this happens, the amount of information processing involved is, I suggest, reduced because what was first learned as a configuration of successive steps can later be integrated as a single complex form, one item of information, not several. But this can hardly apply to the case of the typist carrying on a conversation while she types, since here the two activities do not seem to be integrated except in the sense that they go on simultaneously. To understand this case we have to take account of a wider process of regulation, that of the purposive cycle, and to this I shall turn shortly. Meanwhile however I would emphasise that, although it is possible, with prolonged practice, to acquire special skills of this

1. While I accept that the mind can, with special practice, perform limited dual attention tasks, I would argue that they must involve separate purposive cycles, themselves integrated under an overarching purposive cycle, of which the purpose is specifically to pursue the two subordinate cycles - at least over certain portions of their length - simultaneously.
type, they are quite rare accomplishments and this possibility does not affect our general conclusion that the mind has a strong propensity to think of only one thing at a time.\footnote{1. Cf. William James's conclusion: "If, then, by the original question, how many ideas or things can we attend to at once, be meant how many entirely disconnected systems or processes of conception can go on simultaneously, the answer is, not easily more than one, unless the processes are very habitual; but then two, or even three, without very much oscillation of the attention. ("Principles of Psychology", Vol. 1, p.409).}

Conscious Thought

A section in which I develop further ideas on the nature and function of consciousness, making use of an analogy drawn from music.

Why should this be? One possible answer might be that consciousness, which always seems obscurely to involve some participation of the Self\footnote{2. Cf. Hume's remark: "For my part, when I enter most intimately into what I call myself, I always stumble on some particular perception or other... I never can catch myself at any time without a perception, and never can observe anything but the perception." ("A Treatise on Human Nature" Bk. I, Part IV, Sec. 6).}, is properly an aspect of purposeful or potentially purposeful thinking; that purposes and the personal roles, the plans (to use Miller, Galanter and Pribram's term) which are associated with them must be coordinated if confusion, with consequent ill adaptation for survival, is to be avoided; that this requires that no new plan be adopted without comparison and coordination with other still uncompleted plans already adopted in the past; and that this cannot be done for two new plans at once since they would not then be coordinated with each other, even if each was coordinated with past decisions. Thus the practical function of attention and consciousness is to ensure the proper coordination of our decisions. (Basically attention and consciousness seem to refer to the same phenomenon linking the Self with the world; but we talk of attention when we face towards the world and consciousness when we face towards the Self.)

In passing it may be worth interpolating the comment that if this interpretation is correct we might expect the same function of...
coordination to be reflected in any animals which can formulate alternative possibilities and choose between them, instead of simply responding in a reflex manner to the environment. This raises in turn the question whether reflex responses derived from experience can be acquired in any way other than that with which, as humans, we are familiar, namely the habituation of a response which was originally a conscious choice. On a first impression there is no reason to add gratuitous complication by postulating some different process, even if such an alternative can be conceived; and this suggests that on a speculative basis we should accept that any animal which can learn from experience — as distinct from letting experience trigger off some genetically programmed reaction — must have the capacity to make choices in the first place between previously unformulated possibilities, and hence that it must also possess some capacity analogous to that of human consciousness, which organises a man's noticing, non-automatic experience into a single series of predications at the focus of the mind. Perhaps we could suggest that every animal that has periods of sleep and wakefulness is likely to possess a capacity of this kind to organise experience into a series of steps; for when we are conscious, that is what we do (and dreaming is a kind of consciousness), whereas when we are unconscious there is no reason to believe that this function continues, though reflex responses of various kinds may still occur.¹

These are no more than speculative thoughts. To carry our enquiry further, let us consider more closely what a man does when he is awake. Effectively he is always either perceiving or thinking, following progressions of perceptions or trains of thought. These are the natural units of attention. Any one series may be very short — it may even consist of a single predication — or it may be relatively

¹. A person in a hypnotic trance may have coherent experiences of which he is afterwards entirely oblivious until his controller instructs him to bring them back to mind. I see no reason to say that these experiences were not conscious, even though there may have been some interference with the process of storing and recalling them. Correspondingly if under hypnosis I undergo an operation without feeling pain, unless that pain can subsequently be recalled, I would argue that it was probably never an element in consciousness; but if it can subsequently be recalled, then it was.
prolonged; but at the end of it the mind switches abruptly when attention is diverted to something else - as when the door bell rings - and another series is begun. The question that arises is what kind of links exist between the predications internal to a progression or a train of thought.

We can give a partial answer immediately. A link is always either one of organisation (spatial, temporal or spatio-temporal) or one of similarity. These are the two types of linkage which we have already mentioned in discussing the resonance of association. My mind moves from this tree to the next, or to the sky between, or (shifting across a level of hierarchy) from the tree to the leaf or to the apple hanging on a branch; then it may notice many apples, joining them by a link of similarity, then leap to the garden of Eden across another link of similarity plus one of organisation - and so on. This partial answer however does not say why our attention moves across one link rather than another out of the thousands of possibilities present. Again we can perhaps find a partial answer in the relativities of the different thresholds to be crossed, of which we took notice in considering the resonance of association. But this reminds us of another dimension of the complexity with which we are faced. The resonance of association, according to our hypothesis, is going on all the time, and so is a massive unceasing input of sensory data from all our sensory channels. We are concerned here with two processes going on simultaneously: the shifting, blending, indefinitely vast multiplicity of the synchronic resonance of sensation and association; and the identification out of this resonance, through some process of drastic selection and coherent organisation, of particular notes organised in particular ways to form particular predications. A second process is superimposed upon the first.

The analogy of music can perhaps give us some further help here. When I hear a tuned note my mind is faced with a multiplicity of superimposed frequencies; but what I hear is a single frequency - that of the fundamental or lowest note, the one with the longest wavelength. I hear no other frequency individually, but I recognise the precipitate, as it were, of them all together in the timbre and intensity with which
the fundamental note is heard. The fundamental wavelength provides the container form, as I would call it, of a cell of perceptual consciousness, while the synchronic impact of all the frequencies involved provides the quality and intensity of the perception. All three are integral to the cell, for I cannot perceive a note unless I perceive it as infused with a certain quality and intensity of tone; nor can I perceive tonal quality and intensity without perceiving a note. Even with untuned sounds, though our discrimination is much more coarsely set, we do discriminate roars, rumbles, whistles, rushes, shrieks and so on. I suggest that the way in which the mind deals with logical forms in consciousness is fairly closely analogous to the way in which it deals with the impact of sound and other senses. An initial process of automatic segregation and association of the sensory input into cells organised together in complexes in appropriate spaces, which takes place below the level of consciousness, provides, when recoded, the raw material of the sensory input to consciousness. It also provides a starting point, or rather (as the process is continuous) a datum line, from which the resonance of association across the mind-manifold is continually re-energised. Out of this mental resonance the mind selects individual ideas as the container forms of the cells of thought and organises them into predications at the focus of consciousness. In the resulting experience an intellectual grasp of form is infused with the qualities and intensities of emotional life. The experience can be simply one of tracking the body's given perceptual input - though always subject to a drastic narrowing of focus on to one part of the input. But it can also be an abstract tracking of ideas drawn from the total resonance of the manifold. These idea-components are then constructed into predications, and each predication builds up a new form-as-a-whole, infused with a quality-as-a-whole and an intensity-as-a-whole. This is the life of the free, or apparently free, intellect.

At this point we come up against an apparent limitation of the musical analogy. How does the mind select the forms to be directly grasped, as distinct from those which contribute only indirectly to the

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1. These are sounds in which the overtones are not restricted to the harmonic series of wavelengths related to each other in simple mathematical ways.
quality and intensity of the experience? There does not seem to be any automatic physical process comparable to the way in which my mind picks on the fundamental frequency as the note it will hear, as distinct from the frequencies which merely contribute indirectly to the loudness and timbre of experience. If we take a group of ideas superposed adjectivally, there is no rule which indicates automatically which one must be the substantive (if you leave words aside). I can speak without contradiction either of a female pianist or of a piano-playing woman. The strong "selection restrictions" inherent in the vocabulary of any particular human language will normally in such a case predispose the mind sharply towards one attribute rather than another; but there is no rule obviously inherent in the mental process to identify which must be the substantive. Yet it may make a considerable difference to the sense: "fat man" is not the same as "human fatness".

As an approach to this problem let us imagine what happens if I wake up to find myself unexpectedly in a totally unfamiliar place, surrounded by inexplicable objects in a strange inexplicable space. First I start to construe a physical image or understanding of my surroundings. To do so I begin from given values or data, which are sensations—primarily colour, light and dark—and various differentiations and relationships between them. All these values, as we saw in Chapter I, emerge within limited registers of possibility which in a sense they bring along with them. To elaborate the image of my surroundings I walk about, looking at things from different viewpoints, judging distances, shapes and angles; I touch and feel; I sniff; I listen. In this process I do not merely collect new data, but I test, confirm, falsify and extend different aspects of my first construings; for the process of perception (as James J. Gibson shows, for example, in his book "The Senses Considered as Perceptual Systems") often involves a complicated marshalling together of different "cues". Given the known constraints of what I have called the logic of perception, otherwise the framework of natural necessity, the possibilities evoked are narrowed down by the correlation of different values which reinforce or cancel particular possibilities until a firm construction is established.

Meanwhile my mind has simultaneously been exploring every sort of more abstract association evoked by these unfamiliar objects, or parts of them, or groups of them; and again a similar process of classification, matching, reinforcement, cancelling, evocation, and construction ensues\(^1\), through which I try to establish what these objects are, what kind of a place this is, where I am, how I could have got here. Although the initial data are given, the process of understanding is essentially one of evoking a myriad possibilities and shrinking them down, in the light of constraining necessity, through mutual reinforcement and cancelling, to one particular combination of possibilities which is the actuality before me. Yet at the same time the resonance of possibility continues, just as the overtones of melody notes continue to sound while the melody is heard, and the collective impact of these resonating ideas makes itself felt through the shifting emotional qualities and intensities with which my understanding of the focussed ideas is infused.

The precise blend of resonating ideas will be different at every different moment of consciousness, but we can supply broad classifications to identify particular types of emotional experience - fear, anger, relief, anxiety and so on - just as in visual perception we can apply broad classifications to identify recognisable colours such as red, blue, or green, even though every occasion of perception is unique and the range of discriminable shades is vastly greater than our basic repertoire of colour words. Similarly again it seems a plausible hypothesis that the intensity of emotion varies directly with the quantity of resonating ideas in stimulation, just as the brightness of our perception of light or the loudness of our perception of sound waves varies with the number of the appropriate neurons in stimulation\(^2\). At the same time, as we shall see shortly, intensity of emotion reflects a massive shifting of the thresholds of association in the mind-manifold, and consequently a strong impetus towards particular types of purpose and towards action related to achieving such purposes.

1. This is the process to which Sloman refers as "disambiguation".

2. "When the same note is sounded more loudly more and more nerve fibres are brought into activity." (Peter Nathan "The Nervous System", Penguin 1969, p. 50).
Focal Attention and Subordinate Complexity

In this section I begin a closer examination of the process by which thoughts are articulated - essentially a process of grammatical construction.

The process of understanding or trying to understand, which I have described in Chapter II of this study takes the form of a series of predications. To begin with, let us say, I direct my perceptual attention at a particular located object. This becomes the grammatical subject of a predication. As such it is definitely designated by the cone of the perspective of my attention, which locates it on a cognitive map in relation to Me-Here-Now. I recognise certain things which define the subject - its particular overall shape, its colour, small, size and so forth, together with its construction (where appropriate) from component elements having their own shape, colour, size, etc., and all related in specific ways to each other and to the whole. Characteristically all these attributes, components and relationships are not recognised pair by pair as separate predicates of the subject, or of components which are themselves recognised as predicates of the subject. Such a process is what a strict logical analysis would in fact undertake, reducing the whole to a series of binary predications between simple elements; but this, while theoretically possible, would be an exceedingly prolonged and tedious procedure - just what a computer might undertake. Characteristically what the mind does is to recognise the subject from the outset as a synchronically complex whole. It does not become separately, determinately, aware of each of these attributes, components and relationships, but it does become aware of them simultaneously, in a more indeterminate way, recognising the subject from the outset as embodying subordinate complexity.¹

This implies that the form-as-a-whole is recognised as the container form of a complex involving subordinate elements that are related together, in some cases by superposition (as with overtones on a fundamental tone), in some cases by sequential continuity (as

¹ As I have mentioned earlier, this point is developed from a slightly different angle by Michael Polanyi in his book "Personal Knowledge" (Routledge & Kegan Paul, 1952). Cf. the remark on p. 88: "Subsidiary or instrumental knowledge... is not known in itself but is known in terms of something focally known, to the quality of which it contributes, and to this extent it is unspecifiable."
the discriminable peculiarities of a complicated shape or outline are linked together in sequence), and in some cases by structural organisation (as the components of a structure are related in space to each other and to the whole). It is this highly complex whole, determinately grasped as a whole but not in detail, that the mind then relates in a predication at the focus of consciousness to a predicate, which is again a whole and may be just as complex as the subject. In this context we note particularly that it is the container form-as-a-whole of the subject which is related by a transition in space over time to the container form-as-a-whole of the predicate. The synchronic complexities of the subject and predicate are absorbed, as it were, within their container forms.

1. We may note in passing that the superposition of wave forms, as of adjective ideas on a noun idea, is (to consciousness if not to the physicist) a relationship not involving extension; while the sequential elaboration of a visual or tactile form does involve extension.

2. It should be noted that the forms which are organised in these ways include what Piaget would call sensori-motor schemata. Thus learning to ride a bicycle can be laborious, but as my skill in bicycle riding increases I can integrate more and more of the process into forms of wide span — such as "I shall now ride right round the block" — and when this is done the subordinate complexity of the process, including responses to events unforeseen in detail, continues below the level of consciousness. This phenomenon, which Bruner calls modularisation, is associated with the practice of skills of many kinds, including, for example, musical skills. There are strict limits to the number of forms which the mind can grasp determinately in a single predication, but by practice and habituation we can learn to integrate highly complex schemata of any kind as single unified forms; and this in turn makes it possible for the mind to think creatively, predicatively, across wider spans, at a higher level of the hierarchy of ideas. In such cases, as might be expected, becoming consciously aware of the detail of what is integrated at the lower level can effectively inhibit the full performance, precisely because it breaks up unified forms of wide span into smaller determinate forms which are then too numerous to be brought together in single predications. These matters are discussed at greater length in my studies on "The Grammar of Perception", "The Grammar of Thought" and "The Grammar of Language".

It has been suggested, e.g. by John Shutter, that the capacity to perform in the way I have been describing reflects a kind of split in the mind between two selves, one conscious and inhibited while the second is freely creative. But if it is once recognised
For the sake of simplicity we have been presupposing a strictly perceptual experience with no abstract classifying or interpretation of what we perceive. In practice however experience is never restricted in this way. In trying to perceive what something is, we are constantly exploring what it is like. In the terms of the model developed in this study all the discriminable features of the perceptual experience, whether determinately grasped or not, set off a simultaneous resonance from similar features of the mind-manifold. The question which is crucial at this point is how this chaotic resonance is reduced to order, just as the apparent chaos of perceptual data is reduced to order by the focussing of attention on a subject form (or schema) to which all the complexity of components and attributes is then related in an ordered way.

Two Simultaneous Processes of Association

The processes of association are here seen as operating on two levels: first in the mechanism by which the attention shifts from one subject to the next, and secondly in the simultaneous impacting of a cloud of associations which provide the emotional colouring of experience.

In the case of perceptual experience, where we are trying to "make sense" of a perception, the initial ordering of classification is facilitated by the focus of perceptual attention. If the subject of our perception is a certain form—as—a—whole, we may jump very quickly to the identification that this form is, say, a tree. That is to say, the perception wakes an echo—an "evoked idea"—from the idea-complex that all consciousness is to be conceived as grammatically structured, with hierarchical distinctions of level between the predicative system, the subject and predicate, the determinate components of the subject and the predicate, and the elements of indeterminate pluralities, there is no need to turn to such uninviting hypotheses.

The following piece of anonymous wisdom quoted by Alan W. Watts is relevant:

The centipede was happy quite,
Until a toad in fun
Said 'Pray which leg goes after which?'
This worked his mind to such a pitch,
He lay distracted in a ditch,
Considering how to run.
in the mind-manifold labelled by the symbol "tree". This is not necessarily the only idea it could evoke; it could for example (if it was a fir tree) evoke the idea of a geometrical cone, or the idea of a plant, or (if it was a monkey-puzzle tree) the idea of a puzzle for monkeys, or the idea of a particular shade of dark green. But the choice will be relatively limited and, in context, the strength of one association is almost certain to be much greater than any other's. So we are likely thereafter to make the subject of our thinking not "this particular form-as-a-whole" but more specifically "this particular tree", this definitely designated instance of the class tree. And my argument is that once the subject is thus classified it effectively establishes the logical space within which other ideas incorporated into the predication are recognised.

I need to give some explanation of what this means. Before I do so, however, let us take cognizance of the further case in which a subject for predication is selected which is nothing to do with a person's immediate perceptual experience. Say I see a fir tree, and that reminds me of a Christmas tree, and then I start thinking about Christmas. As the example shows, the mind can move from one subject to the next by steps of association - sometimes with intervening steps which direct the movement of attention without necessarily themselves becoming the subjects of predications. I do not think we need to postulate any other mechanism of selection than this: the mind, guided by the input of the senses combined with the thresholds of association in the mind-manifold, normally moves from one subject to another across a bridge of association or resonance, that is, a link of resemblance or of past organisation. This does not affect the fact that a thousand other associations may simultaneously be in stimulation in the mind, some dying away while others continue and evoke new reverberations. The two associative processes are simultaneous but different. Something analogous happens, after all, when I shift my perceptual attention from the fir tree to the sky behind it, then to a bush in front, to a flower, to a dewdrop on the grass, to the sound of an aeroplane overhead. While the object of attention (the grammatical subject of the predication at the focus of the mind) shifts from one whole to another in what I have called a progression, the myriad constituent details of each
predication - forms, colours, intensities, relationships of which I am not specifically aware - shift in a different, more continuous, process, some falling away as my attention moves, but others continuing to contribute to successive predications. Even when I focus on the sound of the aeroplane, my eyes will probably turn upwards to search the sky for it, and some of the features of my preceding perceptions - trees, sky and so on - may continue to contribute peripherally to my new perception. Still more obviously is this true when we set aside the artificial segregation of perception from thought; in practice all sorts of associations from the preceding progression will still be sounding in my mind as I begin to look for the aeroplane. On the other hand if there now takes place a sudden violent explosion behind me, it is true that my total attention will be switched - after (significantly) a moment of disorientation - to some quite different focus. How in that case does the mind pick on a new subject for predication?

It seems fairly clear from this example that a sufficiently intense sensation, even if it comes unexpectedly, without relation to the current focus of perception or thought, will always of itself command attention as a subject of a predication, and that it will then immediately set off an almost entirely new resonance of association which will extinguish the old and determine a new series of thoughts. Moreover the new sensation does not have to burst upon us like an explosion: I may suddenly become aware that there is a faint smell of burning in the room, and as I do so I will realise that the smell has in fact been infiltrating my peripheral consciousness for a little time past, though I have only now become sharply aware of it. And immediately it will set my thoughts off on a new track.

Apart from the shifting input of sensation, however, we do not need to look further than the mechanism of steps of association, already discussed, as providing the links by which the mind moves from one subject to another. At any moment a large number of associations are being explored subconsciously, and it is the state of the thresholds in the manifold which dictates the one which will come next to the focus of attention. If I am sufficiently hungry,
for example, almost anything will remind me of some form of food. If I am sufficiently possessed by an emotion such as love or fear, my mind will continually return to the subject of its emotion. But one point we have to note is that if, as I have suggested, there are two different associative processes going on simultaneously (though, as it were, on different levels), this implies that there are two threshold levels for association: one for associations contributing to the collective background resonance of the mind, and a second for associations brought to the focus of attention as the specific elements of conscious thought, whether as subjects or predicates or as what I have called features of subordinate complexity.

The Nature of Logical Space

An examination of the nature of the quasi-topological, non-perceptual space in which we think, and of the relationships we recognise in it.

I referred earlier to the question of logical space and its relationship to the subject idea of a predication. To this we must now return. I gave reasons in Chapter I of this study why I think we have to conceive of ideas as forms emerging in a quasi-topological but non-perceptual space. I believe this is inescapable, if only because thought is inconceivable without the differentiation and relation of ideas; and differentiation and relation are already spatial metaphors; without some sense of space they are meaningless. The closest we can come to describing logical space is perhaps to say that it is a

1. The idea of logical space is not of course a new one. Wittgenstein, for one, used the idea in his "Tractatus". "The proposition", he begins, "determines a place in logical space. The propositional sign defined earlier as the "sensibly perceptible" sign "through which we express the thought" and the logical coordinates: that is the logical place. The geometrical and the logical place agree in that each is a possibility of existence." For Wittgenstein this is equivalent to saying that each is a form; for a form in the sense of what I have called a container value itself creates a possibility. "The form", he says, "is the possibility of the structure"; and "the structure of the atomic fact" is "the configuration of the objects", "the way in which the objects hang together in the atomic fact." But this does not get us much further. What Wittgenstein means by logical space or logical form is not elucidated. (The quotations are from sections 2.0272, 2.03, 2.032, 2.033, 3.4, 3.41 and 3.42 of the "Tractatus Logico-Philosophicus": London: Routledge and Kegan Paul, 1933).
metaphor of Euclidean space, a transformation of it, different, flexible, topological and yet in significant respects analogous with it. And the root of the analogy lies not so much in the forms, for these we cannot strictly imagine (as was noted earlier, even "the general inconsistent idea of a triangle" is impossible to imagine in Euclidean space), but in the relationships.

I have argued elsewhere in some detail in "The Grammar of Thought" and "The Grammar of Language". See also page 76 above.

I have argued elsewhere in some detail that the basic relationships which can be established between ideas in thought are fundamentally the same as we can recognise in perceptual space or analogical space-time - apart from a limited number of additional logical relationships. The perceptual relationships include those of orientation (up and down, left and right, etc., with a number of discriminable degrees between), of sequence (or "neighbourhood") in time or space, of inclusion and exclusion, of distance, angle, impact, relative speed and so on. The additional logical relationships establish links of equation or resemblance (fundamentally links of classification or reclassification, including comparative and superlative reclassification), links of grouping (e.g. addition and subtraction), and links of causality. Even these logical relationships, however, involve perceptual metaphors, such as a picture of lengths laid parallel and compared, or a picture of a "cap-fitting" link between a more general and a more particular form, or the schema of component and whole, or the images of aggregation and segregation where the idea of a flock (Latin "grex") plus a preposition is not far to seek. It is no coincidence that in language we use the same basically perceptual prepositions ("in", "before", "beyond", "towards" and so on) for abstract as well as perceptual thought constructions. We say "it follows" for logical as well as physical succession. I have already argued that the number of repeatable forms that a mind can remember is finite, though large. I now suggest that the number of relationships which the mind can conceive and use is not only finite but quite limited. On the other hand the variety of differentiations of form which the mind can build up through combination, by putting together repeatable forms in predicative structures, with linkages drawn from its repertoire of known relationships, is virtually
infinite.

Effectively a relationship drawn from this repertoire can be used in two different ways: synchronically when it relates "features of subordinate complexity" within a subject or predicate; and diachronically when it relates subject and predicate in a transition over time at the hinge of a predication. In language subordinate, and hence synchronic, relationships are expressed, for example, by prepositional links, or genitive or dative links of case, or by links of adjectival superposition; while diachronic links are expressed by verbs. Subordinating conjunctions are used in a variety of ways to embed one predication as a whole within another by assigning it a noun role, an adjective role or an adverb role within the second predication. It is my contention that, although the vocabulary of any normal language includes a great variety of verbs, their differentiations are largely a matter of so-called "selection restrictions" which make a given verb opt only for a particular type of subject or object - as "kick", for instance, tends to require a foot, or a person with a foot, as its subject. The number of basic relationships which verbs can convey is much more restricted. I will not argue the case for this here, but it may be worth mentioning, as evidence tending to support my thesis, that Basic English, evolved as a simple universal language by C.K. Ogden and I.A. Richards in the 1930s, was able to make do with no more than 18 verbs, eked out by prepositions used as verb elaborators or, as German grammars call them, separable prefixes. According to Lincoln Barnett¹, "The critical discovery made by Richards and Ogden was that their stripped-down lexicon required only eighteen verbs - as against four to ten thousand that may be available in the vocabulary of a college-educated man... The ability of these verbs to do the work of all the others stems from their gift of being able to enter into an astonishing number of mergers with prepositions... each one substitutes for hundreds of bigger, if subtler, words."

How then is the logical space itself created? Physical space is a union of dimensions of possibility growing from our sense of the

vertical dimension established primarily by the vestibular apparatus in the inner ear, the horizontal dimension derived from it, and our sense of the "facing" dimension of depth by which the Self is distanced from what it observes. By contrast the analogical space in which we recognise a melody is a union of dimensions of pitch and time, again distanced from the Self in a dimension of depth (which, I have argued elsewhere, is a dimension of temporal depth, a second dimension of time without which we could never recognise a span of time any more than we could recognise a spatial span if we were not distanced from it in a further dimension of space). Correspondingly, I suggest, the logical space in which we grasp an idea - always by means of a predication - is a union of dimensions of possibility which are supplied by (i) what I will call the axis of generalisation of the subject idea, together with (ii) a dimension of time in which the transition at the centre of the predication can be recognised, and (iii) a dimension of depth which may again be a second dimension of time. (This last is the dimension by means of which the mind has to distance itself from what it recognises, even from its own headache, if it is to make it the focus of attention.) Within the space of possibility so created the subject form and predicate form are brought together in a relationship which always expresses in some sort a perceptual metaphor - though in the case of an intransitive relationship, it will be recollected, my argument is that the predicate is the same as the subject, but the subject at a later moment, related to its earlier self by an existential link in time. It is the central perceptual metaphor which establishes the orientation of subject and predicate to each other and to the axes of this metaphorical logical space.

Meta-Classification and the Focussing of Possibility

How the range of possibility to be opened up in a given context is narrowed and focussed by the process of "logical typing".

In saying so much I have raised, but not answered, the question of what one can mean by the axis of generalisation of an idea. This is a problem of some depth and ramification, but a solution to it can
perhaps be found in the idea of what Gregory Bateson called logical typing. Bateson derived the idea from "Principia Mathematica", but his version, worked out in cybernetic and psychological terms, is perhaps more relevant to our discussion than the more mathematical original. It rests on a distinction between messages and meta-messages. The higher level meta-message has the function of indicating the context of possibility, and hence the code, in which the message itself is to be understood; whether for instance a sign of anger means a real threat or is intended only in play. The meta-message provides a higher level classification within which the idea conveyed by the message itself is to be grasped. (We may note in passing that George Kelly, too, was concerned with this problem, offering a solution in terms of his own theory of dichotomous constructs, but clearly involving the hypothesis of a metaphorical space. "One needs", he says, "to be aware of the two-ended nature of the construct and the possibility that one person's "gentle" may have quite a different continuum stretching away from it than does another person's "gentle"... The contrast aspects of an expressed personal construct must not be overlooked in interpretation."

As this suggests, the whole language of implicit meanings conveyed in social intercourse by patterns of behaviour which signal the presentation of the Self and the recognition of role and status in the other is relevant to the determination of meta-classifications. This "implicit language", as I call it, which has been the subject of much subtle analysis by Erving Goffman and has been more theoretically elaborated by Rom Harré in his "Social Being", is discussed in some detail in "The Grammar of Social Interaction".

My own version of this theory grows out of the earlier arguments of this study. We recognise an instance of anything against the

1. This idea was one of Bateson's major preoccupations and underlies some of his most fruitful achievements, in particular his analysis of "double bind" situations. It is well explained in Chapter IV of his "Mind and Nature" (Fontana/Collins 1979; see in particular pp. 127 - 141.).


background of an appropriate class of things. The class, defined as consisting of those forms which on generalisation coincide with a paradigm form, provides the limited range of possibility against which actuality emerges, information takes shape. Correspondingly, I have suggested, we can focally recognise a class or idea as such only against the background of some wider class in which it is identified as an instance; for it is always the instance of which we are directly aware, while the classification, although it has in some way to be present to the mind, is always submerged out of focal consciousness. Thus when I examine a particular rose just picked from the bush I will be aware of its colour and shape and fragrance, while the fact that it is a rose remains submerged (though present). As soon as I think of it specifically as a rose, however, I have to realise the idea rose against the background of a wider classification, say the idea flower.

Here we encounter a complication; for all ideas can be generalised, and hence classified, in a variety of different ways. To put the

1. I note that the view ascribed to Frege that "concepts cannot be referred to (as concepts)." (R. Nozick "Philosophical Explanations", Harvard 1981, p. 111).

2. It may be objected that there are some ideas, such as "object", "quality" or "intensity", which are already at the limit of generalisation. I doubt however whether even these can properly be regarded as exceptions. If the idea "object" is directly generalised, it merely disappears. But in fact we use the word object in different contexts, e.g. physical, grammatical and logical contexts, and in practice these provide alternative backgrounds against which it can be realised. The basis for this phenomenon is that, as I have suggested earlier, the links of association through which the accretion of the features of the mind-manifold is governed are not merely links of direct resemblance, but also links of organisation, that is of past contingency, otherwise of indirect resemblance. For in a certain sense all the discriminable features of a contingency resemble each other; every past contingency can be seen in a certain perspective to establish the class of discriminable features of that contingency; and the same applies at a higher level of generalisation to classes of contingencies. All links of organisation can be seen in this light as links of indirect resemblance, and the same principle can be seen to underlie all cases of definite designation, by which an instance is located on a cognitive map or context, as opposed to indefinite designation, by which it is located numerically as a singular or plural instance of a class. Finally we may note that, on this hypothesis, although it is true that the more general the idea, the less scope there is for further generalisation, conversely the more general the idea the greater the scope for applying it to diverse contexts.
point in reverse, it is of the essence of a form that it is both a unity and a complexity; from above, as it were, it is one thing; from below it can always be analysed into elements related by organization or superposition. And in consequence a form does not evoke just one kind, one class, of associations across the manifold, but many; and the more features of subordinate complexity there are, the more of these classifications are potentially there to be evoked – not merely one but probably several for each discriminable feature, and further associations for various possible combinations of features. Each of these classifications can be regarded as establishing a cone of generalisation with a paradigm form at its apex, defining, as it were, an axis of generalisation or possibility. We end up, therefore, not with a limited range of possibilities against which information can emerge, but with a multitudinous dissipation of possibility in all directions.

What is more, we reach the same situation if, instead of starting from an idea, such as a visual perception, which is clearly full of complexity from the outset, we take a predication built up of words delivered in sequence (or, for that matter, of notes and chords delivered in sequence). Each word element in a sentence, that is, each word, inflexion, or significant element of word order, conveys an idea – either a substantive idea, or a relationship, or a role in a relationship – which is in itself a simple element in the articulation of our thought. It may be evoked from an extensive idea-complex in the mind-manifold, but the idea evoked on any one occasion is a single, relatively simple form and one which, as it occurs, is recognised as a whole, not analysed. But even a short sentence includes many word elements and if each evokes its own associations across the manifold we end up with the same scattering or dissipation of possibility.

In fact however this does not happen. Possibility is brought to a focus, not dissipated. And this occurs because one of the component ideas is recognised as the subject, it is recognised in one particular cone of wider generalisation, and all subsequent elaboration of the subject takes place within this perspective. There is a close parallel with the way in which, when we hear the first two or three notes of a
We establish automatically (and in general subconsciously) a "key", otherwise an appropriate but limited set of note possibilities based on a tonic note, which is literally a keynote. Even the predicate, though it may be built up separately, is eventually recognised as an elaboration of the subject and shorn in the process of any irrelevant associations. The crucial point is that one or more ideas out of those presented must be designated as substantive, and then of all the substantives present one must be identified as subject. The process thus has two stages; indeed it has three if we bring in the further step by which a completed predication may be embedded as a subordinate clause within a wider predication, acting within it the part of a substantive, or an adjective, or an adverb (a form which strictly is superposed not on a verb but on the form of the predication as a whole).

A diagram may help to elucidate the first stage, which is that of the designation of substantive ideas and the accommodation of adjectival ideas as superpositions upon them. In this diagram two cones of generalisation intersect. We designate for attention (with the aid of cone D, a third cone representing the axis of depth) one instance of the idea X for attention. It is the grammatical function of designation to identify a substantive in this way. If this instance of X lies in the region of intersection, we see that it has the additional characteristic 0; but in this perspective X is substantive and 0 is adjectival, incidental, so that when the instance is fully generalised to coincide with the paradigm form X, it loses its characteristic 0. (This presupposes that the form of 0 is not contrary to the form X or any part of it, or to the paradigm form of the more general class of possibility against which it is set. Thus an object cannot be both green and colourless, since "colourless" is a contradictory of green.)

Now we can also produce an alternative version of this diagram. Here all that is changed is that 0 provides the axis of generalisation.
We pick out an instance of 0 this time which happens to have the additional characteristic X. In this altered perspective the compatibilities between X and 0 do not change, but the logical space establishing the field of relevant possibility is altered. Say X is the class dog, 0 is the class brown, and the instance designated is in the one perspective a brown dog and in the alternative perspective an instance of the colour brown evidenced in a dog. The mind is then orientated in the first case towards dogs (or, in a wider perspective, animals) and in the second case towards the class of brown things (or in a wider perspective coloured things). These distinctions have a practical importance because the orientation establishes the context and the actual form evoked by a word may vary according to the context (the value evoked by the word "red" in the context of red setters is somewhat different from the value evoked in the context of British pillar boxes); and this is not all, for the possibilities relevant in the surrounding logical space are alternatively either animal possibilities or colour possibilities, and this may have a critical effect on what the mind thinks of next.

Within a predication ideas are not merely superposed adjectivally on one among them which has the base or substantive role; in addition designated substantive ideas, whether or not elaborated adjectivally, are related to each other through relationships of organisation. These are the relationships which always involve some sort of perceptual metaphor. For relationships of superposition, i.e. adjectival elaboration, although we may dig them out retrospectively, are in a certain sense absorbed in the unified, idiosyncratic form which they build up together, as the overtones are absorbed in the tone we hear, or constituent notes are absorbed in the chord we hear. The eventual superposed form, as we recognise it, is internally undifferentiated, and so its idiosyncrasy involves no spatial metaphor. But such a form still has to be designated, and so located, in some kind of space before we can take cognisance of it. And in the second stage of the elaboration of a predicative system
designated substantive ideas, whether or not elaborated adjectivally, are linked to each other in ways which do, as we have seen, involve perceptual metaphors. When these are synchronic relationships, referring to features of subordinate complexity, they characteristically take a core and satellite form, in which the core substantive (but not the satellite) may have in addition the higher level role of subject or predicate. (In more complicated cases one core substantive can itself be the satellite of another: in the sentence "He painted the wart on the chin of Oliver Cromwell", Cromwell is grammatically satellite to his chin and the chin is satellite to its wart; the wart is the predicate.)

When the relationships are diachronic, they are characteristically expressed by verbs rather than by propositions or case endings and they must in every case link a subject and a predicate. Such predications, as we have seen, can also be embedded, acting as substantives, adjectives or adverbs, within wider predications.

In all these cases each substantive idea is strictly a designated instance of the class indicated by an identifying word-symbol; and that class itself represents once instance of a wider classification, of which we are not consciously aware, but which provides the more extensive cone of generalisation in which the class is recognised. But when a number of substantive ideas are fitted together grammatically in a predication, it remains true that the cone of generalisation in which the subject idea is recognised still provides the unifying perspective or "key" in which all the others are "seen", and within which they are effectively confined. This provides a restriction of context or possibility which is progressively established and clarified as the sentence is completed and finally the predicate is linked to the subject. For convenience I have been referring to predications expressed in language, but the same would apply to thought which is not expressed in words.

In this way every predication builds up a form which is the subject form elaborated, but the subject still recognised in the perspective of the wider classification or meta-message which identifies its "logical type". It is however possible for the same elaborated idea
to be built up in different ways, different initial ideas being taken
as the subjects of the predications concerned. If I say "the bat struck
the ball" I build up the same idea as if I say "the ball was struck by
the bat"; but the first sentence establishes a bat context and the second
sentence a ball context, and the two contexts are subtly different in
the possibilities they open up, the unconscious expectations which they
evoke. To take another example (drawn from "The Grammar of Language"),
the following three sentences, which say the same thing, build up the
same form on the basis of different subjects:

(1) "Our notation provides us with a way of representing the
synchronic complexity which may be useful here."

(2) "A way of representing the synchronic complexity which may
prove useful here is provided by our notation."

(3) "The synchronic complexity may be represented, in a way which
day prove useful here, by means of our notation."

The same form is constructed in each case, but in (1) the perspective is
provided by the way in which we see "our notation", in (2) by the way in
which we see "a way of representing something" and in (3) by the way in
which we see "the synchronic complexity". Each looks forward, as it
were, in a slightly different fashion, depending not on the substantive
word itself, but on the perspective in which we find ourselves looking
at it.

We may note that sentence (3), in which the subject is definitely
designated, places the subject form explicitly in the context of some
implied prior discussion of an instance of synchronic complexity. As
this suggests, each new predication, establishing a new subject, sets
up a new logical space, but it is often a space which is continuous with
that of the preceding object of attention and grows out of it. In a
progression of predications, such as a paragraph, one sentence is in
effect superposed upon another until at the end the whole is grasped
in a very generalised way as a sort of meta-sentence; and when there is
continuity of thought, this generalised meta-sentence itself provides a
context, a perspective, a constraining limitation, within which the meta-
classification of the subject of the next sentence is placed.
The Articulation of Thought: A Summary

A summary of the conclusions reached in the preceding four sections.

In conclusion, to go back to the nature of the logical space involved, what I have suggested is that we can see it as a space of possibility established by the meta-classification which the subject idea evokes in the broader context of the occasion, combined with a dimension of real time and a third, distancing dimension representing the perspective of attention. This is a vague, flexible, metaphorical space, but it is stabilised by the perspective of attention, which establishes not only a metaphorical depth but also, by derivation from it, a metaphorical height and width. Across these dimensions the meta-classification of the subject provides an intersecting array of possible forms, comparable perhaps to the array that we subconsciously recognise in front of us, in the case of physical perception, before we actually pick out specific objects of attention.

Within this space there emerge the forms of designated substantive ideas picked out of the general resonance by the operation of successive superimposed constraints which are directly comparable to the focussing mechanisms of perception. The process of focussing centres down on to one form in particular as the subject of the predication, a specific instance of the subject idea or class, which is itself an instance in the wider meta-classification that sets the context. Each substantive idea that emerges represents an instance of a different class, bringing its own cone of generalisation; and each may also incorporate further adjectively superposed ideas.

These substantive ideas are now related together in logical space by means of relationships which are all perceptual metaphors - differentiation, relation, orientation, direction, transition, inclusion, exclusion, classification, comparison, equation, contrast, aggregation and so on. The binary clusters so formed are themselves ordered hierarchically in relationships of core and satellite or component and whole, until a single organised system is established, consisting of
subject and predicate complexes joined at the apex by a relationship which is not synchronic like the others, but diachronic, involving a dimension of real time. This central transition is the focus of the axis of attention relating the thinker, who is Re-Here-Now, to what is thought; and it is for this reason that the verb includes indications of person and tense. Person indicates whether Re-Here-Now is identified with the subject, or is involved in dialogue with the subject, or is not directly involved with it. Tense indicates the relationship of past, present, or future between Re-Here-Now and the time of the predicative transition.

The elaborated construction which results from all this is a form—
as-a-whole built of component substantive forms fitted together in complex, grammatically specified ways. But it has a particular orientation in its logical space based on a particular axis of generalisation in which one form, the subject form, emerges as the basis or container form of the whole construction. And this axis of generalisation conversely establishes a perspective which constrains the way in which we recognise all the idea components and their relationships. The form which we grasp as a result is thus always still the subject form, but the subject elaborated in highly complicated ways and orientated in a particular abstract perspective.

The model of the articulation of thought in logical space which I have tried to elaborate here may seem a needlessly detailed attempt to analyse the processes of the mind in terms of crudely physical images. Crude I fear it may be in relation to the incredible complexity of the processes to which it addresses itself. But I would strongly defend the need to attempt a model of this kind, which is designed not merely to describe mental processes, but to bring out and systematise the assumptions on which the description rests. The alternative is to avoid being specific about what it is that you are talking about, and so to proceed upon assumptions concerning the nature of ideas and the ways in which they are related together which are never fully brought into consciousness and never coherently articulated. I am conscious of the rough approximateness of this model, of its speculative nature, of the fact that it is probably astray at many points. But the moral is that it needs improvement, not that we can do without it.
In any case we have to note that this description is incomplete insofar as it fails to bring out one of the most important constraining factors. We have described two processes superimposed one upon the other, the evocation of a shifting resonance and the identification of particular thoughts out of it; but we need to remember that they both occur within the frame of a third process, the true regulative process. This, which I call the purposive cycle, is one through which the mind identifies purposes, thinks out strategies, takes decisions and acts.

Note: Certain ideas expressed by C.H. Waddington in his "Concluding Remarks" to the volume "Evolution and Consciousness" (E. Jantsch and C.H. Waddington eds., Addison-Wesley, 1976) are obliquely, but interestingly, relevant to our discussion of meta-classification. He emphasises that the concept of information, as defined by Shannon and Weaver, is not adequate for dealing with the development of biological organisms. It is necessary to express the specificities of, for example, a developing embryo, not as statements or information, but rather as instructions or algorithms. Thus "a system containing quite a few instructions, including instructions to repeat an action, can produce results which appear to be of fantastic complexity in terms of information." He is giving new expression here to a point made by Ashby when he argued that in mammals the gene pattern is used as a regulator, R₁, to develop indirectly in the cerebral cortex a second regulator, R₂, of vastly greater capacity than the gene pattern itself. The additional "quantity of design", according to Ashby, is derived from the environment (See "An Introduction to Cybernetics", 1956, Methuen reprint 1965, p. 271). Waddington suggests that:

"Instructions are necessarily instructions to behave in certain manners, that is, to alter things in some way or other. Any alteration of a situation must always have a characteristic corresponding to a "value" for some system of assessment; for instance, a genetic change of instructions for the synthesis of a particular protein, or for carrying out a particular type of behaviour, will have a value from the point of view of natural selection. This leads to the conclusion that the expression of specificities in terms of instructions necessarily involves us in normative thinking... Since all biological systems contain a multiplicity of instructions, it seems natural, if not inevitable, that they will be involved in a multiplicity of value systems."
In making these remarks Waddington was discussing the capacity for "self-transcendence" of certain organisms. In the present context I am not concerned with this aspect (though I make some reference to the issue in a later section: see p. 419 below). But I would wish to re-express Waddington's point in more general terms by suggesting that information acquires meaning only insofar as it is recognised as related to some purpose - in Waddington's terms as having a value in some wider system. Without a meta-message the message itself has no meaning; for meaning, as I would define it, is use in relation to a purpose; to understand anything is to understand its function in a context.

The Purposive Cycle (1)

In this section I enumerate and describe the phases of the mind's purposive or regulative cycle.

We associate qualities and intensities of emotion and sensation with loadings - second order classifications - of desire or aversion, and these reflect the mind's tendency to focus on imaginations of things we want to achieve or to avoid and of possible means of achieving or avoiding them. It has already been remarked that such loadings of desire or aversion lead to a lowering of the thresholds of association towards what we may call goal images or aversion images. This does not happen in exactly the same way for each, since in the first case we tend to focus not only on the image but on ways of achieving it, while in the second case we tend to focus not only on the image but on ways of escaping from it; and the emotional "taste" of the experience is very different in the two cases. In these complementary tendencies lie the roots of the purposive activity of the mind. My contention is that when the mind is following progressions of perceptions or trains of thought, these activities always form part, in one way or another, of purposive cycles. In consciousness, moreover, it is never not following progressions or trains of thought, and so it follows that the whole of our conscious life is related to such purposive cycles; the function of conscious life is to serve the
identification and achievement of purposes. 1.

What then is a cycle of purposive thinking? The simplest way to explain what I mean is to enumerate and describe the phases of the cycle. I suggest that they are as follows:

1. **Exploring and Orientation.** The mind is constantly construing incoming sensory impressions, together with the associations which they immediately call to mind; while at the same time it is following trains of free association in the directions in which the threshold resistance is lowest, and these in turn interact constantly with the continuing input of the senses. Much of this process is below the level of consciousness and, as many tracks can be followed at once by means of resonance, it often develops at great speed. The tendency is for a polarity to be established between images of wish-fulfilment, to which the lowest threshold settings lead, and impressions of the Self in its current environment - between Me-There drinking a glass of beer and Me-Here hot and thirsty. But there is a continuous interaction of association between these poles. The form which the wish-fulfilment images will take is affected by what is currently going on at the other pole and vice versa; we tend to construe our perceptions in ways related to what is uppermost elsewhere in our mind at the time.

There is however one important qualification to make: the mind, as we have noted, cannot resist easy links of predictive inference from the immediate environment; if I see a bus bearing down on me, I cannot avoid the thought that it is going to hit me; and this will arouse in me feelings of fear and aversion. In following the tracks of association, therefore, the mind is naturally led to focus not only on objects of love and desire, but also on objects of fear and aversion.

1. Certain forms of contemplative meditation are explicitly intended to achieve a state in which the mind is conscious yet emptied of all content. I believe that, taken literally, this is a logical impossibility: you cannot be both conscious and without awareness of anything at all. But I would accept that these practices can lead to a state of consciousness in which the attention rests only on the current input of the moment to the senses (and perhaps only a restricted aspect of that input such as the visual patterns that form behind closed eyelids), without any awareness extending beyond the immediate perceptual span in time or space, and - most important and unnatural of all - without any interpretation or classification of what is going on, drawing upon the resonance of memory.
As we have seen, it cannot rest on one fixation, it always has to move on; but once it is brought to a focus of desire or aversion, it tends to move round a basin, as it were, of related thoughts and images, constantly coming back to the focus image and possibly in the process defining it more and more clearly.¹

This is the process we can describe as orientation, the way in which the mind establishes its goal and aversion images and so defines the directions in which it wants to go. Subjectively, as the mind identifies an object of desire or aversion, we tend to recognise an access of emotion. A high level of emotion always characterises a new orientation of the mind, which is accompanied necessarily by a sweeping change in the threshold settings of the mind manifold; but it usually does not last for long, if only because the mind is constantly taking action to change the environment in a favourable direction, and particularly so when it is in a state of high emotion.

In establishing its orientations the mind is often seizing on practical aims and objects for its plans; but we need to remember, beyond this, that a great deal of its activity is concerned, not so much with achieving practical ends, as with presenting an appropriate Self or persona which will achieve the respect and understanding of others. In Harré's words, "the major human preoccupation in the complex interweaving of practical and expressive activities is the presentation of an acceptable persona appropriate to the scene and the part in the action... associated with a sense of worth and dignity."² Much of this activity is however implicit, if not unconscious; it often shapes or colours the things we want, and perhaps especially the ways in which we set about achieving them; it can affect the explicit goals we adopt without our being explicitly conscious of our motivation in preferring one thing to another.

2. **Purposive Model Building.** The next stage is that of purposive model building. Insofar as I forecast the likely trajectory of the bus bearing down on me, I am already constructing a mental model of possible future events. If the course of association leads me to an imagined impact of the bus on myself, this creates an aversion image and I therefore purposively develop alternative scenarios in which, for example, I turn smartly to left or right and the bus goes by without hitting me. The models I create are spatio-temporal scenarios normally imagined in very generalised form and built of predictive inferences which are of varying degrees of subjective probability, or conductivity to purposive thought.¹ Within them I imagine alternative models of myself pursuing alternative but predictively possible courses of action related either to achieving goal images or to evading aversion images. These courses of action are possible roles for the Self to play. To avoid confusion over the definition of "role", however, and in order to conform to an already established usage, I will use the word "plan", as adopted by Miller, Galanter and Pribram in their well-known work "Plans and the Structure of Behaviour"² though I will frequently qualify it with the word "personal", to emphasise what I believe, an important aspect of the matter and to keep distinct the personal plan and the scenario within which it is unfolded.

The separation of the two functions of orientation and model building is not absolute, for as the scenarios are developed so the goal images and aversion images become more precisely defined. A given situation may offer several alternative plans, depending either on alternative goals or on alternative scenarios. The scenarios may vary in probability, the goal images or aversion images may vary in the strength of the emotion and hence the purpose which they generate. But

1. Every predictive inference is based on a predictive rule or hypothesis which has its own degree of probability (conductivity) and on deductions linking the situation to the hypothesis, each of which again has its own degree of subjective probability. Thus I take the rule that thunder follows lightning, which has a high degree of probability; I classify (deductively) the flash I have just seen with greater or less confidence as lightning; and I infer with greater or less assurance that I will probably soon hear a rumbling sound which I will classify as thunder.

purposive model building is always directed towards achieving a purpose by means of a role or plan which links Me-Here-Now with the end I have in view. Predictive necessity may in some circumstances lead unavoidably to extremely unpleasant situations, as when we realise that the ship is sinking beneath us; but the mind will always seek a way out; beyond the shipwreck it will look for the raft or lifeboat - some means of salvation for the "essential variables" somehow. Significantly, as the model building proceeds, the mind may begin to organise its plans in hierarchical fashion; in pursuit of a longer span personal plan directed towards a longer term objective (like getting across a city street) I may identify a sub-plan directed towards an intermediate objective (like reaching the safety of a traffic island).

3. Decision. The next stage is that of decision - effectively the adoption of a particular personal plan in a particular scenario. In the model building stage I may try out alternative scenarios and alternative plans within the scenarios, testing their desirability and probability. But at the decision stage I adopt one personal plan to the exclusion of others. The final decision is determined by the relative emotional pull and practical feasibility of the different options. At this stage, particularly, considerations of the presentation of the Self and of the need to establish and reinforce social roles, both those of the Self and those of others, will often affect the decision that is made. This applies to decisions about the performance of appropriate "face work", as Goffman calls it - saving the "face" of one party or another in potentially embarrassing situations - and it applies perhaps most of all where the choice of particular forms of address and particular tones of voice are concerned.

Having tried on a succession of garments I decide on this one and pull it firmly over me. This one becomes thereafter part of myself, bringing the scenario with it; any action which it requires of me in given circumstances follows automatically. A role cannot be played in a vacuum and so every role or plan, as we have seen, presupposes a scenario - though it may be one imagined in extremely general terms and consequently it may cover many different possibilities. Personal plans may vary widely in the spans they cover. They may be very short,
as when I decide to switch on the light, or very long, as when I decide to get married or to become a doctor; and broadly the longer the span, the more generalised the plan and the scenario.

We do not in practice have to take a constant stream of conscious minor decisions, since a great many of our actions flow from general personal plans already adopted, which emerge into relevance when external circumstances appropriate to their scenarios materialise or seem likely to materialise. Even when the bus bears down on me, the odds are that I will not have to take any conscious decision, because I already have a generalised self-preserving plan in which I move out of the path of all large oncoming objects. A conscious decision becomes necessary, however, when more than one desirable option comes into focus. I may make the predictive inference that the bus driver is almost certain to put his foot on the brake, and if this prediction is strong enough, then I may find that the alternative personal plan of continuing on my way will prove to be of higher conductivity to my purposive thought than the role of jumping aside.

4. Actualisation (Action and Monitoring). Throughout our waking lives what might be called the cone of possibility which we see before us with the headlamps of predictive imagination is being constantly converted into actuality. Imagined potentialities are being sealed into actuality and made part of the irrevocable past by all the detailed particularity of perceived happening Here Now. Personal plans previously entertained hypothetically, then adopted by decision, are sealed by physical action into the continuing Self. The reality as it reaches us is far more particular and detailed than the prior imagination, but most of the time it fits into the generalised patterns of our foreseeing. The world would be extremely difficult to live in if this were not so. Our senses are constantly monitoring at a sub-conscious level the incoming flow of reality, scanning for difference from what is expected; and broadly it is the things which are different that come to our conscious notice — the door left open, the itch on the shoulder blade, the strange noise under the bonnet of the car. Our own actions moreover are part of this incoming flow of reality. Once the decision to adopt a particular personal plan has been taken, the action
follows automatically, either at once or at a later stage, depending on the realisation of the scenario and the requirements of the plan. Once I have decided to walk to the station, all the necessary action flows without the need for any new posing of options, so long as the scenario continues to unroll according to prediction. Only if, for example, I find that the river at the bottom of the hill has flooded and blocked the road, do I have to stop, consider new options, and take a new decision. Action itself is not conscious unless consciously monitored by our senses, including our sense of touch and what J.J. Gibson calls our "heptic" sense of the state of our body. Monitoring is thus simultaneous with action, not successive with it. Monitoring and action both characterise a single phase, which in one word can be described as that of actualisation.

The incoming flow of sense impressions never ceases and it is bound to the steady flow of real irreversible diachronic time Here Now. When we follow trains of thought, we are organising ideas in an imagined time and space, past or future, near or far, real or unreal. By definition, when our minds are exploring, focusing or model building, they are not in the narrowly limited span of the Here Now, but are moving in a sort of arabesque around it in imagined time. When our conscious attention is concentrated on the process of perception, the two streams coalesce: consciousness is bound to diachronic time and inhabits the Here Now. For most of our lives, however, we are not inhabiting the Here Now, our consciousness is off exploring, focusing and model building. Even when we are using our senses - as in watching a television set, listening to a speech or reading a book - our conscious attention will often be interpreting the sense impressions symbolically, and so using them merely as a bridge into an imagined world. It is true that in such wandering moments we are still located in a particular place at a particular time; but we can only become aware of this by recognising our mental activities of the moment as part of the action phase of some wider purposive cycle, the acting out of a wider role. Ordinarily, that is to say, the objects of our consciousness are external ideas and things, including on occasion parts of our own bodies; but it is possible also for us to make the object our consciousness our own Self carrying out some activity; and then we are not merely conscious but self-conscious.
5. Readjustment. Our monitoring of reality brings us some information which is in accordance with prediction - though it will almost always be much more particular than the generalised prediction, and will consequently tell us much more than we foresaw. It may also bring us some information which conflicts with our prediction; and it may bring some which was entirely unforeseen. We carry in our minds a model of the real world and this has to be continually modified and extended by incoming information. (This is Neisser's "cycle of perception", writ somewhat larger.) The total volume pouring in is far too great to be incorporated and most of it simply goes straight into oblivion; but a process of selection takes place which has the effect that we remember especially the things that are relevant to our desires and aversions. We do not remember at all the things which may have been monitored but were not brought to the focus of the perceiving and interpreting consciousness at the time when they were experienced. All this new relevant information, especially where it differs from previous forecasts, is liable to change our predictive expectations. Thereby it can alter the feasibility of personal plans and the probabilities involved in scenarios we have previously imagined; it can bring new ones into the field of imagination; and it can bring altogether new goal images or aversion images into focus. The unending process of assimilating information about the real world as it flows past me here now consequently involves a corresponding process of adjustment to our system of objectives, plans and scenarios as it is registered on the mind-manifold. This last phase of the purposive cycle links on directly again to the first phase, that of orientation, in a new cycle.

This completes our review of the phases of the purposive cycle. The concept of the cycle is itself a relatively familiar one, though it has perhaps been developed here in somewhat unfamiliar ways. The reader will notice that, although it has been worked out independently, it corresponds fairly closely to Hiller's analysis of the four stages of decision-making, a process which he examines in some detail at the levels of the cell, the organ, the organism, the group, the organisation, the society and the supranational system. For convenience of comparison it may be worth repeating here what these stages are: (a) establishing purposes or goals, (b) analysis of the situation, (c) synthesis of a
course of action, essentially by reducing a number of options to a single choice, and (d) implementing the decision. My phase 2 combines (b) and most of (c), but I separate out the act of decision as a separate phase 3. His stage (d) corresponds to my phase 4, but he has no final stage of readjustment or assimilation corresponding to my phase 5.

Neisser, on the other hand, in his (admittedly narrower) concept of the perceptual cycle, does explicitly include a phase of assimilation and adjustment, and I doubt whether Miller would in practice have any objection to a reformulation of his analysis to include a fifth phase of this kind. My segregation of decision as a separate phase is perhaps open to question, because it is difficult - indeed arguably impossible - to identify any measurable span of time over which decision takes place; but on the other hand it represents the most critical transition of all and needs to be identified as such. However that may be, it is evident that we are talking about the same cycle and that others - for example, Polya, to whom reference is made in the footnote on page - have also in different contexts identified what is fundamentally the same phenomenon.

The Purposive Cycle (2)

A discussion of the ways in which the mind fits the predications of the conscious moment into the cycles of purposive thought.

The argument that what we are doing as we think, perceive and act always forms part of a cycle of purposive thought does not imply that our conscious life is simply an endless sequence of completed cycles following one after the other. The effective unit of conscious attention, as we saw earlier, is the perceptual progression or the train of thought; but the mind can follow only one such at a time; indeed it can be

1. Very occasionally and with prolonged practice we can learn to follow two cycles at once, but this is possible only when we have learnt to simplify the task, making the maximum use of habituation. Even then it is more of a trick than a normal phenomenon of conscious life. But it is through this process - the simultaneous following of two different cycles subsumed, as I suspect, under a third cycle of which the purpose is to do both together - that we can explain the mind's capacity to deal with dual attention tasks discussed on page 115 above.
conscious of only one predication within it at any one moment. On the other hand, although every progression or train of thought is part of a purposive cycle, it can be only a very small part; and, having followed a small part of one cycle, the mind can switch suddenly to a quite different cycle and then back again. When it returns, moreover, to the first one, it does not necessarily begin exactly where it left off. Not every cycle is tidily completed. As we have seen, the phase of model building can lead back to a redefinition of the original goal or aversion image; and such redefinition can lead forward again to a redefinition of the personal plans related to them. The mind moves back and forth, refining and developing its purposes. The one clean break comes when action is taken in pursuance of a chosen plan; on this there can be no going back.

Many cycles are in play at any one time. A short cycle may be completed in a couple of seconds, but a long one may take half a lifetime and still not be complete. The Self, from this point of view, is like a rope of innumerable strands which are the plans it has adopted over the years. Some are long term, some short; some are complete and woven into the strict coils of the past; but at the growing end the rope is not tightly woven, it frays out with many roles stretching into the future, some further, some less far. The further they go, the looser and more generalised they are, yet they still apply direction and constraint to the future pattern of the individual.

It is important to note that the very words focusing, model building, deciding, realising, assimilating, adjusting, themselves refer to the acting out of personal plans. In fact the whole of any one purposive cycle always represents part or all of the action phase of some wider purposive cycle; and ultimately all our activities are part of the acting out of the overarching personal plan of biological survival which was adopted for us at our conception. As we have already noted, action is separate from decision, it follows automatically from the decision to adopt a given role; insofar as we become aware of it, we are realising what we are doing, and the realising is not the same as the acting. I can watch my hand holding a pen, writing these words, and at the same time I can monitor the impressions of touch that accompany
the writing, together with my internal "haptic" sense of the
position and attitude of arm, hand and fingers. All the time the hand
is acting; but it is only by means of this elaborate monitoring system
that I can become aware of its activity. I have just argued that the
process of monitoring is itself an activity; but it is a mental activity,
that is, an activity of attention rather than motion. Moreover it is
related to a different wider plan; while I am conscious of the writing,
I am not aware of the monitoring; only by widening the focus of attention
can I become aware of the monitoring as such; and when that happens I
am no longer aware of the writing except as a subordinate aspect of the
wider activity which can be described as "Me Monitoring Myself Writing"
and which is itself part of the actualisation phase of a still wider
purposive cycle.

The mind is economical and a great deal of our activity, as we
have seen, simply does not get realised at all. This applies to mental
as well as physical activity; we can become aware of ourselves exploring,
focussing, model building, deciding, assimilating, only when we self-
consciously observe ourselves do these things; and when we achieve this
we are in effect realising ourselves as acting out a personal plan
adopted in some wider purposive cycle (though at the time we will not
be aware of the wider cycle). Our earlier analysis has put action and
realisation in one phase of "actualisation", and this is necessarily so,
because we can only realise what is happening now; but it is important
to bear in mind not only that much of what we do is never realised, but
also that we realise much more than our personal activity - for what we
are aware of can include the unrolling of the whole scenario within which
our own personal plan is acted out.

The case of decision is comparable to that of action, but different
in a significant respect. For whereas action is a process, decision
appears not to be so. I can say "I am choosing", which means that I
am still running over the possible options; or "I have chosen", which
means that I have already decided between them; but I cannot pick on a
precise moment of "I choose" when the actual choice is neither still in
the future nor already in the past. It is significant that decision,
choice, has no apparent duration, and so we cannot become aware of it
as a process. In this respect decision is like the shift between one fixation or predication and the next. One train of thought will usually include a whole series of predications, each with its own subject recognised in relation to a predicate. In retrospect we can sometimes follow the track of a train of thought with its associative links from subject to subject, just as a psychologist in a laboratory may be able to obtain a photographic record of the successive fixations of the eye as it scans a picture. But we can never pick on the join between one predication or fixation and the next, even when the mind switches from one train of thought to a quite different one, or from a train of thought to a perceptual progression. If you stick a pin into me while I am thinking transcendental thoughts, my mind will immediately switch to a perceptual predication; but in doing so it follows no apprehensible path; the line of demarcation between the one and the other has no thickness.

The fact that there is a parallel between the way in which the Self decides between alternative plans and the way in which it shifts its attention from one predication to another is not altogether surprising, for in both cases we have to do with a process of selection—which is ultimately the same thing as regulation, the emergence in accordance with law (or rules) of particular actuality out of a range of possibility. In the first case the process of selection is determined by the automatic operation of the mind-body system at its current settings, which may be physical (the fact that I am hungry, or that, as I have lost my spectacles, I cannot see very well at the moment) or may be mental (the fact that I have decided to walk to the station, or that I am depressed by what I have just read in the newspaper). These settings are multiple and complex to an almost unimaginable extent; indeed it is probably more helpful to speak not of the settings at the time of the mind-body system but of the form at the time of the mind-manifold, in other words to use an analogue rather than a digital model. Yet somehow, by means of the cumulative application of constraining rules, the mind selects and organises, without effort of will, from the twin inputs of the senses and of association reverberating across the mind-manifold of knowledge and memory, a single series of organised predications, perceptual or conceptual. The identifying of alternative plans as options can be part
of this process; then at a higher level of selection the mind may decide consciously between them, thereby reducing the options to one. But this conscious decision is again a matter of regulation, the application of constraining rules which narrow down the possibilities of transition. The question whether this selection at the highest level is in some sense a matter of free will whereas the other was automatic is one of great interest to which we will return; but it need not detain us here.

Structure and Process (2)

In this section I return to the comparison with James G. Miller's model, and the question of how the mind is to be conceived in terms of structure and process.

In this chapter I have now given an account in the broadest terms of the processes of consciousness. Elsewhere I have attempted what is in some respects a considerably more elaborate account through an analysis of the processes of language. In the present context my aim will now be to turn to a closer examination of the nature and role of the Self in these processes. Before I do so, however, it may be useful to return briefly, in the light of the account I have just given, to the comparison with James G. Miller's analysis. It will be remembered that he identifies three major subsystems at the core of the information-processing operations of any living system, namely the associator, the memory and the decider. The process of predication, as I have described it, is in a sense a process of association; it draws upon coded material derived from the senses (corresponding to the output of what Miller calls the "encoder" subsystem), as well as upon ideas elicited from the mind-manifold (corresponding to his memory subsystem); and it forms part of a wider process, the purposive cycle, whose function is to take decisions issuing in behaviour by the organism. We are talking about the same subjects; but we seem to be drawing different lines between structure and process.

It is an essential part of Miller's theory that every subsystem exhibits both structure and process. He defines the associator as "the subsystem which carries out the first stage of the learning process,
forming enduring associations among items of information in the organism", in other word (in my terms) as the subsystem governing the input to the mind manifold. But this is a curiously restrictive definition, since you have to recognise something (drawing upon experience to do so) before you have anything to learn. As I see it, there must be a prior process of association which I believe takes the form of a predication before you have anything to read into the memory. Miller comments that "although associating at this level has been investigated by thousands of researchers it is a remarkable fact that as of now the structure of the associator is not known for any organism". An observer might be led to think that perhaps he is looking for something as a separate structure which is not there; what he is missing is the grammatical structuring of all experience into predications.

Memory is defined by Miller as "the subsystem which carries out the second stage of the learning process, storing various sorts of information in the organism for different periods of time"; and this definition would cover well enough the mind-manifold as I conceive it. But his discussion of the relevant processes of reading into storage, storage and retrieval, with their corresponding structures, is nearly all conducted in physiological terms; he makes no reference to the ways in which the material stored is ordered, nor to any correlation between this and the ways in which it is associated, read into storage and retrieved. There is no separate identification of facts of existence and facts of classification. The distinction between association (as he narrowly defines it) and reading into storage is far from precise; nor is it recognised that what is association in one direction is retrieval in another direction. (In the terms of my model only one word is needed). Nor is there any consideration of links of resemblance and links of organisation (or metonymy) as principles of association.

When it comes to the decider, "the executive subsystem", Miller says that "much is still unknown about the structure of this most crucial of organism subsystems", but he refers to various endocrine and neural components which are organised (in the mamalian case) into nine echelons, from that of certain neurones, as in the gut, which elicit contraction of a muscle by "axonal reflexes", to a series of different structures in the

brain of which the last is the cerebral cortex. At each successive level more information from inside and outside the organism is brought to bear on the decision. Miller's discussion of the decider is related to the four stages of the decision-making process as he sees it. In regard to the first stage, that of establishing purposes or goals, he refers to attention as a method of regulation which favours one category of inputs over another. He describes motivational drives as related to goals "determined by (i) disturbances in one or more of an individual's subsystems, i.e. his physiological steady states; (ii) the individual's concept of what constitutes the optimal welfare for his total organism; and (iii) his supersystem's standards as represented to him by authority figures. He relates these three types of motivation to Freud's id, ego and super-ego. Next he offers a physiological account of emotions as telencephalic and diencephalic processes in the brain elicited by information inputs. As regards the second stage of decision-making, namely, analysis of the situation, Miller finds little that is specific to say, apart from noting that ablation of the posterior intrinsic sector of a monkey's brain appears to disrupt its ability to accumulate information providing cues to the correct solution of a problem. In regard to the third stage, however, that of the synthesis of a course of action, he discusses at greater length such matters as plans, strategies and algorithms, probabilities, utilities and costs, the importance of proper "chunking" of inputs and the influence of group pressures on the individual; and on the physiological aspect he concludes that the frontal cortex must function whenever choices are made among alternatives.

In all this there is clearly much that can be accommodated to my model and is in effect grist to my mill. But it seems to me that the processes he describes are not mutually related in a fully coherent way, and that they make an uneasy fit with his threefold structural division between decider, associator and memory. He does give some separate attention to "cystem processes", when he deals with stress and anxiety.

1. Miller's fourth stage of decision-making, that of implementation, need not be considered here. His discussion of this stage centres on the physiological mechanisms by which command signals are transmitted into effect. He notes that the sources of willed impulses have not yet been identified, but it is suggested that they may be "non-specific centres" of the mid-brain and diencephalon.
with concepts of personality, particularly as they issue in defence mechanisms or, as he prefers to call them, "adjustment processes", and with such concepts as "attitudes", "cognitive consistency" and "structural balance". Miller's own definition of a system process is that it is one in which the subsystems act as components of the higher level system, but he says little to explain how in practice relationships between the subsystem-components build up the system process. Overall we have a compendium of ideas but, as I suggested earlier, not a working model - not, in Miller's own terms, a "concrete system". His defence, a perfectly legitimate one, against such a criticism would be that we do not know enough yet to be able to construct any detailed working model that would be more than a tissue of speculation. But for my part, as I have indicated on an earlier page, I believe that much of value can be achieved by trying to elaborate a coherent model to reflect the functions of the mind; and this is what, in the present study, I am trying to do.

Nonetheless, I feel myself challenged to say more precisely how I would describe my own preliminary model, as sketched in this chapter, in terms of structure and process. I conclude, first, that the mind-manifold is certainly a structure, synchronic and unchanging in relation to any one predication. It is the structure of one subsystem of the organism as a living system. It is itself of course subject to change over longer spans of time, and thereby is transformed into successive different structures as the input of experience and the crumbling effect of time have their effect. Correspondingly we can say that the irreversible flow of experience through the living system constitutes a single process. It is not impossible to imagine the mind-manifold in physical terms as part or all of the cerebral cortex or to imagine the flow of experience in physical terms as consisting of all the physiological events, including neural events, that take place during the life of the organism. But it must be remembered that we have no direct consciousness of either the mind-manifold or the total process of life. What we experience are predications at the focus of the consciousness of Me Here Now. And, crucially, it is at the focus of consciousness, within the span of one predication, that we are able to unify structure
and process, synchrony and diachrony.

In a predication the subject, which is a synchronic structure, is linked in a transition over real time, which is a diachronic process, to a predicate, which is again a synchronic structure. As the total predication is grasped and slips, in a further process, out of the span of immediate consciousness, it builds up a new synchronic structure, a reflection of which is read into the mind-manifold; and a further copy or image taken from it can thereafter be embedded as a subordinate synchronic structure in a succeeding predication, just as a subordinate clause can be embedded in a wider sentence.

The structures of consciousness are built of ideas which are forms; and forms are themselves by definition synchronic and potentially capable of being analysed into configurations (or structures) of components. The relationships between forms are always also synchronic, except for the single central diachronic transition at the hinge of the predication at the focus of consciousness Here Now. According to this picture, therefore, we have the mind-manifold as one major structure or sub-system and the arena of consciousness as another. The arena is difficult to characterise because it has no lasting content. What essentially constitutes the arena is a stabilisation of the coordinates of a space. Isidor Chein quotes Koffka as arguing in his "Principles of Gestalt Psychology" that the ego is an object which "serves as the origin of the system of spatial coordinates... different from all others inasmuch as it determines fundamental space aspects". Chein puts the point in his own words as follows: "the self is that which is the origin of perceived space-time (origin of course being understood in the mathematical and not in the historical or genetic sense); or, if you will, the self is the hereness in the thereness... I am here in space-time and the objects with respect to which I act are there." I do not wish to go into detail about the Self at this stage, but I would strongly endorse the point that consciousness involves a space Here Now within which up and down, left and right, front and back have to be stabilised before any form or

1. "The Science of Behaviour and the Image of Man" (Tavistock 1973) p. 197. A note on Chein's account of the image of man is given in Appendix I to this study.
structure can emerge; and this applies to the logical or metaphorical space of ideas as much as to physical space; even when you are thinking about quadratic equations or the state of the economy you are facing towards the ideas before your mind, which are in a true sense distanced from you and deployed in front of you. (It is possible to perceive and think in two dimensions rather than three, but even then the images or ideas of which we are aware are deployed in depth in front of us and this depth provides an essential third dimension, even if we are not conscious of it at the time.) The space appears to be synthesised anew for each predication, though for successive predications within a progression or a train of thought the new space is not totally different, but rather represents a shifted perspective, an extension growing out of that of the previous predication without altering its basic coordinates.\(^1\) It is hard to think of the arena as a continuing subsystem with its own structure, comparable to the mind-manifold; indeed it is hard to conceive of it at all. Yet the continuity of the focus Me Here Now during an individual's waking hours is the central fact of consciousness. It would be rash in the extreme to suggest a physical location or structure for the arena beyond saying that it is linked somehow to the physical organism and moves with it through the world; but it is surely a fact of which our model must take account. Given its continuity I would regard it as in Miller's terms a subsystem of the organism, and I would specify its structure as the frame of coordinates, up and down, left and right, front and back, within which every apprehension of consciousness has to emerge.

What then of the ideas and predications, the forms, qualities and intensities of consciousness, the flow of information through the mind? My answer would be that predications, which unite synchrony with diachrony, can be categorised as ephemeral structure/processes within the subsystem; their succession in progressions and trains of thought can be categorised as a characteristic process of the subsystem; and the succession of purposive cycles to which they belong can be categorised as simultaneous higher order processes within the subsystem. Thus we

\(^1\) See in this connection the section "The Nature of Logical Space" on page 127 above.
have a basic structure consisting of the mind-manifold and the arena; and two basic processes, one at the lower level of the progression and the train of thought, and the other at the higher level of the purposive cycle. It is worth emphasising that only the predication of the moment is present to consciousness. The purposive cycle works itself out unconsciously, and so does the progression or train of thought, though we can always bring either of them to consciousness by making it the subject of a predication.

Certain further "system processes" which involve relationships with other subsystems remain to be discussed. First there is the processed and coded input of the senses transmitted from what Miller calls the "decoder" to the arena. This input consists of synchronic recodings of limited spans of the irreversible diachronic flow of experience; they amount to "loose" forms or combinations of forms which, on reaching the arena, are organised through a process of focussing and selection into the predications of which we are aware. Beyond this there is the process by which a reflection of each completed predication is transmitted to the mind-manifold and the reverse process by which reflections from the mind-manifold - all synchronic forms or structures of forms - are transmitted to the arena for incorporation into predications. Finally there is a further process of output from the arena whereby, at the end of the third phase of a purposive cycle, a selected course of action, an adopted personal plan (which is itself a form or structure of forms) is transmitted via Miller's "encoder" subsystem to other subsystems of the organism, and results in action. This is the process of behaviour.

The account of the mind given in this chapter is inescapably speculative and involves many arguable assertions, a full discussion of which would take much more than the space so far occupied by what is already a long chapter. But it may serve nonetheless to suggest something of the nature of the structures and processes which any working model of the mind would have to encompass; and as such it may provide a sufficient frame within which to pursue our enquiry into the Self.
III: THE IDEA OF THE SELF IN CONSTRUCTION
AND ACTION

Thou which within me art, yet me! Thou eye
And temple of his whole infinity.
- Thomas Traherne

Definitions and Perspectives

A first approach to the question of what we mean by the Self, identifying three perspectives, those of biological man, behavioural man, and psychological man.

Who am I? What do I mean when I talk about myself? If I am a person, what is a person? It is curiously difficult to give straight answers to such questions.

As a first step it may be helpful to consider what things can be reckoned as parts of me, and then to look at the sum of these parts. My body, as I see and feel it now, is part of me, and so are all the members and organs of my body. So are my thoughts and feelings at this moment. But so too are my memories and all my past activities and thoughts and feelings, going back to the womb (even when I do not remember them); they all go to make up my total Self. So too my body in all its past history. So too my plans and aspirations, my future Self - body, thoughts, feelings, activities - all the way to death and dissolution. Nearly all of my past has already gone beyond the recall of memory, but it is still part of the truth of what has happened in the world. Nearly all of my future is beyond prediction or conception, but the fact that it is coming, however vaguely it may be delineated, is very much a part of me.

The totality of all this I shall provisionally call the sum of me. Now what is it that makes a sum of all these parts? What binds them together? First, we may say, the continuity of the body as a physical form continuous in space and time from conception to dissolution.
Secondly the briefest, overlapping continuities of my behaviour, that is of linked sequential activities by the body, which extend from crawling or walking to playing football or performing the role of Hamlet; and here we have to distinguish particular acts or sequences of behaviour occurring on particular occasions from recurring patterns of behaviour, like those associated with driving a car, or having a chip on the shoulder, which unify, in an abstract sense, many particular instances. Thirdly there are the continuities represented by my plans and aspirations, the paths which I plot out through the future which, as time moves on, are steadily overtaken and replaced by present actuality, and are as steadily extended into a further future. Fourthly there is the continuity of consciousness which consists, as I have argued, of a continuous sequence of predications of thought and perception, one at a time and one after another, throughout my waking hours.

These are four types of distinguishable continuity which give apparent structure and unity to the accumulation of parts which is the sum of me. But how do I know myself? Only through consciousness. But conscious knowledge always involves a knower and what is known, an I and a not-I, a subject and an object. The Self is what the knower as subject recognises when he looks at the subject of his knowing, making it an object. But as soon as it becomes an object it is no longer the subject, the I cannot simultaneously be the not-I. I cannot know myself directly, because I cannot distance myself from myself. How are we to find a way out of this dilemma?

Let us begin by considering what we can say about the knower, considered as an object. The answer is not very much. Essentially we deduce it as the point where the coordinates of the personal space in which I think ideas or perceive physical forms (that is to say, the arena of my consciousness) have their origin. As Chein says, it is "that which is at the origin of perceived space time". It is also however the origin, in some sense, of my perceived activity or behaviour - in Piaget's words "a centre of functioning", in Chein's words "a hub of activity". At

1. I am using "subject" and "object" in the ordinary sense corresponding to "subjectively" and "objectively"; but this is not of course the same as the grammatical sense.
the same time it is always associated with the body and located in, or at least near, it. Yet it has no precise and permanent location in the body. Chein compares it in this sense to the body's centre of gravity. We ourselves tend to identify it not just with the body but with the total Self, the sum of me. One could say that it is the representative of the sum of me at the growing point of time, Na-Here-Now, where the future is still uncertain and the present is being created. It is the eye and the will of the total Self as it takes cognisance of the world and, in some degree, creates it.

I am aware that the preceding paragraph somewhat strains comprehension and relies on metaphor to a greater extent than seems desirable in a study of this kind. But we must not delude ourselves that we can deal with the simple questions at the head of this chapter without venturing on the brink of the comprehensible. Nor should we delude ourselves that any general theory of psychology which fails to face these ultimate questions can ever establish a perspective to take in the whole man. I will return to the status of the knower in the last chapter of this study. Meanwhile we can move to the question of the self what is known. In effect we dealt with this question in Chapter II. We cannot directly know the Self as it is; but we can and do form an idea of the Self, which provides the basis for our knowing.

How does this happen? To begin with, we can see, hear and feel bits of ourselves, and watch bits of ourselves acting, in the Here-Now. And the model developed in Chapter II suggests that every such conscious experience can be remembered (though not every one is remembered in practice). Those forms which are remembered become accretions to a feature of the mind-manifold which is a representation of my total Self, located within the mind's representation, or map, of the world in space and time. This feature is a complex superimposition and organisation of all the remembered episodes, activities, imaginations, thoughts and plans of a whole lifetime in which my Self, in actuality or imagination, plays or has played a part. When I think of the Self at any time, the idea I evoke is the limited profile of this immense complex which emerges as relevant in the perspective or context of the moment; but it stands for the whole, even though the whole cannot be grasped entire,
just as a two-dimensional image formed on my retina is realised as
standing for the whole of a solid three-dimensional object, of which
the greater part is hidden from view. What is more, it stands for
the real whole, the thing in itself, the I, the Knower, the Actor,
not merely for the representation on the mind-manifold.

When I think of other people, the process is exactly the same,
though the idea-complex representing another person, even one I know
well, is inevitably far smaller and less elaborated than the idea-
complex relating to myself.

Any particular view that I take of myself on a given occasion (what
I have called the evoked idea), although it may stand for the whole, can
only embrace a minute fraction of all the detail that I potentially
know about myself; and the same is true, though to a lesser extent, of
my evoked idea of any other person who is at all well known to me.
Inevitably the evoked idea on any given occasion is highly selective.
It will consist of a number of features, or subordinate forms, super­
posed and organised in such a way as to build up a more complex form.
These features may be particular events in which the Self has a part,
or particular physical or mental activities of the Self, spreading over
longer or shorter periods, whether in the past, the present, or the imagined
future; or they may be more generalised characteristics, classifications
of many recurrent features. In many contexts the evoked idea is so vague
as to be no more than a marker, but it is always sufficient to identify
the particular idea complex we are thinking about, located as it is in
space and time on the map of the mind-manifold.

It seems broadly fair to say that there are three main types of
perspective in which such a view, or evoked idea, may emerge, and
consequently three main types of selectivity. First there is the type
of perspective in which we evoke a highly generalised idea of the whole
complex. Here I see myself as represented by my biological destiny
across space and time — as the biological man, the organism defined in
relation to its environment. Secondly there is the type of perspective
in which the evoked idea is of some aspect of my behaviour as seen from
the outside — or rather as I imagine that someone else, perhaps George
Herbert Mead's "generalised other" would see it from the outside. This could be called a view of the behavioural man, defined essentially from the outside in his relation to others, a view that includes the generalised classifications of patterns of behaviour or disposition which are called traits. Thirdly, there is the type of perspective in which the evoked idea is of some aspect of the purposive roles or plans or aspirations that I adopt for myself. This could be called a view of the purposive, psychological man, defined essentially in relation to his own aspirations for the future.

We note that the phenomena which emerge in the first two types of perspective are also open in principle to the observation of other people; they are "objective" phenomena. But those which emerge in the third type of perspective are "subjective" phenomena: I can describe them to other people, but only I myself can observe them directly. There is an idea complex in my mind-manifold relating to every person whom I know individually, including myself; and ideas can be evoked of every such person in each of the three types of perspective. But when I am thinking of other people my ideas of their plans and aspirations are second-hand or conjectural; only in the case of myself, the reflexive person, are they directly observed. In general when I speak of an individual, I am thinking of the biological man; when I speak of a person, I am thinking of the behavioural man; when I speak of a Self (even someone else's Self) I am thinking of a man who is subjective, purposive and capable of reflection. All three however relate to the same idea complex which can be called indifferently the idea of the individual, the idea of the person, or the idea of the Self. The distinction is one of perspective, not ultimately of subject matter.

Logically, we may note, these distinctions could be said to define the perspectives of human biology or anthropology, of behavioural science, and of psychology proper (which is concerned with the psyche, usually translated as soul, spirit or mind); although in practice, of course, these perspectives considerably overlap at their borders.
Psychological Man

Man as a purposive being, concerned with imagined plans, always setting himself goals and always dissatisfied. The relation of a plan to its scenario, otherwise the facts and possibilities of the surrounding world. The anticipatory Self as a rope of overlapping personal plans fraying out into the future.

My concern in this study is essentially with the conscious, reflective Self, and hence with the third type of perspective, that of psychological man. This does not mean that I question the legitimacy of other views of man - the "bio-social view", for example, which is associated with H.J. Eysenck, or the strict behaviourist view associated with B.F. Skinner, or the systems view developed by James G. Miller, or George Kelly's personal construct view, or Rom Harre's "Architectonic Man", or the biological view based on evolution and bioenergetics by J.N. Bronner, to mention but a few. Nor, however, on the other hand, am I willing to concede anything to the exclusive claims of those proponents of other views who object altogether to mentalism, otherwise the use of the direct evidence of conscious experience, on the grounds that it "buries the sources of human behaviour within the individual and so obscures them from public view." The earlier parts of this work represent, as I would claim, the development of an objective model in terms of which it is possible to accommodate in principle a whole variety of different perspectives on human nature, biological, behavioural or psychological, and to recognise the usefulness of different perspectives in different circumstances. It is only from now on that I narrow my sights exclusively to one particular type of perspective; and, even so, as I have already said, I propose to return to a broader perspective in the final chapter.

In order to approach psychological man, let us turn to Shakespeare. This is the soliloquy of King Richard II, defeated and held prisoner in Pomfret castle, at the end of the play:

I have been studying how I may compare
This prison where I live unto the world
And, for because the world is populous
And here is not a creature but myself,
I cannot do it. Yet I'll hammer it out.
My brain I'll prove the female to my soul,
My soul the father; and these two beget
A generation of still-breeding thoughts,
And these same thoughts people this little world,
In humours like the people of this world,
For no thought is contented. The better sort,
As thoughts of things divine, are intermix'd
With scruples, and do set the word itself
Against the word,
As thus: 'Come, little ones'; and then again,
'It is as hard to come as for a camel
To thread the postern of a small needle's eye'.
Thoughts tending to ambition, they do plot
Unlikely wonders: how these vain weak nails
May tear a passage through the flinty ribs
Of this hard world, my ragged prison walls;
And, for they cannot, die in their own pride.
Thoughts tending to content flatter themselves
That they are not the first of fortune's slaves,
Nor shall not be the last; like silly beggars
Who, sitting in the stocks, refuge their shame,
That many have and others must sit there;
And in this thought they find a kind of ease,
Bearing their own misfortunes on the back
Of such as have before endur'd the like.
Thus play I in one person many people,
And none contented. Sometimes am I king;
Then treasons make me wish myself a beggar,
And so I am. Then crushing penury
Persuades me I was better when a king;
Then am I king'd again; and by and by
Think that I am unking'd by Bolingbroke,
And straight am nothing. But what'er I be,
Nor I, nor any man that but man is,
With nothing shall be pleas'd till he be eas'd
With being nothing.

"My brain I'll prove the female to my soul, my soul the father;
and these two beget a generation of still-breeding thoughts". These
thoughts, he says, are like people, for they people this little
world. And they have one dominant characteristic (this is what the
speech is about), that of discontent. For no thought is contented.
Thoughts of things divine are intermixed with scruples - by which I
think he means ideas of duty, bringing discontent with our present
state - or they run into seeming contradictions that are barriers to
comprehension. Thoughts tending to ambition fail. Thoughts of ease and contentment merely flatter and deceive themselves. "I play", he says, "in one person many people, and none contented." Whatever I am, I will be contented with nothing till I eventually am nothing. These are parts or roles that he is playing, but they are different from those of behavioural men, for they are not reflected in behaviour: they are imagined personal roles or plans.

Here perhaps is the clue to psychological men. He is full of thoughts which always tend towards something, towards goals; he is always setting himself goals and always dissatisfied. The crucial thing about him is that he is Here Now, but is never content with what he has or is Here Now, he is already looking forward with anxiety, greed, ambition, hope, fear or whatever to the future. Inching so he is constantly mapping out plans, or personal roles, as unique pathways leading towards his goals. Being plans, they are sequences of features of behaviour, but they are seen, understood, classified from the inside, in a different way from the social roles of behavioural men, seen from the outside.\(^1\) The bargain which Goethe's Faust struck with the devil was that the devil could take him if he ever said to the passing moment: "Stay awhile, you are so fair". And Faust here is Everyman.

Man is of his nature a purposive being. In bodily terms the preservation of the gene pattern is represented by what Ashby called the essential variables\(^2\), which have to be kept within certain limits of value if survival is to be assured. If the value of one of the essential variables is too far from the norm, we feel pain or hunger or thirst, for example; and the effect is that we establish imagined wish-fulfilment situations in which the value is brought back to normal. We explore

1. A comparable distinction is drawn by Professor John Rex between psychological and sociological explanations. "The former could be thought of as explanations of an actor's actions in terms of his own pattern of motivation, whereas the latter must be thought of as explanations of one actor's actions in terms of the pattern of motivation of another." ("Key Problems of Sociological Theory", Routledge and Kegan Paul 1961, p. 179.) While I think the distinction is accurately drawn, I would not wish to exclude sociological explanations from psychology or vice versa.

all kinds of perceptions, recollections and associations in such a way as to identify possible chains of cause and effect deriving from our own possible actions and leading through an environmental scenario to the achievement of the goal image or the avoidance of the aversion image. Successful achievement is associated with pleasure, which is in some sense an indication of what is ultimately good for the essential variables; and what we associate with pleasure becomes an object of desire.

Our goals are linked however only in exceptional circumstances to the direct preservation of essential biological variables. Ordinarily we are concerned to plot a path through a labyrinthine future, constantly establishing for ourselves proximate goals which are related not to physical indicators of need, but in the first instance at least to some idea of establishing our Self in a situation which is imagined as satisfactory. Thus Richard II imagines various personal plans, compares them with past experience, explores their associations and evaluates them, weighing them in the balance of pleasure and pain:

Sometime am I a king;
Then treasons make me wish myself a beggar,
And so I am. Then crushing penury
Persuades me I was better when a king...

It is clear however that we do not make these assessments in isolation from one another. The Self we imagine in a given situation not merely brings with it a body of a given age and condition, it also brings with it a great deal of baggage from the past and a great many commitments to the future. These are all incorporated as elements in the idea of the Self, which possesses enormously ramified links of organisation, because it has been associated with all the conscious experience of the individual in his lifetime. It is built up, like any other idea-complex, by the constant accretion of ideas which reinforce and modify existing features, or add new ones as the case may be. As we have seen, it includes all the past history - the past development and behaviour - of the man, so far as these have left any trace on the mind; and also all his future, so far as that can be predicted by the mind. The structures relating to the past consist of the past development of the biological man, together with those personal plans...
(and any social roles they may subsume) which have been adopted and performed, or partly performed to date, and have thus through their eventual performance been sealed in as behaviour, whether or not they went according to forecast. (Plans and roles which have been considered but not adopted can still find a place in the memory as part of the idea of the Self, but only as imagined, not acted out, behaviour.) The structures relating to the future consist of the predicted future development of the biological man, together with those parts of adopted personal plans which have not yet been performed or completed and so stretch on into the future. These structures projecting into the future we may call the anticipatory self.

We can say that in any existential situation when the mind is plotting out and comparing possible future personal plans, they are matched against the complex of the anticipatory Self and assessed in four ways more or less simultaneously. First they are assessed for logical compatibility — if the new plan is incompatible with an existing one, then either the one or the other has to be modified or abandoned. Secondly, as an extension of the first process, they are assessed for desirability: do they help forward other, usually longer term, plans which are an accepted part of the Self, or do they get in their way? Thirdly they are assessed for feasibility, the likelihood that they could be successfully carried through, given the facts and probabilities of the environment, including other people. Fourthly they are assessed for pain or pleasure. This is not a matter of tuning one form against another, but one of assessing the emotional resonance of the imagined plan, the simultaneous impact of all its associations in the mind, the blend and extent of which yield not only a specific quality and intensity of mood, but also, on a different register, a value for what we might describe as emotional want or emotional aversion. All four of these assessments can affect the acceptability of a new plan in different ways; but if eventually adopted it becomes part of the anticipatory Self, which is fundamentally a rope of overlapping personal plans of varying time spans.

1. The nature of logical incompatibility is discussed in "The Grammar of Language".
It is true that we cannot dissociate a plan from the facts and possibilities of the surrounding world, which include those of the individual's own mental and physical capacities, and in which the plan is embedded. Nor, consequently, can we dissociate it from the individual's ideas concerning the world in general, that is, from the rest of his mind-manifold. Our model suggests, however, that we must envisage the environmental "scenario" as a unified idea-complex of its own within the manifold. The fact that it may be built up originally of copies or reflections of relevant ideas derived from elsewhere in the manifold does not affect this point. And when the plan is definitely adopted, the scenario complex, with the plan at its core, itself becomes part of the idea-complex of the Self.

Many of the personal plans building up the idea of the Self will be the counterparts of social roles, and these carry their own social constraints. But even when there is no external social restraint a man feels an internal psychological constraint which makes him reluctant to abandon a personal plan he has once adopted before it has reached its end. He may of course have to, because of some necessity imposed by the environment, physical or social. He may do it anyway, because he wants to adopt some other plan which is incompatible with it, or because he is disappointed with the way it is working out in practice. But it is always a major step to abandon a long term plan once adopted, because it means abandoning part of a man's idea of himself, and thereby abandoning part of the mechanism he has developed for avoiding contradiction among his shorter term plans. A man's longest term plans, especially those concerning his religious or philosophical values, his family, his job and his position in society, tend to govern his life. In general he selects only such shorter term plans as are consistent with them. Otherwise, if these plans conflict, he can easily fetch up in trouble and confusion. He develops therefore a set of more or less consistent and interlinked longer term personal plans, tending towards goals which he accepts as desirable and which it would be difficult anyway to change now without producing some highly undesirable side effects. These plans are wound together in a skein which is set firm in the past, but frays out in generalised form into the future, constantly shaping the man's choice among shorter term plans that emerge unceasingly in the press of
circumstance and the swell of desire. This complex of plans projecting into the future, combined with the mental and physical resources effectively available to the individual at the time, constitute the reacting part of the Self, which I call the anticipatory Self. This feature is central to the character of psychological men, the man of purposes who is always focussing and refocussing his mind on images of contentment and working out trajectories that lead towards them, but whose mirage of contentment is never achieved:

What'er I be
Nor I nor any man that but man is
With nothing shall be pleas'd, till he be eas'd
With being nothing.

The idea of the Self is what it is at any given time. It evolves, grows, changes, decays, with biological man, but at any given time it is complete in itself, including its own past and future in synchronic form. Its reacting part can perhaps rightly be called the personality of the man. Even so, only one aspect of it - which we may call the face that the personality presents, otherwise the evoked idea of the Self - can come into focus at any one time in any one contingency of a person's life.

To elaborate briefly on this word personality, I regard it as that in a man which determines his decisions. The word is commonly used by psychologists to refer to a particular composition of traits or dispositions, and this usage is appropriate to the perspective of behavioural man: a trait is itself a classification of behaviour. But what from the outside is classifiable as a trait or disposition, from the inside is classifiable as a plan. (I use the word plan to refer not only to specific personal roles applicable to specific occasions but also to more generalised plans or policies applicable to whole classes of occasions. If I become a solicitor, for example, or get married, I am in either case adopting a generalised plan which will be acted out in different ways in innumerable different occasions in the future. Many of our long term plans are of this generalised kind.\(^1\)) It follows therefore that in my use of the word personality I am referring to the

1. See the further discussion on pages 190.
same thing as the behavioural psychologists, but looking at it in the perspective of psychological rather than behavioural man.

For most purposes psychological man represents a more useful, comprehensible, manoeuvrable concept than those of biological man or behavioural man. Yet can we say that this idea of the Self represents the essential man? I think not. It seems, and is, a contradiction to treat the idea of something as its essential reality.¹ This evolving personality, psychological man, is still made of plans, just as, in a different way, behavioural man is made of social roles; and, as Shakespeare pointed out on more than one occasion, the actor is not the same as his parts²; indeed he includes his parts. So we come back to biological man, that four-dimensional world line, the individual who includes behavioural and psychological man in himself. This, one might say, is the actor, and therefore the true man, in theological terms the creature. Yet he is of the three the hardest to think about and speak about.

Why? I think because he represents a profound mystery which we cannot anyway bring fully into focus. If we take the underlying actor for granted, it is then comparatively easy to think about particular sequences of behaviour or particular personal plans, or even that composition of personal plans and capacities which is personality. Usually when we think of a man we think of him as psychological man, the man of plans and decisions; and this is natural because it is just in this way that we think of ourselves in any of the contingencies of life. Yet, as the existentialists have pointed out, the decider and the actor are not quite the same.³ Ultimately I am not a personality, a synchronic composition; I am a life, a diachronic destiny. I can recognise myself here now, but that does not exhaust me; I am all that I was, and all that I will be, and all that I ever heard or saw or thought or knew. And as my destiny begins in mystery it ends in mystery, and it makes its own small track across a universe of mystery.

¹ This point is also made by Isidor Choin: "The Self and the Self-Concept are not identical, no more then is any concept identical with what it is a concept of." (op. cit. p. 206).

² "One man in his day plays many parts". But who, then, is the man? No one has thought more profoundly on this point than Shakespeare. See in this connection the further discussion on page below. See also "Drama as the Deep Structure of Psychology" by A.E.St.G. Moss (unpublished Ph.D. thesis, University of Surrey).

³ This point is discussed in more detail in a later section. See page 374 below.
We find ourselves faced here with the limitations of all knowledge. What we know consists of facts; and these are always facts about reality, ideas that are identified as unique because of their reference to unique locations in space and time, but ideas nonetheless, not the immediate reality which we cannot ever frame into factual knowledge. On the face of it each of the versions of man is valid in its own context. In the words of Isaac Penington, the Quaker, "Every truth is shadow except the last. Yet every truth is substance in its own place, though it be but shadow in another place." In our immediate context it is purposive, psychological man with whom we are most concerned. In the sections which follow I will attempt a closer analysis of the way in which his personality is built up and operates. In doing so I will need to go over some of the ground covered in Chapter II when we were considering the purposive cycle, but this time I shall be doing so from a different angle, considering the idea of the Self rather than the purposive cycles in which, at every moment, the Self is occupied.

The Idea of a Person (1)

An account of the idea of the Self as built up from a superimposition of logical forms from which a particular profile is evoked on a particular occasion.

If a man's idea of himself is not fundamentally different in nature from the ideas he forms of other things, and in particular of other people, the best way of considering how it is built up may be to look first at the way in which we build up other ideas.

In terms of the model described in Chapter II it is characteristic of any idea complex that it is built up by the superimposition of different logical forms, acquired in different circumstances. These are brought together either because they correspond to a single object with a unique trajectory in space time, or because they are subsumed, as a family of forms linked by family resemblances, under a specific sign or symbol. Other ideas are continually being thought, but they have to be built up \textit{ad hoc} on each occasion out of the forms available from this repertory, or derived from current perceptual experience. When one idea has been built up more than once it may acquire its own
sign or name, and so become a new complex on its own. The form which
the same complex will yield when stimulated in different circumstances
will vary, just as the wave form generated by a vibrating body will
vary according to the way it is struck. Similarly the profile of a
three-dimensional object — whether it is a salt cellar or a cathedral —
will vary according to the angle from which it is viewed; yet in spite of
this the profile of the moment is taken as a sign of the three-dimensional
shape which it is beyond the power of our senses to grasp as a
simultaneous whole.

The elements which are superimposed as we build up our idea of a
person are recollections of situations, classifications (e.g. of social
roles, traits and other behaviour patterns), events, thoughts, progressions
of events or trains of thought, in all of which the person figures in one
way or another. They are derived from predicative systems in which he or
she is related to other people and things by links of organisation,
whether spatio-temporal or logical; and it is a significant consequence
that when we recollect the person other people and things are brought
along too. But the fundamental link of organisation which holds all
these scenes and ideas together is that they all find their place in
or around a continuous series of transformations, or changes of state,
of one natural object or body, which has a beginning in the formation of
a zygote cell and an end in the dissolution of the last cell bearing the
characteristic gene pattern.

It is important to note that the profile evoked in any given situation
is not simply a reanimation of one of these recollections. Just as we
smooth a curve round the points plotted to make a graph, so we can fill
in by imagination (though usually in a highly generalised way) the bits
of which we know nothing. Out of the superimposed elements the mind
builds not a pile of pieces but a continuous whole, from which we
recreate in each context an appropriate, if sometimes vague and
generalised, continuous profile. I can think of my father, now dead,
as a man who lived for 77 years. I can think of him holding a particular
job over a period of years, I can think of him as a student, or on his
wedding day, or in the act of putting a golf ball on his lawn. These
are recollections — or imaginations — of widely varying time span, yet
each represents a situation. They are different images spreading over
different periods of his life trajectory, but each can be taken as an aspect and a sign of a whole that is inexhaustible by any cumulation of aspects. Significantly they include representations of both personal plans and social roles which he has adopted at one time or another. My brother and my sister will have largely different recollections of their father, and in any given context each of us will evoke him somewhat differently. But the different detailed imaginations will conform to a broad general shape uniting points we have in common, and above all excluding things which are incompatible with the known facts. In relation to the four situations suggested above, for instance, although our individual evocations would be different, in a real sense we would be evoking recognisably, or at least reconcilably, the same man.

Harre and Secord in "The Explanation of Social Behaviour" argue that there is no single self associated with any one biological individual, but rather "a multiplicity of social selves", each appropriate to a particular social circle and system of obligation. As against this, it is my argument that (i) there is a single idea-complex of the Self stored in the mind-manifold, although (ii) as a complex whole it is inaccessible to our grasp; on the other hand (iii) a particular profile standing for the stored idea-complex of the Self is evoked *ad hoc* in every relevant situation and every such profile or "evoked idea" of the Self will in detail be different from every other. Prominent among the elements which build up the idea-complex of the Self are the personal plans and social roles which the Self has adopted; and it is the social roles, as they find expression in the evoked profile, which correspond to the "multiplicity of social selves" postulated by Harre and Secord.

The Idea of Person (2)

A discussion of the views of Harre and Secord.

Before I attempt to work out my own model in further detail it will be relevant here to discuss more comprehensively the "ethogenic" view of man expounded in Harre and Secord's book. This approach to psychology grows out of certain ideas drawn from Kant and Boscovich

which involve, they say,

... a radical revision both of thing concepts and of action concepts.

a. Things are to be treated as individuals with powers.
b. Action is to be treated as the realisation of a potentially created in space in the neighbourhood of active things.

... We say of a thing that it has a power when it is capable of a certain action ... in virtue of its nature. The conditions which have to obtain ... are called 'enabling conditions'.

On this basis, and drawing on the ideas of certain modern philosophers, in particular Strawson and Hampshire, Harré and Secord have developed what they call the anthropomorphic model of man. People, they argue, are things (biological individuals) existing in space and time, which are agents capable of initiating change and thus endowed with powers. They are not only aware of other things but aware of themselves being aware and of themselves as taking actions. The characteristic human actions of an individual of this kind:

are generated by the conscious self-monitoring of its performance in accordance with certain sets of rules which it represents to itself in the course of making anticipatory and monitoring commentaries upon its performance and which it subjects to critical appraisal in retrospective commentaries... It can therefore choose different sets of rules for action and this is why a multiplicity of social selves are possible, since a social self is the apparent unifying principle present in an organism's performance in some social episode. Retrospective commentaries are usually given in a context of justification... There are two basic powers upon which the possibility of all this depends, the power of conscious self-monitoring and the power of speech. We are inclined to think that the power of conscious self-monitoring is the most fundamental... Expressing what one means we regard as a special form of conscious self-monitoring.

"A man, then," they conclude, "is a mechanism, but one which monitors and controls the way he performs... Such a being will most economically control the manner of his action by following rules and by forming and attempting to realise plans." They note that there is scope for argument about the extent to which linguistic powers and the power of conscious self-monitoring are connected, but they do not

1. Ibid. pp. 67-68.
2. Ibid. pp. 93-94.
3. Ibid. p. 97.
try to resolve this problem. They emphasise that the standpoint from which monitoring takes place and from which commentaries are made is not itself capable of figuring in an account given from that standpoint; the commentator himself must necessarily escape observation. The standpoint from which we view our actions is, in Kant's terminology, transcendental - not given by experience but presupposed by experience. (The application of this label, as it seems to me, hardly disposes of the relationship between the conscious commentator and man as a "biological individual" or "mechanism", but this is a perennial problem, and one so elusive that Harré and Secord may well be wise not to expend much time upon it.)

On the basis of this analysis Harré and Secord construct what is essentially a psychology of powers, contrasting with the model developed in this study, which could be described as essentially a psychology of plans. The two are not however irreconcilable. Perhaps the essential bridge between them is the importance assigned to possibility or potentiality in relation to actuality. "Possibility exists", according to Harré and Secord, "because human beings have the power to make anticipatory and retrospective commentaries and to imagine what is going to happen or what might have been."¹ I am not sure that I can accept the causal link, which implies that possibility could not exist without human beings; but in the present context that is neither here nor there. The importance of the possibility of alternatives in relation to learned responses and the nature of behaviour is discussed in this study, for example, in the section on "Behaviour" on pages 30-32 above, where an important link is established between behaviour and information - for the essential nature of information lies in a relationship between limited possibility and actuality, a point to which Harré and Secord do not appear to make any reference.

Where I have been more concerned with the process of the selection and eventual realisation of specific plans and scenarios, Harré and Secord have been more concerned with the powers and liabilities which are eventually expressed in these decisions. The Nature of Man, they say, is unknown, but we identify kinds of man by means of "type terms",

1. Ibid. p. 246.
which can be analysed into a mix of psychic and physiological components. With their aid we can establish "paramorphic models" of man, and the total set of such models in a man's nature is mediately related to his social behaviour through his set of possible social solves. Each social self is manifested as a cluster of powers and liabilities. Powers and liabilities may be long term or merely transitory and short term, and their effectiveness is related to appropriate enabling conditions. The particular cluster of powers and liabilities a man has at a particular time is highly variable. It may be described in certain circumstances as reflecting a particular state of readiness; this is essentially a teleological concept, identifying a state of the organism in virtue of which it is ready to do a specific type of thing.¹

These concepts can be accommodated to my model. The particular cluster of powers and liabilities a man has at a particular time corresponds to the evoked idea of the Self, the particular profile which is evoked from the stored idea-complex of the Self in the mind-manifold, on a particular occasion. As this idea is evoked the individual will be simultaneously forming an idea of his environment as it exists on this same unique occasion, and he does this with the aid of idea-complexes in his mind-manifold ordered, as we have seen, in two ways: by location on a four-dimensional map of the world and history, and by classification - the classes being labelled by symbols. Ideas are evoked from appropriate idea-complexes by a kind of resonance, through links of similarity or past association with forms identified in the immediate environment, whether of perception or of thought. From these classifications are derived the constraints, otherwise the rules and roles, by which the individual interprets his environment and his own powers and liabilities in the situation, and hence works out his own view of the range of possibility open to him.

On my account the profile of the Self evoked in any given situation is unique to the occasion; but such profiles can themselves be classified by means of "type terms"; and elements within them can be classified as powers and liabilities (or clusters thereof). The nature of the individual is constituted by the whole stored idea-complex of the Self.

¹ Ibid. pp. 264-8.
in the mind-manifold. Individual social selves can be identified as the social roles to which the individual is committed in relationships with other people (who play complementary roles); and these appear in varying guise in the evoked profiles of the Self which emerge on different occasions. Roles (or plans) can be identified as forms uniting linked successions of rules; as noted on page 185 below, my views on this point are very close to those of Harré and Secord.

In the upshot, therefore, my account is more idiographic, more concerned with the specific occasion, and less a matter of types and classifications than theirs. It is much more detailed (though no doubt correspondingly more speculative) in its analysis of what actually happens in consciousness, particularly in relation to the process of choice or decision; and this gives it, as I believe (and as I hope to show), a greater explanatory power. But there is no fundamental incompatibility in the two approaches.

The Idea of a Person (3)

Some comments on "self concept theory" and its relation to the theories developed in this study.

Again, before I proceed to develop my own ideas in greater detail, I need to make some reference to the considerable body of work which has been carried out, mainly in the United States, in the field of self concept theory. This represents a loose tradition, going back to William James, in which such figures as Cooley and Mead, Allport, Kelly, Maslow and - pre-eminently at the present time - Carl Rogers may be said to stand, together with a number of neo-Freudians such as Erikson and Fromm and many others of different schools. These writers are linked by a concern with the concept which a person forms of himself as determinative of what he is and how he behaves. R.B. Burns in his comprehensive review of this field quotes Reimy's (1943) definition of the self concept as "the individual as known to the individual". He continues: "This aspect of the Global Self, the self concept or Me, is the individual's percepts, concepts and evaluations about himself, including the image he feels others have of him and of the person he would like to be,
nourished from a diet of personally evaluated environmental experience.\(^1\) for Burns the self concept can most usefully be approached as "a set of self attitudes". He quotes the work of Cattell and Child (1975) on the factor analysis of motivation, demonstrating the consistent appearance of a "self sentiment" and concludes his work with a Rogerian assertion of the value of a positive self concept and of experiences "such as acceptance and regard from significant others, success and achievement in salient areas", which are conducive to this end.

Clearly the self concept in this terminology corresponds broadly to what I call the idea of the self. Why, then, can I draw so little that is relevant to my immediate purposes from so large and distinguished a body of work? I think the reason may lie in the strong emphasis laid during the last half century on what can be empirically tested and usefully applied. As a broad generalisation it is fair to say that psychologists in this tradition, having identified an entity which is clearly of great importance in people's lives, have tended, reasonably enough it may be said, to concentrate on refining ways of classifying and measuring different aspects of the self concept, together with ways of using such measurements (in the field of education and elsewhere), and finally ways of applying therapeutic techniques to change the self concept and so to improve the individual's effectiveness. The concentration is on testing and measuring what can be tested and measured, and changing what can be changed. The theoretical framework employed has been kept relatively simple, elaborated as a rule no more than is necessary for the practical purposes in view. There are reasons for this which may not always have been consciously worked out but which are made cogently explicit by Broadbent in the paper discussed in the introduction to this study.

The result is that the self concept remains, as it were, a black box. We learn more and more of its external measurements, as defined by "type terms", and we also learn something about ways of operating upon it which can result in changes in the individual's behaviour. But we are not much further advanced in understanding either its internal

constitution or how it functions in relation to other elements of the body and the mind, how it fits into a wider system. The elementary terms by which components or aspects of the self concept are described are themselves words of highly generalised meaning, not related to each other in strictly defined and imagined ways — component selves (material, spiritual, social, bodily), concepts, percepts, images, Gestalten, emotions, feelings, meanings, affects, attitudes, traits, dispositions, evaluations, interpretations, memories, relationships and so on. There is discussion of structure and process, but not much hard analysis of what elements are built in what space by means of what relationships into what structures; and correspondingly not much precise analysis of the processes of change.

I am not suggesting that the elementary terms employed lack precise reference or useful meaning; on the contrary they may carry valuable and accurate information. But each system of ideas tends to develop from a relatively restricted theoretical perspective and therefore applies in a relatively limited context, without precise means of translation to bring it into another context. I am inclined to the view that work of this sort is at its most illuminating when it is at its most impressionistic, as in the subtle and complex studies of Erving Goffman. But the kind of understanding towards which I am trying to work here requires a comprehensive perspective and a comprehensive model not merely of the Self but of the whole mechanism of the mind within which it exists and functions; my concern is less with elucidating in detail particular aspects of the self than with establishing a coherent model of the self and mind as a functioning whole.

Of the writers discussed by Burns perhaps Kelly is the one who comes nearest to a similar ambition; but I have given reasons in an earlier section why I think his scheme is inadequate. Of other writers Isidor Chein (mentioned by Burns only in connection with an article of 1944) has developed in his valuable book of 1972 "The Science of Behaviour and the Image of Man" a conception of the "ego structure" as built up from "imbricated perpetuated motives" or "concerns" which has some similarity to my view of the anticipatory Self as built up of superimposed personal plans of varying spans projecting into the future.
Although I can accept much of what Chein says on particular topics, I find the total structure of his model less convincing. In particular I think it suffers from the lack of any distinction corresponding to the one I draw between the evoked idea and the idea complex as stored in the mind-manifold; and partly in consequence of this its dynamics are far from clear. "The interplay of motivational forces in the ego's structure", he says, "is... one of counterbalancing relevant considerations and finding paths of action that maximise the potential gain from the entire system of interlocking concerns..." But he is a long way from explaining how this is supposed to happen. (A more detailed note on Chein's account of the Image of Man is given at Appendix I.)

In concluding this section it may be relevant to comment that William McDougall in his "Introduction to Social Psychology" of 1908 (with supplementary chapters added in later editions) comes far nearer to setting forth a comprehensive model of the mind, including the self, than almost any of the writers who have succeeded him. McDougall's once famous and now dated book exemplifies to some extent what other psychologists were reacting against when they turned to more strictly experimental work. His elaborate theory of sentiments built round the sentiment of the Self has been largely superseded by the more statistically based analyses of such writers as Cattell. Although his achievement deserves respect, his model is quite differently based from my own and I do not propose to examine it here. I shall therefore now return to my own model. I will attempt next to develop a more detailed account both of the ways in which the idea of the Self is built up through experience and of the processes through which it affects the decisions and behaviour of the individual.

Consistency and Patterns of Behaviour

The consistency of a stable Self as a requirement for coherence in an individual's responses and hence for effectiveness in regulation. Consistency as a social requirement, expressed in rules, roles and behaviour.

Not only are there many gaps in our knowledge of any life trajectory - even our own - but many of the things we do know will not
come to mind in a particular situation; if we know a person at all well, only an infinitesimal proportion can possibly come to mind at once. In each particular context one aspect of the person will be illuminated. This may be, or may include, a sharp recollection of a past occasion, but often it will be an image drawing on past recollections, or at least not incompatible with them, but adjusted and extended to fit into the new situation. The image as a whole is then a sign of the person and probably labelled with his name. This is what happens every time we think of a person who is not present. The recollections which come to mind are those which are apt to the situation, that is, connected by association with the context. They include physical images, but also words and actions, and the further associations and images to which they may give rise, in particular patterns of behaviour which may extend back into the past and on into the future as expectations having the character of generalised rules.

This whole process of imagining a person in a given situation is a kind of extrapolation, which is only possible because we can rely on a good deal of consistency in a person. To begin with, a person does not change physically except over a fairly long period of time, and then by imperceptibly small gradations. But, apart from this, we establish a regularity of character over a whole spectrum of behaviour in a man. The expectations we build up may prove wrong in particular instances, but they are right often enough to make them reasonably reliable.

The main reason for this is that such consistency is required if a man’s responses over a period of time are to be coherent and his regulation of the environment consequently effective. This is a point to be considered in more detail later; but it may be useful to observe here that a stable Self of this kind is also a social requirement. Evolution has made man a social animal, inconceivable outside society, unable when newborn to live more than a few hours without succour from other humans. Ultimately, this is a means of immensely increasing each individual’s regulative capacity. But to exist in a society, which rests on cooperation, a human has to have an identity, so that others can know him and can have reliable expectations of him, even if they have never met him before.
Expectations reflect rules. As soon as an object has been classified by the mind as a human being, a person, we can automatically have certain expectations of him according to the context. If we add a few more attributes which are normally registered, such as sex, approximate age, kind of dress, language spoken, occupation, we can place him in a more precise class and correspondingly add to the rules which we may assume to apply in given circumstances. These are social rules; they apply generally to all persons who are instances of the class as defined and are also units in a particular social system. This system may be that of human society as a whole (for some rules apply to all men) but it may be that of a nation, a linguistic group, a firm, a school, a football team, a family. The members of a social group are particular units in a system in which each has a unique place; but they are also instances of the class of members of the group, all of whom are similar to each other in important ways. Essentially they are similar because they know and accept the same set of rules; and it is the operation of these rules which creates the system; for the units of a system by definition have relationships between them, and it is the possession of rules of behaviour, otherwise of sequential patterns of activity, in common which relates the units of a social system.

Having a rule of behaviour in common does not of course mean that the members behave in identical ways when they obey it. For such a rule has direction and it often applies differently to the different sub-classes with which it may be concerned. A schoolmaster and a schoolboy may both know and accept the rule that boys call masters 'Sir', but the behaviour it elicits from each is different. We can say that in accepting the rule each is playing, or conforming to, a social role. The same rule can affect differently those who fill different social roles; while on the other hand each role may be affected by many different rules, as both the schoolboy and the schoolmaster may confirm. A role defines a class of person. Anybody playing the role is an instance of the class. It is a classification of which the essential defining values are rules of behaviour - though these rules may themselves imply other restrictions; the role of father, for instance, can only be played by a grown male person.
Of all the rules which members of a social group may have in common the most important are the rules of a language. For the possession in common of the rules of vocabulary of a language makes it possible for them to have a broad understanding in common of the regularities of the physical world; moreover it is by far the most important of the means by which the rules of social behaviour are propagated from one member to another. We may note that the common possession of the rules of the English language itself defines a social role, that of English-speaker.

When we say that the defining values of a role are to be identified as the rules of behaviour which it may seem to exemplify, we are implying that there is a hierarchical relationship between the two. What is a role — a form — at one level may be identified as a set of rules at another level. As I have suggested elsewhere, the set of rules corresponds to the social role as the tailor's set of measurements corresponds to the complete suit — though it is worth emphasising that the rules have to cover not only the individual measurements but also, at a higher level of hierarchy, the ways in which these measurements are to be ordered together to build up the suit. A comparable definition of role is given by Harré and Secord¹:

"A role is what a person in a specific category does, but in a formal episode his actions and sayings are generated by his following the appropriate subset of rules... Thus, role consists of a sequence of actions and knowledge of role consists of knowing the rules which enjoin these kinds of action in the proper order and in the appropriate circumstances. But of course much role filling is not a performance generated by conscious following of explicit rules...".

My ideas have been evolved in a somewhat different context, but they appear in this area to be fully compatible with the views of Harré and Secord. My only comment would be that, like nearly all modern philosophers and scientists, they steer clear of the concept of form, and I believe that is to their loss; in practice, as we grow up and learn the rules of the multiple social groups to which we belong, we do not in general learn the rules as such; we learn to know, as broad forms, the social roles which matter in each group, the rules are abstractions which we only need to establish explicitly in particular

situations where there is some degree of obscurity or conflict.

This hierarchical relationship makes possible a vast simplification. Just as a curve, which would have to be represented by a whole series of discrete coordinate values at the system level, can be recognised at the unit level as one single value in the register of two-dimensional outlines, so one role can be fixed and stored in the mind as one idea, yielding in any given context one value at the unit level. On the other hand in any given situation, where juxtaposition of unit values is not sufficient for our purpose, we can close the focus of attention and try to formulate the explicit rules which should apply. Thus in most ordinary situations when I am acting the role of father I will not need to hesitate about deciding what a father ought to do; but in a situation of moral difficulty or social complication, if I have to decide what punishment is appropriate to a small boy who throws stones, or in what way a father should behave in church when giving his daughter away in marriage, then the mere recognition and juxtaposition of a unit value or form for the father role may not be enough; I may have to focus more closely and consider explicitly what rules of behaviour I ought to follow.

In doing this I will not necessarily proceed at once to the abstract formulation of rules; the natural first step is to call to mind in some detail a series of comparable situations and juxtapose a number of instances of the role as played by myself or others in the past. That is to say, I may first focus my attention on the irregularities of the curve more closely, examining the sub-roles or routines which build up the role, to see if I can get a good enough reading as a result, before I proceed to the next step of taking measurements. Often indeed this process of comparison and juxtaposition, with a constantly varying focus of attention, gives a subtler distinction than such measurements as we can arrive at. To reduce to rules my conception of what a father should do in this particular situation may produce only a crude approximation to the idea I have in mind. Yet in the last analysis a role is a combination of ways of behaving which are rules. Working in reverse, if we are given a set of rules relating to the behaviour of one type of person in one type of situation we can, as it were, bring them to life in the conception of a role. A set of such values, as we have seen,
yields a role, just as a set of measurements by a tailor yields the contours of a suit.

Behaviour, Role, Plan and Scenario

A section concerned with the further analysis and definition of terms, as a preliminary to more detailed consideration of the way in which the complex of the anticipatory self is constructed.

In any actual or foreseen or imagined situation concerning an individual, certain aspects of our idea complex relating to him or her are evoked, and in consequence certain expectations are aroused, growing out of behavioural patterns which form part of the complex. At the same time we are aware that such patterns only become effective to the extent that they are motivated from the inside, as it were, by appropriate personal plans, directed towards personal goals (whether positive goals of achievement, or negative goals of avoidance). A man does not in practice reliably live up to social expectations if he has a strong personal motivation to kick over the traces and do something quite different from what he is socially committed to doing - for example, if he is planning to run away with his neighbour's wife. Consequently in building up our idea of a person we are concerned not merely with his external social roles, but also with what we can deduce of the internal personal plans that support them. These build up a structure of their own on which the external roles are carried; but this structure does not by any means correspond exactly to the external structure; there are often gaps and tensions between them.

In order to avoid possible misunderstanding here, it may be helpful to redefine, in relation to each other and to certain other terms, four key words, behaviour, role, plan and scenario, as I am using them in this study. Behaviour is any observable action or sequence of actions performed by an individual or organisation; it excludes thoughts

Cf. Chein's discussion of traits and motives on pp. 280 ff. of "The Science of Behaviour and the Image of Man": "The trait... cannot be comprehended apart from its blank and contextless (and therefore meaningless) description, save as one can relate it to the motives that are being served." (p. 281).
or feelings which cannot be directly observed by others. A **behavioural pattern** is a classification of a particular repeatable type of behaviour.

A **social role** (or **role** without any qualifying adjective) is a pattern of behaviour determined and defined by social rules or expectations. In a given situation it is always one of a pair, the counterpart of a corresponding social role acted by others (singular or plural). Human society is a network of such pairings of social roles, reflecting a complex fabric of obligations and expectations. These are often built into **organisations**, structures of complementary roles which interact with individuals and other organisations. Individuals have purposes and consequently they adopt **plans**, which are sequences of behaviour designed to achieve specific future goal images or to escape specific future aversion images. Organisations also have purposes and adopt plans, which in their case I distinguish as **projects**. These plans or projects represent paths leading towards the achievement of particular purposes within the constraints of the physical and social environment as it exists and as it is forecast into the future; and these constraints represent the **scenario** of the plan or project. Such a scenario is constituted by the natural laws and regularities of the surrounding physical world and by the human laws, rules and expectations of the surrounding social and political world. The scenario incorporates both the plan itself and the roles through which the plan is linked into the forecast environment, as well as the ways in which others interpret these roles.1

I shall only refer briefly in this context to organisations, projects and the structure and process of society; I mention them only for the sake of completeness, since I have made them the subject of a separate study, "The Grammar of Social Interaction". I need however to refer here to social roles insofar as they affect the individual who adopts them. Since human beings live in a social environment, the completion of any individual plan (or **personal role**) almost always

1. "I may not be able to see myself as others see me, but I am constantly supposing them to be seeing me in particular ways, and I am constantly acting in the light of the actual or supposed attitudes, opinions, needs and so on the other has in respect of me." (R.D. Laing et al, 1966, quoted by F. Fransella).
involves the acting out of one or more social roles, in part or in whole. The same sequence of behaviour therefore is both part of a plan related to a particular personal goal, and also part of or all of the acting out of one or more social roles; and each of these social roles is related to other social roles played by other people or organisations in the social environment. As part of a plan the behaviour is related to a personal goal; as part of a role it is related to social obligations to other people.

There is of course some behaviour which does not affect others, and so does not reflect any social role; but a behaviour that is consciously and deliberately undertaken must be part of a plan. Thus if I walk to the station, my actions represent behaviour which is planned but is not social behaviour. On the other hand when I buy my ticket from a station official my behaviour involves acting out a social role, in obedience to a number of social rules. Yet both my walking and my ticket buying are parts of a single plan, the purpose of which is to arrive at an office in London. Why do I want to go to this office? Because I have a job to do there. What is this job? A social role. Why must I perform this social role? Because I have contracted to do so. Why did I contract to do so? In order to fulfil a longer term, more general plan, that of earning my living. And so on, and so on.

It is not that roles and plans are intermeshed; it is rather that one (the role) is carried on the back of the other; the role is the external aspect of a plan which emerges whenever that plan involves entering into a relationship with the social environment. In a fundamental sense the plan is primary, the role is secondary. The plan is adopted as part of myself, the role is something that I put on as a means of carrying out the plan, just as I put on an overcoat as a means of keeping out the cold. Yet in another sense the role – or at any rate the network of potential roles established by the rules and expectations of the social environment – can be regarded as primary. I establish my own purposes and my own particular plans; yet I can only start from where I am at any moment; and the possible goals that I may set myself, with the possible means that are available to me, are strictly constrained by the facts of my body and the physical and social
environment in which I find myself, including the facts of my own past history, as well as the framework of the surrounding world. The scope I have for adopting a new plan is limited by the plans I have already adopted in the past and the social roles which I have already undertaken in relation to them, whether from free choice or under coercion. Thus plans are restricted by possibilities. But plans are still idiosyncratic to the planning individual and it is his plans that build up his idiosyncratic personality. The study of psychological man is at the root an idiographic enterprise, while the study of behavioural man is a nomothetic enterprise.

One further aspect of the definition of these terms remains to be clarified. As I have mentioned earlier, I use the word plan to refer not only to specific plans related to the achievement of specific goals on particular occasions, but also to more generalised plans or policies applicable to whole classes of occasions, on each of which a specific sub-plan exemplifying the generalised plan is put into effect. Here we need to make certain distinctions. I may adopt a long term plan to become Prime Minister. This involves a remote goal, but still a specific one. Because it is so remote I will have to adopt a series of more limited sub-plans in order to achieve it — to join a political party, to become a candidate for Parliament, to win the constituency election, to be appointed a Minister, and so on. The same is still true in the parallel case where my long-term plan is much more general — for example to attain a position of prestige and authority — because, although conceived in such general terms, it is still a specific goal. However there is also a less specific case to consider. If I decide to get married, I adopt a plan which is not directed merely to a single goal, to be achieved on my wedding day, but one which will also affect me on innumerable occasions over the rest of my life. The sub-plans I adopt on these occasions are not stages towards the wedding day, which is already past; rather they are sub-plans of a long term plan to live the life of a husband.¹ Now it could be said that this means that in

¹ Colin Murray Parkes is referring to this type of situation when he says: "There are... some types of goal situation that are continuous over time, e.g. occupation of territory, incubation of eggs or maintenance of proximity to mother. In such cases there is no consummatory behaviour and achievement of the goal situation initiates a special type of ongoing activity, whose effect is to ensure that the goal situation will be continued." ("Bereavement", 1972. Pelican edition, p. 74.)
getting married I am in fact adopting a generalised social role; and consequently that these bits of behaviour are actually sub-roles, not sub-plans. But the truth is that they are both. I could not sustain the role if I did not have an underlying purpose in doing so; this would be true even if my marriage had gone sour and my purpose was only the negative one of avoiding the unpleasant social and financial consequences of divorce. The fact that I can ask myself: "Why am I doing all this?" is evidence that I must have some underlying purpose, otherwise I would not be doing it. Often, I suggest, these are cases in which the individual adopts a social role and makes it into a personal plan. It then becomes an ideal role, a role which is adopted as a purpose in itself, not a means to some other underlying purpose. Many of the longest term, governing plans which make up the anticipatory Self are ideal roles of this sort. The most characteristic of all are ideal religious or heroic roles, which the believer adopts to form his own ideal Self, even if he knows he cannot live up to them - when, for example, a Christian "puts on" the role of Jesus Christ as "the Way, the Truth and the Life".

Finally we can identify the most general case of all when an individual adopts a social rule (as defined in the preceding section) as one of his personal long term plans - for example if he decides to make it his purpose to speak the truth on all occasions, or to do no murder, or to honour his father and his mother. These are ideal rules, ultimate generalisations of ideal roles, which are here established as long term plans constitutive of the anticipatory Self. It is worth adding in conclusion that even in these ideal cases the distinction remains between the two sides of the coin, the plan and the role, the inner and the outer faces of the same behaviour. For the plan is part of a man's idea of himself, an element of his integrity, while the role is an element in the fabric of society. The plan is related to a man's purposes, the role is related to the constraints of the world. The plan is analysable into sub-plans and finally actions. The role is analysable into sub-roles and finally social rules. Adopting a role is fundamentally a means towards achieving the purpose of a plan already adopted.
The Polarity of Wish-fulfilment and Real Life

An examination of the way in which an individual's thinking is polarised between images of wish-fulfilment and images of present reality; and of the way in which plans are developed as a means of building bridges between these poles.

In the case of our own Self we build up in our mind what is basically still the idea of a person, not altogether different from our ideas of other people. But the idea complex relating to our own Self, as noted earlier, is vastly more detailed and prominent, partly because it enters into so many more of our memories, and partly because it is associated with values of sensation, emotion, pleasure and pain which cannot be directly registered in connection with anyone else. I can see or touch my own limbs and other external features in exactly the same way as those of other people (though with certain restrictions as to angle of view and approach). On the other hand my registration of the pain in my stomach is in an obvious sense private to myself, even though I may try to recode it and so describe it to the doctor. And just as we are directly aware of our own emotions, so we are also directly aware of our own personal plans and motivations, without any need to deduce them from appearances - though this is not to say that we are incapable of deceiving ourselves about our own underlying plans (the question of unconscious thinking and the unconscious plans that go with it will be considered on a later page). Correspondingly the structure formed by our private internal plans is liable to loom much larger, where our own Self is concerned, than the external structure of social roles through which it is linked to the common world of human society; for it is in the private world of plans and motivations that our decisions - even our decisions concerning social roles - are taken.

Pleasure, pain, emotion, these affect the selection of goals and the mechanism of choice and decision, processes in which the idea of the Self plays a crucial part. To recall our previous analysis, the mind is constantly construing incoming sensory impressions, together
with the associations which they immediately call to mind; while at the same time it is following trains of free association in the directions in which the threshold resistance is the lowest, and these in turn interact constantly with its continued construings of sense impressions. The tendency is for a polarity to be established between images of wish-fulfilment to which the lowest threshold settings lead, and impressions of the Self in its current environment. But there is a continuous interaction of association between these poles. The form which the wish-fulfilment images will take is affected by what is currently going on at the other pole, for the thresholds of association are mutually lowered, so that we tend to construe our perceptions in ways related to what is uppermost elsewhere in our mind at the time, and we tend to identify objects of desire or aversion which are related to the physical situations in which we find ourselves.

One important aspect of this process of interaction arises from the tendency which we have already noted for the mind to make predictive imaginings, following out the effect of known rules of sequence as they develop out of the existing situation. The sort of predictive imaginings which the mind makes will tend to be affected by its current wish-fulfilment tendencies; but the predictive possibilities, at least in the short term, are much restricted by the actual situation and certain immediate forecasts impose themselves automatically. If I am sitting in my chair the immediate forecast is likely to be one of "no change". But, wherever I am, if I see a tiger advancing towards me it is likely to be one of dramatic change. Now as soon as the mind recognises this forecast situation and assesses it as unpleasant, there is an immediate reaction in the sudden formation of a new wish-fulfilment image - oh to be somewhere else. Subjectively we recognise an access of emotion. This always accompanies a violent and widespread change in the threshold settings of the mind-manifold. It may be maintained while any particular group of settings continue to be set exceptionally low - though we may note that this situation, with its accompanying state of high emotion, does not usually last for very long; for not only does the environment often change of itself; the mind too is constantly taking action to change the environment, and particularly so when it is in a state of high emotion.
Action is in the first place a physical movement, or an application of the mind, which is under the control of the conscious will. The range of immediate possibilities of action in any given situation is relatively small, even if combinations of, for instance, simultaneous muscular movements are taken into account. And the mind itself is trammelled by rules of association and continuity. However the mind is not much concerned with single steps. It moves on from passive predictions of what will happen anyway to alternative predictive imaginations of what will happen if some positive action is taken. But not merely one action; what it imagines is a series of causally linked actions, consequences and further actions, which may be prolonged over minutes or hours or days or years, and which abuts in some end-situation assessed as pleasurable or at least less painful than the present. Any such series is equivalent to imagining a span of the Self's own future life trajectory, or that of some system (another person or a nation, for instance) with which the individual is concerned emotionally. Each span is likely to be focussed as one system under one image. It may have to be worked out in much more detail; the working out might indeed involve the writing of a volume or the designing of a complex machine. But in each case the whole, as a plan for the Self, has to be subsumed under one image for the purpose of retrieval, assessment and decision. The scenario always shows the path towards a wish-fulfilment image. Predictive necessity may in some circumstances lead unavoidably to extremely unpleasant situations, as when we realise that the ship is sinking beneath us; but the mind will always seek to find a way out; beyond the shipwreck it will look for the raft or the life-boat - some means of salvation for the essential variables, somehow.

Once a plan has been adopted, it is part of the continuing Self and will come to mind, forming part of the Self's profile, in any appropriate context. But meanwhile the mind is away on new tracks of association, prediction and desire. As we saw earlier, the acting out of the plan does not require continuing conscious attention. The polarity between desire, or Shakespeare's "discontent", and actuality is never resolved for more than a moment; indeed, although no more than one system can ever be at the focus of consciousness at one time,
the trains of association and imagination relating to many different objects of desire and many different decisions are usually being pursued simultaneously below the conscious level as part of the reverberation of association across the mind-manifold. Yet any plan once adopted has a constraining effect on other decisions until either the acting out is completed or it is interrupted and replaced by something else. The constraint has the effect that no new imagined plan can be adopted and annexed to the Self if it is not logically compatible with any relevant old one which is still not complete — or, rather, no such new role can be adopted unless the old one is abandoned.

A great many of our minute to minute decisions are acted out and completed immediately. If I decide to pick up a pencil off the floor, the imagined new plan of myself picking it up fits with no effort into the profile of the continuing Self sitting in my chair. The process of decision occupies no more than a split second, then spills over at once into the action, which again is completed within a split second. Consider however the situation if, halfway down, I am brought up short by an unexpected twinge of lumbago. The monitoring feedback draws attention at once to a discrepancy between the plan as imagined and adopted, and the plan as acted out. There is a new factor not foreseen. A new wish-fulfilment image — stop that pain — appears at once, reinforced by sharp emotion, and leads to the imagination and immediate adoption of a new personal plan, that of myself slowly and cautiously straightening up again before my hand has reached the floor. The new plan is incompatible with the old, but in the circumstances its attractive power is the greater and the old is abandoned. I may retain the old wish-fulfilment image, I may still want the pencil; but I will now adopt a new and perhaps more indirect strategy for getting it; the original plan is abandoned for good and if something like it is ever adopted again it will nonetheless be a different plan in a different situation.
The Traveller

An illustration of the process by which the mind successively imagines and adopts plans and sub-plans of varying time-spans to achieve its purposes.

We have seen that, while many personal plans are of short time span and swiftly completed, others may be of much longer span. Consider the case of a traveller who sets off on a walk through the hills. He knows the general direction of his destination. In taking the decision to walk there, he has first imagined and then adopted a personal plan stretching over the whole imagined span of his journey in time and space. As he sets off he may mark a dip in the hills on the skyline as his initial objective. It may take him rather far to the East, but he may head towards it nevertheless as offering an easier journey, since the crest is lower than on the more direct line. This further decision involves the imagination of two more alternative sub-plans, either of which could fit into the first and overriding plan, giving more particularity to one part of its highly generalised form. He compares the two, his predictive imagination suggesting that the higher and more direct route will make him more tired but may make it possible for him to arrive earlier. One image will seem to him more attractive or less painful than the other and he will adopt it.

As he proceeds, he will have to make a series of such decisions. Some will be of short span - is he to clamber over this fallen tree or walk round it? - some more far reaching: is he to follow this road, along which he can move much faster but which seems to take him far to the right of his intended course? Each of these decisions fills out his original plan, clothing some part of it with more detail but not effacing the general outline, which remains overriding. Each sub-plan is matched to the overriding one and is abandoned if found incompatible with it. To put it the other way, a distant generalised future is gradually given detail in the form of imagined alternatives, certain of which are adopted and acted out. In the process these are fused with the mind's construing of the immediate sensory input and thus made actual, acquiring far more detail still.
The execution of any plan, once adopted, tends to sink out of consciousness, but it is monitored subconsciously and the attention is alerted if the perceptual feedback shows any significant deviation — if, for example, as the traveller executes the plan of walking across a grassy meadow, he finds his feet sinking into an unforeseen patch of bog. Every imagined plan is related to realistic predictions. If he comes to a stream, he may imagine himself jumping over it, but he tests this plan against another, which is that of his known long-jumping capacity — one which may be based either on a specific memory image or on a vaguer image generalised from many past experiences and the constraining rules in regard to his physical performance which they embody.

Prediction and imagination are constantly interacting with each other. If he is walking along a straight even path his attention may be far way, concentrating on the difficult interview he has to face tomorrow (imagining yet another plan); but the monitoring perception goes on all the time and is always, though not always consciously, an ingredient in his awareness. At a moment of physical judgement and decision, as when he is measuring his leap across the stream, the span of consciousness contracts to the actual span of close perception. This may embrace only a fraction of a second, but the nature of concentrated perception is such that it includes a relatively great amount of information in a small span. Even here there is a whole series of gradually narrowing perceptions and predictions leading up to the moment of the leap; and that moment is not a break, but is followed by intensive monitoring of what follows. By contrast if he has an easy jump to make over a puddle, only a glance is necessary and he can think in terms of a single movement instead of a series of sub-plans unified by intermittent widening of the focus of attention to envisage the leap as a whole.

Broadly it can be said that the longer the time span of a plan the less precise detail it is likely to hold. As the traveller considers the whole span of his journey he is guided by the vaguest plan in the vaguest scenario, whether the latter takes the form of a picture of "over the hills and far away" or that of a recollection of some relative positions on a map. As he imagines the nearer stretch between his
starting point and the dip on the skyline, he has some direct perceptions
to give definition to parts of his image; but there may still be great
gaps of dead ground between, which are imagined in the most cursory
fashion, or not at all, unless the need arises. Yet when the need
does arise, always some sort of image is yielded. If he asks himself
how far he will have got by lunch time, some conception of a point between
here and there will come to his mind. For a scenario (or a plan
emerging in a scenario), though it may be evoked from the recognition
of a few isolated values, has continuity. Once realised, given body or
continuity in this way, a plan, like any natural object or abstract idea,
will always yield a value or set of values in a given context to which
it is related, as a curve will always yield a location at the point where
a given line crosses it, or as a plaster dinosaur in a museum, though
built up from a collection of isolated measurements of fossil bones, yet
forms a whole yielding a single coherent profile from any angle
whatever.

In the case of our traveller, as he casts his mind forward or back
to particular points on his journey (including the point of the present
moment), what he recognises in each sub-context is a sub-plan - himself
jumping the stream or having his lunch or whatever it may be. As he
proceeds on his way, he is all the time taking in and construing a
constant stream of sense impressions. He construes them, as we have
seen earlier, by relating them to the ideas already uppermost in his mind,
the ideas for which the thresholds of association will be at their lowest.
These will tend to include the general plans which are of the greatest
current importance to him; and among such plans those which are linked
by easy associations to the incoming impressions will tend to have
the greatest effect. Thus the sensory impressions received by our traveller
will tend to be related to the general plan of himself making his journey.
Roughly it would be true to say that each time he tops a crest or turns
a corner and a new vista comes into sight, he has to set his course
again, fitting the exigencies of the immediate situation to the over-
riding purpose of reaching his goal. This process is essentially that
of creating in imagination and then adopting - making part of himself -
a particular sub-plan which relates the incoming impressions to the
general plan. The span of each sub-plan can of course vary within wide limits and there may be sub-sub-plans and so on. If he finds his path blocked by a boulder, he may adopt the sub-plan of Self pushing it aside, only to find that the boulder is too heavy to move; and thereupon he may turn to the alternative sub-plan of finding a way round it. Each decision or act of will is an act of creation, the selection of particular values from the environment and the evocation or creation from them of a particular contour or plan; yet it is not creation entirely de novo, for it is also always the discovery of a new pattern compatible with the old, of a new more particular contour which fits into the overriding general shape. The creation is part of a dialogue between the existing general plan and the environment, which results in the emergence of what may be a number of imagined plans, and the adoption of one of them. At every moment of self-consciousness a new Self is discovered, yet it is a new Self fitting on to the old, or rather fused with it. The selves fit within each other like overlapping scales; but the scales vary immensely in span, for I can recognise myself at one moment as a pilgrim to the grave and at the next moment as a man turning a door handle; and they can be many layers thick, one on top of the other; from the wide and general to the more and more narrow and particular.

Decision

The polarity of desire and actuality and the successive acts of adoption by which the two centres of consciousness are brought momentarily together in the adoption of new plans.

Every new plan adopted becomes part of the Self. But so in a way does every personal plan ever imagined, however remote it may be from being carried out. We remember the fantasy of the abandoned alternative, just as we remember the thing we actually did; and as our memories fade with time, it sometimes becomes harder to distinguish the one from the other. What distinguishes the memory of the plan we actually adopted is essentially the fact that it is accompanied by perceptual detail. If it is a plan of any long span, it also incorporates a wealth of sub-plans which give it further particularity. Even if it is one of
short span, it will be reinforced, like the one we described of pushing the boulder aside, by a detailed mass of perceptual information, for which there is no equivalent in a plan that is merely imagined briefly and then discarded. Moreover it also fits in a somewhat different way into the continuous sequence of systems recognised by the waking mind. The imagined plan of course also appears in this sequence, for it comes before the mind at a particular time as one element in a train of thought. But the acted plan is related invariably to some physical action or series of actions by the body. Even in the case of a mental plan like that of reading a book this is true: to imagine reading "War and Peace" is a mental event occurring in the sequence of mental events, but it is a very different event from actually reading it, using one's eyes and sitting in a chair. The body has its own history in our remembering, for the input of the senses never ceases during consciousness, and the acted plan is associated with this input - with Me Here Now - over the whole period to which it relates, as the imagined plan is not.

We have already noted that in consciousness there tends always to be a polarity between the focus of desire and the focus of perceived actuality. Purposive thought builds in imagination a causal bridge (which is a scenario incorporating a personal plan) between the two. And when we act in accordance with our purpose the bridge, as we proceed, becomes actual. It is our continuously monitoring feedback perceptions which establish its actuality, as they establish its correspondence with, or deviation from, the original imagined plan. The process of consciousness is that of a succession of acts of creation by which the two centres of consciousness are brought together in a new plan that is made actual as it passes into memory, while simultaneously a new polarity emerges.

The actual moment of decision is the moment when one system in the succession of predictive systems which constitutes the train of thought comes to incorporate actual perceptual units that fill in spaces, as it were, which in the preceding system were filled by more generalised sensory images. When the imagined plan is recognised as
fused with the profile of the continuing Self, imagination spills over into action. It is of course possible to make a mental resolution which does not apparently require to be initiated by any physical movement and so sealed in to the Self in the way we have described. But even in a case of this kind we mark the decision as having been taken at a particular time and place which are identified perceptually; some form of perceptual sealing must take place if it is a real decision and not merely another plan floating freely in the imagination and thus without any continuing power of constraint.

Looking at it from another angle, we could say that, as we saw when we were considering the purposive cycle, the stream of consciousness has a dual current. There is first of all the steady current of input through the senses, recording the World Here Now, which never ceases during waking hours and arguably never entirely even during sleep. These sense impressions are always construed in some degree and monitored by the mind, though they are often ingredients in the coloration of consciousness rather than forms at the full focus of consciousness. There is however also a second continuous current which is the uninterrupted succession during waking hours (and also during dreams) of predicative systems at the focus of attention. These may be perceptions but they may also be imaginations or recollections, as the mind follows the course of free association or the chains of causal thinking in the manner which has been analysed on earlier pages. When the attention is focussed on a perception, the two currents may be momentarily fused into one, but at other times the current of attention may wander far away into the past or the future or into fields of abstraction or imagination, while the monitoring current pursues its own subterranean course, bound to strict perceptual succession in space and time, ticking the minutes away. Attention describes arabesques around the plodding course of Me Here Now, but is always returning to it, and must do so every time a decision is taken. Perception itself can be split, for if I spend an hour watching a football match on television I will be focussing my mind on a field of visual perception, yet my attention for most of the time will be far away from the monitoring current. The latter will only occasionally rise to the surface, as for instance when I become aware of myself as stiff or uncomfortable and change my position.
The conclusion to which this examination leads us is that a self-conscious perception cannot in fact be sharply distinguished from an act of decision. It is when we become aware of perceptions in relation to a plan of the Self in a given situation that we seal in this plan to the past Self, the Self of recollection. A decision is an act of self-recognition or, perhaps better, self-creation, the adoption of a new contour, a new personal plan. The difference between an act of self-conscious perception which is no more than that, and an act of perception which is also an act of decision is a matter of time span. In the first case the span of the contour of the Self which is recognized extends no further than the actual span of the perception. In the second case the context is wider and the contour extends further into the future. Thereby it automatically involves the acceptance of certain predictions and often also the making of certain choices. The point which all this brings out is that a decision is not so much a particular action as a recognition, a construing, a reinterpretation, an extension, a recreation of the idea of one's own Self.

The quasi-identity of acts of self-perception and acts of decision can be seen most clearly in relation to the incidental decisions which follow from the acting out of a decision of longer span. I know the way to my house and when, on the way home, I come to a fork in the road I turn to the right at the appropriate time without any sense of taking a decision. Looking ahead I see the fork and judge the distance; and the subsequent act of decision — though it must in one sense be taken separately each time I go this way — is not introspectively separable from the act of perception. This is because in adopting the sub-plan of Turning Right I am doing no more than fill in a necessary detail of the wider plan I adopted when I decided to walk to my house. I am conforming to an earlier decision. There is no need for doubt or hesitation. The same analysis applies to many details of the presentation of the Self and the recognition of the roles of others which figure, more or less unconsciously in our behaviour.

Yet in fact every new plan has to be conformed or accommodated to an old one — or rather to the profile of the continuing Self embodying all relevant plans, as it emerges in this particular situation. This profile is a combination of values relevant in the situation, including

probably a physical image as well as positive or negative emotional resonances in relation to particular plans adopted (or not adopted) in the past. The decision to walk to my house was itself an accommodation to a profile including a positive value for the wider life-plan of myself as a man with a home and a family who lives in that house. Ultimately, every new personal plan has to be accommodated to plans of wider span and greater generality right up to the point where we are dealing with plans extending over the whole span of a man's remaining life. It is this system which makes the mind so efficient a regulator. It enables the organism to adapt its response not merely to isolated immediate values in the environment but also, so far as may be necessary, to take in longer term plans within plans. Every act of decision is a rapprochement of the past and the future in the creation of the present. Thus the system makes it possible for our responses to different situations over a period of time to be consistent with each other and thereby it makes the idea of the Self a coherent whole. It achieves this result in an economical way, since in any one situation only those contours of the continuing Self which are relevant (through association in the context) come into play, forming what we have called its profile in the situation.

Alternatives and Compatibilities (1)

An examination of the way in which the mind imagines alternative plans and chooses between them.

Coherence of response is achieved over great spans in spite of the fact that the number of units that can be related into one system at the focus of consciousness is limited; and the means by which this is achieved is the principle of hierarchical distancing, which enables a single value at one level to epitomise in a fused or concrete form (at the cost of some generalisation and thus some loss of information) what will emerge at the next level as a whole set of values articulated in a system or complex. This is the root mechanism of the plan itself, a single value integrating a whole set of values as a curve integrates a set of points through which it is drawn. And it is perhaps significant that this mechanism comes into play even in the case of
the most immediate reaction of the Self to a value registered in the
environment which threatens to disturb one of the essential variables—
say a blast of cold air.

The reaction, even in so simple a case, is not a one-to-one response
to a value in the register of cold; it is a response to a plan integrating
many values (or what would be many separately distinguished values at
a different level of hierarchy). I do not react to cold but to the idea
of myself cold. The obvious regulatory action in the situation may be
to adopt the plan of myself shutting the window; and if I am much pre­
occupied I may find myself doing this almost unconsciously. Still more
is this true of a movement like that of brushing a crumb off my sleeve,
in which the plan involved is no more than an image of my arm and hand
executing the movement and the hand brushing against my sleeve — first
imagined and then almost immediately monitored in actual sensation. The
span of the whole episode is very short and the facts which the act of
regulation take into account are very few; it is almost a direct response
to a stimulus; but this very limited plan is nonetheless accepted
effortlessly as an aspect of the continuing Self and it can be recognised
as such if the process is brought to a sharp focus of consciousness.

It may be useful to recall that I am using the phrase "the idea of
the Self" to reflect the Self as established at a given point in time,
with all that has ever happened to it so far that has left some continuing
mark, including its bodily history and attributes and all its past
thoughts. I distinguish however between this total stored idea-complex
and the idea evoked on any given occasion. In any one situation
naturally only one aspect or profile of this Self is recognised, the
"evoked idea"; but, as we have already seen, it is recognised as a
sign of an inexhaustible whole, built up from the superimposition of
all past recognitions of the Self or parts or aspects of it over a
lifetime. Moreover insofar as this Self included personal plans or social
roles not yet acted out, it is an "anticipatory Self, it exercises
constraints on behaviour in the future and thus indirectly extends on
into the future. But it does not include the imagined plans which the
mind is entertaining but has not yet adopted. These are still loose,
as it were. Once the situation in which they emerged has passed by
(and assuming they were not adopted) they become merely aspects of a past situation, part of the scenario in which a different plan was actually adopted and sealed into the Self—though the mind's thinking about them can also be recollected as part of the actualisation phase of a wider purposive cycle.

Ordinarily no trivial decision is brought to a sharp focus at all; that is, our recognition of what is happening is not raised to the level of a predicative system. The mind automatically explores along various tracks the associations that the imagined plan arouses in this context and if it encounters nothing of interest (no area where the thresholds of association are unusually low) the action follows and the whole episode fades immediately out of mind. But if the plan stirs up strong emotion, or if it encounters some incompatibility, the focus of attention begins to close and the plan emerges into full consciousness.

If there is an incompatibility, it will be between the imagined future plan and the more general profile of the continuing Self which comes to mind in the context. It will be a logical incompatibility of the kind considered earlier: the imagined plan and the anticipatory Self each imply different values on a particular register at the same time and so they cannot fuse together. This sort of conflict seems at once to cause the thresholds to be lowered and the mind to pay closer attention.

An apparent logical incompatibility can sometimes be removed on closer examination when the context is filled out: it might for example seem impossible for an object to be both round and vaporous, but closer consideration could show that in an astronomical context at least (and perhaps in others) the two attributes are not incompatible. Again if the imagined plan is that of myself flicking a crumb from my sleeve, one aspect of the continuing Self as it emerges in this situation may be a plan of myself as a man with good table manners. Are the two compatible? The answer tends to depend on the detail of the situation. If I am sitting at table at a formal dinner party they probably will not be; the urge to brush off the crumb will probably be resisted and this imagination replaced by another—perhaps of myself carefully and
surreptitiously picking it up and putting it on my plate. If, on the other hand, I am eating a sandwich on a park bench by myself, there will probably be no incompatibility; the action will follow swiftly and in all likelihood below the full focus of consciousness.

As this example shows, when an incompatibility exists and seems inescapable, the mind looks for an alternative imagined plan which can more easily be accommodated to the continuing Self (as it here emerges). It chooses between the two by imagining and balancing the consequences of each (that is, the development of each in its scenario) in the scales of pleasure or pain, gratification or discomfort. The choice may be one of evils, but predictive necessity may allow no scope for any more attractive course.

We have already noticed how the mind is constantly and automatically making predictive imaginations by extrapolating from the present situation in the light of what it knows about the world. This process of predictive imagining includes the behaviour of the Self, predicted on the basis of the profile of the anticipatory Self that emerges in the situation. If the immediate predictions do not work out favourably, the mind not only imagines more alternative future scenarios and plans resulting from alternative courses of action it can take; it can also narrow the focus and work out those it has already imagined in more detail; furthermore it can give more attention to the profile of the anticipatory Self, relating it more closely to the situation and filling out the contextual detail. As the contextual perspective changes, so automatically does the profile of the anticipatory Self. And these changing profiles are not always consistent with each other; we are far from being perfectly integrated people.

Thus when I first see a tiger in the distance advancing towards me, the profile of the anticipatory Self that emerges may be that of Self valiant; and in the radiation of associations from this I may find myself imagining future plans to fit on to it which feature myself walking boldly past the tiger, looking it in the eye. As I feel out the contextual detail, however, both in the imagined future situation and in the present perceptual situation (these being the two focal centres of my
consciousness) I find predictive detail accumulating which gives a high value on the aversion register. In the changing situation I find a new profile of the continuing Self emerging, that of Self prudent; and to match it imagined plans in which I hide behind a bush or a rock as the tiger goes by. Further consideration however still leaves this as anything but an attractive wish-fulfilment image. All of a sudden a different profile of the continuing Self emerges, that of Self getting somewhere else quickly to avoid danger — and to match it a plan in which I run like mad. This image, in all likelihood, will be accompanied by a rush of emotion, associated with a direct threat to essential variables, which sweeps away the other imagined plans and spills over precipitately into action.

Alternatives and Compatibilities (2)

A further extension of the thought experiment of the traveller to bring in more complex problems of choice.

This process of self-creation through choice is clearly of so much importance that it may be useful to consider a different example of the way in which a man confronts himself with alternatives and decides between them. Let us go back to our traveller walking through the hills. As he comes round the shoulder of a hill he sees lying to one side of the path at the bottom of a slope the crumpled figure of a young man with a motor cycle lying nearby. His first reaction is no doubt to imagine a goal image which features himself down at the bottom of the slope investigating what has happened; and this is almost automatically extended by a causal chain — here literally a chain of steps — picking out a way by which he could reach the spot, thus becoming an imagined plan. This plan is in fact an aspect of a normal prediction scenario such as the mind automatically casts forward in every situation. In a dynamic situation the tendency is for predictive images to come first and for the mind then to pick one as a goal; while in a static situation the wish-fulfilment image comes first and the mind then looks for a causal chain leading to it. In the present example either could come first; the traveller's mind will almost certainly envisage him going down to see what has happened, partly because that is one of the most obvious predictive possibilities and partly because such a situation naturally
wakens curiosity in most human minds and makes it an object of wishfulfilment to find out more.

At this stage, however, as his imagination begins to fill in contextual detail, his mind may develop a number of alternative courses, each represented by an imagined plan with an associated emotional colour yielding a value in the register of gratification and aversion. They are disparate images relating to different time spans, and with varying degrees of compatibility with each other. One might be a short-term plan of himself helping the young man, which might be accompanied by an emotional tinge of concern and sympathy. This might be developed into a longer term plan of himself helping the young man to the nearest farmhouse. There might be a short-term plan related to the idea of Self squeamish at the prospect of blood; or of Self helpless and a bit frightened; or of Self not wanting to be bothered. These latter are perhaps to be regarded as predictive or contextual elaborations of the original plan and scenario, rather than new plans in their own right; but they can powerfully affect in particular the emotional coloration of the traveller's experience.

Development in detail of the plan involving practical help could lead to the prediction of much time, effort and trouble being devoted to the task once it was embarked upon. This in turn could yield a high value in the aversion register which could begin to outweigh the initial feeling of concern and sympathy; it could then lead to a search for a practicable scenario with a plan for the traveller which avoids his getting mixed up with the accident. He might, for example, retrace his steps for a few yards and take the other turning by which he could still reach his destination without much of a detour. Then no one might know that he had ever passed this way.

The decision would now tend to resolve itself into the choice between these two incompatible imagined plans of longer span. If the traveller is one type of person the idea of the more cowardly course might immediately induce an emotion of shame or guilt yielding a value in the aversion register sufficiently strong to settle the choice without further ado. Shame and guilt are specifically feelings which relate
to the possible or actual betrayal of accepted long term roles or
plans respectively of the continuing Self. Another type of person might
however hesitate longer; and the choice would then have to be settled
by developing in more detail the profile of the continuing Self on which
the imagined plan would have to be fused. This process could bring to
the surface of consciousness the associations which earlier produced
at a subconscious level the rush of feelings of shame or guilt.

So far all the decisions the traveller has been taking on his way
have been related to the sub-plans of various spans within the over­
arching plan of himself making his way to his destination. This longer
term plan has never been in question as representing in this general context
the relevant contour of the anticipatory Self. Now, however, he is faced
with an imagined plan which is irreconcilable with further progress
towards his destination, at least for a considerable time. He is anxious
to get there quickly and so this prospect immediately yields a value on
the aversion register. He may have a strong wish to help, however,
either out of simple concern, which makes it an object of desire to go
and help, or out of a sense of obligation.

Now the emergence of a sense of obligation into his consciousness
means that in the developing situation new contours of the continuing
Self have come, as it were, into view. Hitherto his journey-plan has
been the plan of longest span involved in his decisions. But when he
is faced with a course which cannot be accommodated with it, he has to
look to a plan of still longer span and greater generality. For this is
how the mind works as a regulator, bringing in the longer span profiles
to effect choice or reconciliation when in the shorter span we are faced
with irreconcilable alternatives, each of which has a strong claim.
That is to say, the hierarchical level is raised; more general con­
siderations are brought into play.

In the present case these considerations may be of three different
types, in ascending order of generality: How important is it to the
traveller to get to his destination quickly? What will other people think
if he takes the more cowardly course? And what would it be right for
him to do?
To deal with the first question he imagines the scenario resulting if he does, or alternatively does not, arrive in time at his destination. Perhaps a number of people are assembling to meet him. The profile of the continuing Self, reflecting decisions already taken and so far followed, is one that includes the idea of himself there among them. An opportunity in his career may be missed if he fails to turn up. Thus the imagined plan of himself helping the motorcyclist is incompatible with the profile of the continuing Self that emerges in this context.

If he turns to the other course, however, he is up against the second question. If he leaves the man lying, someone may get to hear of it, he may be found out and in that case he will be despised and ostracised; this again is a powerful aversion image – for another of the plans of the continuing Self is that of himself in a social role as a man well thought of and of good repute; and it involves a sense of shame even to imagine himself in the position of being ostracised.

Perhaps here the predictive calculations are reassuring; it is misty, no one is around, he would not have been expected anyway to take this route. But still the third question remains to be faced. Would it be right to leave the man lying, even if he could get away with it? If he goes to the man's assistance he may do himself harm materially, and it is unlikely that others will ever hear of the virtuous deed. Yet the plan of being virtuous yields a certain value in the scale of gratification; while even to think of the alternative yields a sense of guilt. As this implies, there is in our traveller a further long term plan of the anticipatory Self, that of Self kindly, compassionate and helpful to his neighbour; and any imagined plan incompatible with this one provokes a sense of guilt. Shame and guilt shade into one another, but broadly shame is the painful emotion of finding oneself an object of contempt or derision to others; while guilt is the painful emotion provoked by the sense of having failed oneself. In the first case we have an imagined or actual plan which is incompatible with a profile of the continuing Self reflecting an adopted social role. In the second case we have one which is incompatible with a profile representing one's own most fundamental personal plans or ideal roles, the last range of the contours of the Self.
There are two types of these fundamental unifying plans, first those which reflect the body and its needs for survival, and, secondly, the most general plans of the anticipatory Self as a member of human society. The latter may be plans first adopted in the earliest years and reflecting a child's early identifications of itself over against parents and others. These bring with them (on the Freudian hypothesis) associations of scenarios in which "introjected" punishing figures exact painful retribution for departures from the indicated plan; and they also bring with them, on this hypothesis, plans of rebellion and guilt like that of Oedipus.1

To adopt any new plan which is incompatible with any existing plan of the continuing Self is in a sense to damage the integrity of the Self. If the traveller has set his mind on playing his part at the meeting to which he is going, any decision which means that he will not get there is in a real sense an amputation of part of himself — still more so if it means sacrificing a significant opportunity in his career. But this is still the sacrifice of a relatively short term plan, whereas to lose his reputation among his associates is to damage a long term plan of the anticipatory Self; and to do something contrary to his own self-respect is in a fundamental way to damage his integrity.

To abandon a short term plan usually means abandoning it for good, if only because of the effect of the lapse of time which changes the situation. If our traveller starts to go to the injured man's help, but then abandons the idea and takes the other road, it will soon be too late for him to change his mind again, and the plan will then have been abandoned for good. In taking this step he will also have betrayed a generalised long term plan, that of Self as Good Samaritan, kindly and self-sacrificing. Such a betrayal will weaken the long term plan, and a continued series of betrayals is liable to lead to its total abandon-ment. But an isolated betrayal, or indeed several such, need not have this effect. They may lead instead to an access of guilt and remorse.

1. These ideas are further discussed in the sections on "The Origins of The Self" and "The Psychology of Wholeness" in Chapter IV.
which tend to reinstate the long term profile as a wish-fulfilment image and can only be appeased by its conscious readoption and reincorporation into the Self through a resolve to do better next time.

Sometimes an individual, when faced with a choice which seems to imply some betrayal of one of his longer term plans, may wish to make it clear to others that he is not really giving it up at all; and to do this he may perform his adopted plan in such a way as to distance himself from it, to show that he is not fully committed to it in all its apparent implications. This is the phenomenon of role distance as described by Erving Goffman.¹ An adult may, for example, join in a childish game with an elaborate jokiness designed to signal that he has not really abandoned the generalised plan of being an adult. The distancing of his behaviour cannot alter the fact that he has adopted this particular plan and is going through with it; but the manner he adopts in performing it constitutes a message in a code well understood by others around him, the effect of which is to make it clear that the generalised longer term plan, which he might seem to have abandoned because of its apparent incompatibility with this behaviour, has not been abandoned at all. In other words he is not really off his nut.

On other occasions an individual may be forced to abandon a major long term plan, not for any reason of his own, but because the world in which he finds himself has changed and he can no longer imagine any feasible scenario in which the role giving effect to this plan can be realised. This is the experience of loss or bereavement, one in which the established wholeness of the idea of the Self is damaged because, as it were, of a gap which opens up in the environment, making it impossible any longer to sustain what has been a major element in the structure of the anticipatory Self. Bereavement in this sense² is the counterpart of self-betrayal; but in the one case the damage to a person's integrity is externally caused, while in the other it is self-caused; and the accompanying emotions are correspondingly different.

Emotion, Desire, Aversion

An examination of the nature of emotions and of the way in which they affect the taking of decisions.

The analysis made so far of the way in which the mind makes decisions, annexing new plans to itself, suggests that ultimately it is the pull of emotions which determines choice. We have now to consider more closely what emotions are.

All mental life is accompanied by a certain quality of emotion. Every abstract cell of thought or association appears to be characterised by a specific tinge and intensity of mood quality, as every visual cell appears to be characterised by a specific tinge and intensity of colour, and every aural cell by a specific tinge and intensity of sound quality. And this quality of mood in turn appears to be analysable as the combined precipitate of the particular cloud of associations attaching to the cell but not individually recognised, just as the sound quality is analysable in terms of the unheard overtones accompanying it.

Emotion is related to mood values (as I use the word) in the same way as harmonies and harmonic progressions are related to the notes of which they are made. Whereas a mood value is an attribute of a cell of thought, an emotional value qualifies our recognition of a predicative complex or system; it is made out of the individual mood values by means of a sort of sustaining pedal effect spread over the system or sub-system as a whole. The mood values of individual cells – as conveyed for example by individual words – are sometimes distinguishable from each other in retrospect, but as they are apprehended their contributions are merged in a flux of emotion. The harmonic quality and intensity of this flux are endlessly changing. For any given system at any time they have specific unrepeatable values dependent on the precise mix of associations evoked at that time. The same idea realised on two different occasions may have a very different emotional accompaniment on each occasion, just as the same view seen on different days will always show differences in detailed colour values. Even on the same occasion, as the mind develops contextual detail bringing in more and different associations, so does the emotional tinge tend to change. I may dwell at first with
compacency on the prospect of hiding behind a bush while the tiger goes by, but as my mind develops contextual detail the complacency may give way to panic. ¹

As every emotional flux has specific unrepeatable values, it is strictly unique. However we are able to identify similarities between emotional experiences and hence to attach labels to broad categories of emotion — like rage, fear, anxiety, depression — even though we cannot readily draw a boundary between, say, fear and anxiety. In the same way we can distinguish broad kinds of colour — red, green, pink, and so on — but we cannot readily say where one shades into another, let alone define colour harmonies with precision.

We classify emotions not only by their type, but by their intensity; and we can also classify them by the values they yield on the registers of desire and aversion, pleasure and pain. Every emotion tends to involve an urge to maintain a given situation, or to seek a particular type of situation, or to avoid or escape from a particular type of situation. This is to say that each emotion tends to be accompanied by a lowering and raising of the thresholds of association in particular directions.

Our perceptual consciousness may be accompanied by components of physical pleasure or pain which are distinguishable from strictly perceptual qualities such as those of colour or sound or touch. We can perhaps best regard them as values derived from the same base of experience as strictly perceptual qualities but classifying it differently in a register of sensations of physical well or ill being which merges into our classification of emotions without any sharp break.

Our thinking about a wish-fulfilment image, whether it is a glass of beer or a well-paid job, is marked by a tinge of emotion, varying with the image and the context, which is classified both as pleasant and as a desire. We speak of a desire as always being directed towards an object of some kind; but it is also a particular kind of emotion. All emotion, as we have seen, is accompanied by the lowering of thresholds to association in a certain way, but a desire is accompanied

¹. See the section "Understanding a Sentence (9): The Harmonic Flux" in "The Grammar of Language".
by the canalisation of association in a very specific direction. As soon as the mind, from the general drift of free or predictive associations, concentrates on a particular wish-fulfilment image, we recognise desire. Consequently the imagination of new plans tends always to be associated with desire in one form or another, or correspondingly with aversion in one form or another.

Ordinarily the mind, through the process of free association, seeks out what it wants, not what it dislikes. However the normal process of predictive imagination may lead in some contexts to aversion images, representing situations to be avoided. The mind does not simply avert its attention from them; this could be dangerous to the essential variables and consequently would not be conducive to efficient regulation. If I see the tiger coming down the path, the idea of the tiger, and the imagined plan leading to a fatal encounter between the tiger and myself, remain continuously as units within the span of my attention. The thresholds are lowered to this extent towards an aversion image if it appears to represent a real threat; but for the rest the raising and lowering of thresholds is such as to enable the mind to seek, not a plan leading to encounter, but a plan leading to escape. My mind is concentrated marvellously towards any plan which leads out of the present situation; it averts attention from any plan that leads towards the aversion image. At this stage therefore it does not have a specific goal; it has a specific aversion and in such circumstances almost anything else becomes a goal. The attention is focussed in part on the aversion image but in order, as it were, to create a ring fence around it and deflect attention from a plan leading in the forbidden direction. Thus the normal effect of an aversion image is to lead rapidly to the identification of an alternative goal which then becomes the object of positive desire. In the instance of the tiger the negative emotion of fear gives way to the positive emotion of longing for the safety of the tree for which I am now running. At the same time the negative emotion and the aversion image which inspired it remain part of the mind's consciousness, ingredients in the system which is at the focus of attention, at least so long as the danger remains.

When a particular plan is adopted from desire, not predictive compulsion, the adoption is marked by a specific tinge of satisfaction,
and this may continue steadily or intermittently as we monitor the plan being successfully acted out — that is to say, as we recognise that our perceptions in the Here Now are effectively sealing it into actuality. Thus if I move from wanting to eat that delicious looking melon to actually eating it, the plan as originally imagined is matched to the feedback of sensory impressions. Hunger is replaced by gustatory satisfaction, a state with a different specific emotional tinge (and one which might for instance be shaded on this particular occasion by disappointment that the melon does not taste quite as good as it looks).

The forced adoption of an unwelcome plan, as when the boat sinks and we have to swim for it, is marked by pain or distress, which continues, whether at the focus of consciousness or as an ingredient of our consciousness of something else, for as long as the unwelcome plan continues. If it is a long term role — if, for instance, I lose my leg and have to adopt a one-legged plan for the rest of my life — I may however become reconciled to it as part of my continuing Self. Then, although it will colour my awareness in many contexts, as part of the state of my body, it no longer in most contexts carries an exceptional emotional charge.

Both satisfaction and pain, however, compel attention if they are intense, and thus ensure that the plan to which they relate figures prominently in the mind's trains of thought at the time they are felt. Though their objects are present rather than imagined in the future, and they can therefore no longer be classified as instances of desire or aversion, they still have an effect in adjusting thresholds towards maintaining, or escaping from, the plans to which they relate. But they are accompaniments of a monitoring process that checks the progress of a plan, rather than of a selection process which leads to the adoption of a plan, — that is, of the phase of actualisation (monitoring and action) in the purposive cycle, rather than that of purposive model building or that of decision.

In retrospect, when a desired plan has been successfully acted out, the mind may yet return to dwell upon it from time to time, experiencing now a different kind of pleasure, or nostalgia, leading to the lowering of thresholds in the direction of its repetition, where
This is possible, or otherwise, where this is not possible, in a more
generalised way towards the adoption of plans like it. Similarly when
there has been a failure in acting out a plan once adopted, the mind
may dwell on the past failure with a different kind of distress. This
may be frustration or shame or guilt or remorse, leading in turn towards
the re-emphasising of the type of plan which last time was frustrated or
betrayed. Thus if I break my resolution to give up smoking for the New
Year my remorse may yet reinforce the general long term resolution to
give up smoking and lead me to try again rather than abandon the whole
idea. On the other hand in different circumstances looking back on
failure in the past may lead to an indignant resolution not to try that
kind of thing again. All these processes are characteristic of the phase
of readjustment in the purposive cycle.

In many descriptive models of the mind emotions, or alternatively
"drives" or instincts associated with certain emotions, are identified
as providing the "motor energy" of the mind. Sometimes a list of
fundamental drives or instincts is worked out - which varies considerably
with the model. Sometimes they are identified as differentiations of a
single central drive ("horme" for McDougall, love for Suttie), sometimes
as differentiations of two central drives, as with Freud's Eros and his
death-instinct. The model I have been elaborating, however, does not
conveniently lend itself to this sort of interpretation. The emotions
accompany and reflect adjustments in the thresholds of association; and
a powerful emotion reflects a rapid and widespread adjustment. But it
does not follow that the emotion bears a causal relationship to this
adjustment; rather the converse; it is a description of the adjustment
rather than its cause. On this model the mind is conceived as a regulator
which, by the cumulative application of inbuilt rules in dialogue with
an input in the form of regularities imposing themselves from the
environment, reduces the chaos of potentiality to a series of discrete
systems at the focus of attention, making a continuous succession during
consciousness. This process leads to the imagination and adoption of
personal plans, each involving a series of physical actions and sometimes
mental resolutions, and abutting (if successful) in the achievement of a
goal or the avoidance of an object of aversion. What causes this to
happen is ultimately the set of rules inbuilt in the gene pattern as
this is given definition through dialogue with the impinging

1. This does not however affect the fact that it is ultimately the
balance of emotional intensities which finally determines what
plan the mind decides to adopt. This point is discussed in the
next section.
regularities of the environment.

It is difficult and perhaps impossible to disentangle with any clarity what the inbuilt rules are. They contribute to the formation of a whole, which is the regulator, the mind-manifold, with all its threshold settings as they stand at a given moment; and it is hardly possible to distinguish the extent to which the end-result is the product of heredity or of environment. The attempt could be compared with the attempt to distinguish with precision, when looking at a landscape, the contributions of the original composition of the rocks, the eroding effect of ice, wind and water over millennia, and the effect of plant growth (itself determined in some degree by climate) over millennia in determining the ultimate form of what we see. Without entering into the controversies which rage over the general issue of the effects of heredity and environment, we can observe that it is certainly possible to identify certain broad patterns of threshold settings, like certain broad features of the landscape, as falling in recognisable classes—food-seeking patterns, for instance, which we class as characteristic of hunger, or U-shaped valleys which we class as characteristic of erosion by glaciers in a past Ice Age. The most natural way to categorise the patterns of threshold settings is by the type of goal towards which they bias the mind—food, for example, or aggressive action against another, or flight, or rest as the case may be.

To some extent however these classifications are arbitrary, or related to specific contexts, which is why they tend to vary from one psychologist to the next. They are descriptions of particular types of patterns, but the patterns to which they refer are not in fact sharply segregated into groups; their variations are continuous and they shade into one another as colours do, so that it is a matter of opinion and context where exactly blue ends and green begins. What provokes a particular type of pattern moreover is not a particular type of object, but a particular type of object in certain appropriate conditions—edible objects, for instance, when the body has been deprived of nutrition for a period. We have to do not with an autonomous drive that is waked or lulled in different circumstances, but with a description, a coding, of a particular type of adaptation to the environment. It is true that there appears ultimately to underlie all these adaptations a tendency
for the organism to maintain its essential variables within the values which are conducive to health and survival. But this end may be served, even in the case of a single variable, like that of the calorie intake, by a great variety of different patterns of threshold settings, different "drives", different emotions in different circumstances. A descriptive model of the type we have been elaborating is that of an open, self-regulating system, with an input and an output of both matter/energy and information. It has no need for "drives", instincts or emotions as sources of motor energy. They are labels for types of constellations of threshold settings, or rather for the codings through which these constellations become available to consciousness, as single values in the harmonic register of emotion, each representing the precipitate of a cloud of associations and/or sensations.

The Conflict of Emotions

When the mind is in a situation of choice or indecision, it may be confronted with a number of goals and aversion images and with various imagined plans associated with them. A plan, it will be remembered, includes the goal image, but also includes a causal chain, of greater or less conductivity or probability, leading from some possible action or series of actions by the Self in the present situation up to the goal. A goal image in isolation from a plan is hardly conceivable; even the remotest wish-fulfilment image, as soon as it becomes an object of desire to the Self, must ipso facto be brought into relation with Me Here Now; but in such cases of remote possibility the causal chain is no more than a vague link of sequence which has no significant conductivity to purposive thought.

When the mind is faced with a choice between several courses of action, the span of attention includes the various plans corresponding to these courses, each forming a unit or sub-system and each invested with a certain tinge of emotion and a certain degree of desire or aversion. If the same plan is related in different ways to different aspects of the anticipatory Self, it will be associated with a different emotional tinge in each context. The attention will also include some realisation of the relevant contours of the anticipatory Self, in relation to which the desires or aversions emerge, but these contours
are normally much more generalised than the imagined future plans. For example, I may have a sharp imagined profile of myself owning the car which I am looking at in the dealer's window. But the relevant profile of my continuing Self is a more general idea, relating to the state of my bank balance, my financial prospects and other calls on my money. It may take a good deal of contextual elaboration to get a precise profile out of this. When the mind is facing a choice between various courses, the attention may shift about, concentrating on each imagined plan in turn in its different contexts as a separate system, but the total situation will always remain present as the context or suprasystem in which the system is realised. At such a moment the other courses may have sunk out of individual consciousness altogether, but they will still be contributing as associations to the emotional tinge of the experience; (reverting to our other example, my anxiety about the tiger will continue as an emotional undertow in my consciousness even when my mind is concentrated on how I am to climb the tree of refuge – and not least if I am uncertain about how good tigers are themselves at climbing trees).

It may be that in a situation of choice a man is faced with two or three alternative plans which are all desirable, all mutually exclusive, and none of which have any significant negative emotional tinge. The simplest example of such a situation might be that of choosing between several different cakes on a plate. In this situation a man decides which he likes most; he simply balances the appetite awakened by each against the appetite awakened by the others and chooses the one which has the strongest pull. The mind appears to have some means of evaluating and comparing quantities of appetite or desire, even when the quantities are evoked by dissimilar objects. If, for instance, in addition to choosing between the cakes he has a further course open to him, also mutually exclusive with the others, of catching the early train home, he is quite capable of balancing this course with the others – though admittedly to match like with like is easier and quicker. It is significant that he is likely to balance two courses first, that of eating any of the cakes and that of catching the train; then only if he has once decided for cake will he close the focus of attention and choose between the different cakes available. Alternatively, if the
choice between the cakes is easy, he may decide that problem first and only thereafter turn to the other question before him.

In other words where we have a number of choices we usually break them up into a series of choices between in each case a relatively small number of courses, as this makes the balancing and comparing easier. In any given situation we can always group the courses arbitrarily (though usually, so far as possible, we match like with like) and then compare the winners of each group, as it were, to decide the ultimate winner by a knock-out process. Where the choice is difficult we can only compare two alternatives at once; and it seems probable that this is always the underlying process. It is only the span of memory which in easy cases enables us to bear in mind three or four options at once and decide which of them carries the most weight, just as the span of perception enables us to see four straws together and decide at one glance which of them is the longest.

The train option in our present example, however, does introduce another factor, that of balancing a positive against a negative pull. The attraction of catching the train is balanced by the negative tinge of its implication, the deprivation of cake; and similarly the attraction of any cake option is balanced by the negative tinge of missing the train. In fact our first example was misleading. There is no course that does not involve both negative and positive emotions, for the reason that each imagined plan is itself a value on the register of what I am to do next, and thereby, if it is to be realised, excludes all other values. The mind evaluates each plan in succession in the context. The adoption of any one plan always means abandoning others. Consequently, insofar as any plan exerts a positive attraction, an equal and opposite negative pull is attached to any alternative.

This is the converse of the fact that if a plan leads to an aversion image and so provokes a negative emotion, an equal and opposite positive emotion is attached to any alternative. In any given situation of choice between the two courses, therefore, the attraction of any one course is diminished by an amount equal to the attraction of the other. If there are six mutually exclusive courses the attraction of one is diminished by an amount equal to the attraction, not of all the other
five together, but of the most attractive of them; and initially the
mind may be uncertain of this quantity until it has considered each
individually and, if necessary, conducted eliminating rounds to reduce
the number of contestants. If the tiger is after me and I have to choose
between jumping into a river and climbing a tree, the attractiveness of
each of these courses is increased equally by a positive charge which
is the opposite of the negative aversion inspired by the tiger. The
charge is not however multiplied when there are two courses, it is
merely available and held in suspense till the elimination between the
two is hurriedly decided on other grounds.

Now if my impression is that tigers like climbing trees but do
not like jumping into rivers, this may affect my choice. It will do
so however not by altering the aversion charge, which remains the same,
but by altering the probability of the tree course being a true alternative,
a true escape from the tiger. To the degree that the probability of
the plan is reduced, its capacity to carry the aversion charge is
correspondingly diminished. The probability is simply the predictive
likelihood that if I adopt the plan and take the appropriate actions
the scenario will unroll itself in the manner predicted and abut in
the wish-fulfilment goal that I have in mind. Every plan depends on
a predicted scenario and therefore has a certain greater or lesser
degree of probability, that is, of conductivity to purposive thinking.

As this indicates, one of the main tasks of the mind in a situation
of choice is that of sorting out the true alternatives, grouping them
correctly and getting the groups in the correct sequence. What are
the alternatives in any situation will depend on the context, which
in turn will depend largely on the values yielded by the mind-manifold,
by He Here Now. This applies in a physical situation when I am
confronted with deciding on a route along a number of branching paths;
the alternatives and the sequence in which choices of alternative
turnings have to be made depend largely (though by no means entirely)
on my starting point, the place where I am now, which sets the
perspective for the whole operation. But the same applies also in a
more abstract situation, for example, when I am trying to fit together
a number of conflicting or partly conflicting activities, as I plan
what I am going to do during the day ahead. The first pair of
alternatives may be that of either lying longer in bed or catching the earlier train. If I catch the train I have the further alternative of doing some shopping before going to my appointment or getting through some work in my office. If I lie in bed and catch the later train there will be no time for shopping, and so this choice does not arise; in the shorter time available, however, I may have the choice between doing a lesser amount of work and having a cup of coffee. If on the other hand I lie in bed longer still and miss the later train, I will not be able to keep my appointment at all. I could perhaps telephone through and change the time; but this might annoy the man I am meeting and diminish the likelihood of a successful meeting. And so on. The mind's task is to decide which courses are alternatives to each other and group them together; in each case, with Me Here Now, they represent together a context of choice in which each course represents a different possible value for one variable, that of what-do-I-do-next-in-this-situation. Each indicates a different possible state to which the system could move.

Having grouped the alternatives, the mind decides between them by considering them individually in the way we have already examined, assessing their positive and negative emotional charges, conducting eliminating rounds if necessary, and adopting the plan which yields on balance the highest positive charge. If none of them yields a positive charge, if the man is confronted with a choice of evils, then he adopts the course with the least negative charge. In a situation of sequential choice, as when a man is planning a day's activities ahead, he will proceed to examine and assess the further implications and choices with which this course confronts him before coming to a final decision. This process of elaborating implications can also be applied to the other initial alternatives and the effect may be to alter his initial assessment of the emotional weighting of each. As he follows out the implications of further choices, the cloud of associations evoked by the role concerned is developed and extended, with the result that there is a change in its emotional tinge.

It is clear that a situation of sequential choice, which is the normal situation of our lives, rapidly offers an extreme complexity of
alternatives and implications, possibilities and impossibilities. The function of logical reasoning is to pick a path through these branching possibilities. Thus logical reasoning depends essentially on disentangling what are true alternatives (and thus mutually exclusive values) on the register of what-do-I-do-next, and then following out the implications in terms of subsequent groupings of alternatives and subsequent choices. It is the mechanism of emotional weighting which makes it possible to achieve decision between alternatives. It is clear that the mind would soon be totally bogged down in a morass of alternatives if there were not some quick means of eliminating all but a few at each stage. In practice this elimination appears to be achieved in two ways: in the first place by a hierarchical grouping into longer and shorter term decisions, the latter being subsidiary to the former; and in the second place by the weighting of each alternative with an appropriate positive or negative charge, a mechanism which gives a direct answer with a minimum of delay in the great majority of cases. The exceptions are essentially cases in which either the emotional weightings are evenly balanced, or cases in which the longer term plans embodied in the continuing Self are brought into play.

A case in the first of these categories in fact tends to be transformed into one in the second category; because, as we have seen, where the pull of two short term future plans in relation to the continuing Self tends to be evenly balanced, the mind as regulator will bring in a longer term plan by way of contextual elaboration. In this new context the two imagined plans will themselves develop new associations and so yield new values on the emotional registers; and these can decide the issue. If I have to choose between an apple and a cream cake, the immediate emotional weighting may favour the cream cake so strongly that the issue is decided without further reference. But if the balance is at all even, it will take longer to assess the relative weighting of each, and this time will allow further associations to be explored (indeed more time is needed because further associations have to be explored to settle the issue). In particular in this instance association may bring the longer term generalised plan of Self slim and fit into play; and against this, while the plan of Self eating apple gives a positive value, that of Self eating cream cake yields a strongly negative value. Thus in the end I may decide for the apple after all.

Social Pressures and the Pattern of the Self

A brief account of the organisations and thought communities of human society and the way in which they affect the plans and social roles adopted by the individual.

Human beings can only live in cooperation with each other; and we have already seen that in trying to achieve our individual purposes we are constantly adopting social roles, the existence and nature of which are determined by the social environment in which we live. As I have already made clear, I do not intend to discuss the structure and process of society in the present study more than is necessary for my immediate purpose; but some reference to the shaping pressures of society is unavoidable in connection with the weighting of an individual's choices and the achievement of consistency between them.

If the mind's successive decisions are to regulate effectively the way in which an individual reacts to his environment, it is essential that they should not be constantly contradicting one another. We have seen that broadly conflict is avoided by making sure that short term plans are accommodated to the longer term plans of the anticipatory Self. But these plans are often shaped in the main by social pressures; for if human societies are themselves to be regulated effectively some consistency has to be achieved not merely between the decisions that are taken by each individual on his own, but also between those that are taken by different individuals. Broadly this is achieved through what I have called thought communities, which shape and constrain the value systems of people who belong to them, because they provide the common coin of ideas - the thought currencies - in terms of which people take cognizance of the world, formulate their judgements and consequently locate their values.

A thought community is any group within which there is a differentiated circulation of ideas - a family, a school, a commercial organisation, a locality, a workforce, a scientific community, a language community, a nation, a civilisation. Such communities vary widely in size, in the sort of ideas they share, and in the intensity
of their exchange of information. Every adult in our society belongs to a large number of different thought communities, and virtually no two people belong to exactly the same set. But thought communities in their varying scope and generality form a loose hierarchy extending from the family to the civilisation; and when two strangers meet they can almost always quickly identify some currency of ideas they have in common.

What constitutes the common coin of a thought community is not a logically integrated system of ideas but, in T.S. Kuhn's terms as applied to a scientific community, a set of "exemplars" forming a "paradigm". It represents in effect a sort of macro-language in terms of which the world is divided up and understood; and its use can thus greatly accelerate the process of mutual understanding by comparison with what would be necessary if every detail had to be spelt out in a verbal language. The system usually includes a number of people - who may be living or dead, or even mythological figures - who are the reference personalities of this community, the known stars of this particular firmament.

One of the effects of intercommunication within thought communities is inevitably to produce a certain alignment of ideas and values among their members - an alignment at least of the terms in which issues are formulated and understood, even if not of the judgements made about them (there is always room for a wide range of what Erving Goffman calls "meaningful non-adherences"). But this effect does not in any case alter the fact that there are multitudes of thought currencies with their corresponding thought communities. The loose system of hierarchy by which the more general overlap the more particular may help to achieve a degree of alignment among those which are closely connected in subject matter; but the contingencies of life are constantly bringing people into contact who tend to see and judge the things immediately at stake in different terms, because of the different mix of thought communities to which they belong. The manager and the trade union negotiator are examples of people who inhabit different yet overlapping worlds; they have some thought currencies in common, from the language of the workplace to (it may be) their common support of the local football team,
but in nearly all cases they also belong to separate communities which see the world in different terms and carry different value systems — communities identified with class, educational background, party, neighbourhood, interest groups, recreation groups and so on. It is significant that when the values of the narrower communities clash, there is a tendency to appeal to the wider, more generalised values associated with the wider thought communities to which both sides belong — for example to the national interest or the values of "common humanity". In a given contingency a solution may then be found if agreement can be reached over a limited range of issues on what claims will for immediate purposes be accepted.

An analysis is presented in "The Grammar of Social Interaction" of the process by which a pedestrian and a motorist, coming up to a crossing at the same moment, might establish a sufficient understanding to avoid an accident. On the basis of this simplest and most transitory of examples the general conclusion is reached that if two people are to cooperate, they need to set up an organisation for the purpose; to set up an organisation they need to reach some agreement as to the ends it is to serve; to agree on certain ends is by implication to agree on certain values; and in order to agree on certain values it is necessary to set up an intercommunicating system which is in effect a limited ad hoc thought community. The agreement they reach need not imply any wide-ranging agreement at all between their personal value systems, it relates merely to "what claims concerning what issues will temporarily be honoured" — and these claims may include those of superior force. Nevertheless it does imply some limited overlap, and this suggests that when two people are in communication with each other in a contingency it will normally be much easier for them to identify common ground to provide the basis for cooperation if they already have membership of one or more thought communities in common.

If I speak of thought communities rather than, more conventionally, of social groups, this is because the conventional term tends to blur the distinction which I regard as extremely important between the thought community and the organisation. A nation, for example, is a
thought community, a state is an organisation in which individuals take part in their roles as citizens, judges, officials or whatever it may be. An organisation is a structure of paired, complementary roles, often hierarchically arranged, which serves for the achievement of certain ends. The players acting the roles can themselves be plural as well as singular (as with members of Parliament in the organisation known as the House of Commons); and still more often the players are themselves subordinate organisations (like the factories of a motor manufacturing firm) rather than individuals. An organisation however can only act through individuals or subordinate organisations and is not itself capable of belonging to a thought community, though its existence may generate one based on the individuals who have roles within it. An individual acting on behalf of an organisation can only agree to courses which are consonant with the constituted purposes of the organisation; it may be possible to alter or extend these purposes, but this can seldom be done easily or quickly. The organisation reflects through its constituted purposes certain values agreed between those who set it up, and it is limited to actions regulated by those values. It is possible for a single individual to set up an organisation himself and to retain all powers of decision in his own hands; but even in such a case he is dependent on the cooperation of employees who will be committed (even if they are slaves) only in the terms of some implicit or explicit contract.

The interactions of organisations with individuals and with other organisations, large or small, take place, like the interactions of individuals themselves, in the environment of a society which in general leaves free play to ecological forces but also imposes on them the ultimate constraints of a political organisation or state. The basic function of a state is to prevent conflicts in a particular geographical area from getting out of hand, and it does so by making and enforcing laws and judgements. This, however, it can only do in terms of some more or less explicit value system which determines the form and nature of its institutions; and such a value system can appropriately be described as an ideology.
Interactions between states also take place again in ecological fashion, subject to little regulation beyond what is imposed by the physical constraints of the world. Yet, to the extent that there is communication between these states and the people who inhabit them they form part of a wider thought community, a civilization, which develops its own common coin of ideas and a consequent system of values.

Over the span of recorded history civilizations — which correspond to "known worlds" — have spread and grown as conquerors have built up their empires and the strong have assimilated the weak. In every case, after a shorter or longer period, the empires have fallen apart; but in general, when an empire falls, the parts into which it disintegrates are larger than those which went before, and the known world which it has created remains to some extent in being as a system across which communication is maintained. Thus, partly as a result of technical development in the field of communications, the size of civilizations has generally tended to increase. Finally in the 18th and 19th centuries the empires of Europe overflowed into every corner of the globe and made of the whole world a single civilization, superimposed though it might be upon massive remnants of older civilizations. As political structures these empires disappeared with remarkable swiftness, but in terms of ideas the unity they created has in many respects grown stronger since 1945, as Western science, technology and communications have asserted themselves worldwide. Yet the resulting accommodation of thought patterns has been of a limited and unbalanced kind, for reasons which it may be useful to explore.

Historically it has been the function of religion in its broadest sense to develop and make explicit the ultimate coinage of binding ideas of a civilization, in terms of which people understand the world and form their judgements. Churches have existed as organisations to propagate ideas concerning the ultimate religious visions and values which the civilization should have. In practice there has always been fragmentation, scepticism and dissent. Not even the mediæval papacy was able entirely to dominate the self-expression and self-awareness of the civilization of mediæval Christendom. But in the past every civilization, when at its height, has had the self-confidence of its
own righteousness, and this has been reinforced by a religious system providing the framework within which the world has been conceived and outside which it has hardly been possible to think.

Our modern world civilisation, however, still very loose and fragmented, has not yet developed any religious orthodoxy of its own; and there is a major obstacle to any such development in the fact that over recent centuries in the West — and now across the world — science has gradually separated itself from religious myth and developed an independent momentum as the effective means of explaining the natural universe. But science itself is morally neutral. In driving out myth it has deprived religion of its most universal means of expression without putting anything in its place; for science cannot supply the function of religious myth in providing a common coin of morally unifying ideas. The acceptance of scientific interpretations of nature and of the methods of science, with all their accompanying fruits of technological achievement, has indeed had a major practical effect in unifying the modern world, which could not otherwise have become a single civilisation; but in moral terms our nascent civilisation is unified only by a shaky acceptance of certain ideals of human rights and democracy, essentially of Western provenance, such as are enshrined, for example, in the United Nations Charter; and even this is often no more than a lip service, supported by no coherent faith and at odds with such forces as those of nationalism and class war. With the general decay of religion and the competition of different religious claims (including those of Marxist "science") the foundations of most of our moral evaluations have tended to sink below the level of consciousness, to become implicit rather than explicit.

The foregoing analysis has inevitably been presented in an extremely compressed and dogmatic form; but it may be sufficient for illustrative purposes in the present context. If we return now to the individual we can see that the thought communities to which he belongs, or to which he has belonged in the past, do not directly determine the form of his personality, because they do not directly determine what plans he adopts; but their influence is considerable, because they do tend to impose their pattern on the organisation of his mind-manifold.
We noted earlier that the complex superposition of forms in the manifold was organised in two ways, by reference to a map of the world and history built up through an individual's life experience, and by reference to the signs and symbols of the codes or languages known to him. Certainly a person's mother tongue, with all the particular discriminations which it supplies or fails to supply (like the multiple discriminations concerning snow which are available to an Eskimo but not an Englishman), has an important effect in determining what he can most easily think. But apart from the ordinary languages he knows, the common coin of every thought community to which he belongs constitutes, as I have suggested, a macro-language, and this in turn influences the larger scale organisation of the manifold. The extent of the effect in every such case is determined by the intensity of the communication in this particular currency; while the interrelation of the effects of different thought currencies on the manifold is organised (so far as it is organised at all) by the broad hierarchical pattern of scope and generality into which, as we have seen, the thought communities tend to fall.

It will be seen that, while I fully acknowledge the existence of the shaping pressures of society on the individual, and while the model which I am presenting attempts to explain how they are brought to bear, I am far from accepting the suggestion of such as George Herbert Mead that it is effectively the social pressures of the "generalised other" which constitute the Self. I do not agree that "a person is a personality because he belongs to a community, because he takes over the institutions of that community into his conduct".¹

In each succeeding contingency of an individual's life the existing anticipatory Self, built up from past decisions related to past scenarios will play an important part in determining what plans he will adopt; but an equally important part is played by the way in which he interprets the world and so envisages the present scenarios.

1. "Self" in "George Herbert Mead on Social Psychology" (University of Chicago Press, revised edition 1964) p. 226. Some comments on Mead's views on the self are given in Appendix II to this study.
in which his present alternative plans are deployed. The coordination of an individual's shorter term decisions tends to be affected, as we have seen, by reference to their compatibility with longer term decisions, often taken many years before; and these longer term decisions again tend to relate to scenarios shaped by the ideas of broader thought communities of nation, language and civilisation to which the individual belongs. A modern Englishman many not be a Christian, but the broader ideas in terms of which he coordinates his judgements will inevitably be ideas shaped by the Christian tradition, even when they identify what he rejects rather than what he accepts.

In this connection we may note that an individual's personality has often largely been formed at its deeper levels by decisions taken in the past when he belonged to a different set of thought communities from those of today. The longest term plans of all may well be plans laid down in early childhood, usually in relation to parent figures, plans which, with their scenarios, are for the most part buried out of direct consciousness. Cases can easily arise in which there is conflict between what is submerged and what is consciously adopted, the pull of the unconscious expressing itself in an intensity and quality of emotion that seem inappropriate, or in what may seem to be irrational imaginations and desires distorting the conscious process. Religious ideas, as the ultimately coordinating ideas of a man's mind, often have a close association with patterns of love or hate, obedience and rebellion, towards parent figures established in childhood; and for an individual to achieve a reasonable degree of coherence of mind and personality it may become necessary to rescue some of these earliest layers of experience into the arena of consciousness.

It is important to bear in mind that the framework of a society is constituted not by its thought communities but by its organisations — including its political organisations — and the roles they create which individuals have to adopt. The role a man has in an organisation determines, in my terminology, the rank he holds in the hierarchy of that organisation. By contrast the status he is accorded by the people with whom he comes into contact, while it may take account of the rank
he holds in various organisations, is determined by the values of the thought communities to which these people belong, in combination with the unique contribution due to the nature and history of each judging individual.\textsuperscript{1} At the same time the roles that an individual adopts and the corresponding organisations that he joins will inevitably determine in part the thought communities to which he belongs. Furthermore the organisations are established and developed by means of constitutive and executive decisions; and these decisions have to be related to the values of common ad hoc thought currencies cobbled together by the cooperating individuals on the basis of their own value systems. In Erving Goffman’s words (which I have already quoted in part): “Together the participants contribute to a single overall definition of the situation and hence in my terms to an agreed scenario, which involves not so much a real agreement as to what exists, but rather a real agreement as to what claims concerning what issues will be temporarily honoured.”\textsuperscript{2} It is in the light of such definitions of the situation that organisations are constituted, roles are established, and projects are undertaken; and it is to such organisations, roles and projects that the plans adopted by individuals in pursuing their own lives have to be accommodated.

Ultimate Binding Ideas

An examination of the psychology of religion as expressed in terms of the model developed in this study, and with particular reference to the nature and function of “ideal” or “heroic” roles.

In the two concluding sections of this chapter I look more closely at two aspects of the working of the idea of the Self; first its relation to the “binding ideas” of religion, or its psychological equivalents, and secondly in relation to the meaning of freedom.

1. Cf. Ron Hare’s distinction between the practical order and the expressive order (“Social Being”, Blackwell 1979, pp. 4-5).

Historically it has been the function of religion in its social aspect to articulate and transmit the broadest values of the society it serves and in some sense to make manifest the ideal pattern of the society. General moral maxims in the form of rules like the Ten Commandments have often been part of the stock in trade of religion, but they are insufficient to express or relate much of the deeper complexities of the pattern of society, or the large part of that pattern which operates below the level of consciousness. Myths, as we have seen, whether in strictly legendary or in quasi-historical form, have served the purpose of expressing more effectively a sense of the contours of the Society's own continuing identity and providing ideal roles that, like personal plans, express not single values, but complex combinations of values embodied in single forms. Furthermore such myths have served the purpose of adding emotional weight to the attraction of the "good" and the aversion inspired by the "evil".

If religion is to be effective as "that which binds" a society or a man, it has to make its appeal to the members of the society by reflecting in some degree the unconscious as well as the conscious patterns of their minds. It can impose its own more explicit pattern only insofar as the individual finds it corresponding to something in himself and so can adopt it as a plan expressing his own anticipatory Self. This process involves his situation both as a member of a society with a collective past and future, and as an individual human being.

At times religions have adopted highly rationalised theological systems which provide a theoretically efficient system of regulation with clear distinctions between categories of behaviour, and a clear hierarchical system of reference to a higher level of generalisation when conflicts cannot be resolved at a lower level. In accepting a religion a man may adopt a whole system of this kind as part of his anticipatory Self. But the difficulty with such rational arrangements elaborated at the conscious level is that, as the historical situation

1. No disrespect is implied by the use of the word myth, which in its strict sense is a way of expressing the truth symbolically by means of a story.
changes, so the theological system, just because it is so clear and explicit, becomes harder to adapt to new patterns and circumstances. Human nature and human society do not altogether change and a great system like that of St. Thomas Aquinas, adapted to man's understanding of the world at one time, will always have relevance in another time if sufficient contextual elaboration is undertaken to make this so. But in many situations the relevance will be remote. Plans are related to predictive scenarios and insisting on a given plan may in some circumstances mean insisting on the interpretation of the world in terms of a given scenario. When man's knowledge and understanding of the world have changed, this can lead to a conflict such as Galileo encountered, which can bring a man to the alternative of abandoning the whole system on which his Self has been conformed, or abandoning the proven rules by which he understands the world. This risk applies not only to theologies based on the rational interpretation of revealed truths, but also to atheistic ethical systems (such as one based on the greatest good of the greatest number) as soon as they begin to concern themselves with specific contexts and actual situations.

There is an alternative, that of adopting entire the imagined personality of some heroic figure, historical or legendary, as the ultimate regulating pattern, an ideal or heroic role such as we have discussed earlier. The advantages of this method of regulating the system are greater than might at first appear. We have already noted that the mind has the capacity to create a coherent role from a few rules or indications, just as it can creatively imagine a curve uniting a few scattered coordinates. This is the capacity that underlies our adoption of idealised personalities.

Consider the idea of a young red-haired Russian-speaking telephonist. From these few attributes the mind builds somehow a coherent idea of a person. It probably assumes (because the social role of telephonist is normally filled by women) that this telephonist is a woman; it adds in other attributes and produces a particular logical form - a profile as we have called it - which is taken as the sign of a much greater though unspecified total complex. Corresponding to this capacity is that of imagining with facility a new profile of a
known person in a new situation. Such a recreation or extrapolation of the person in a new context will to some extent be arbitrary. As we saw in relation to ideas of my father, it will vary from one observer to another. But the realisation which it produces will nonetheless be far more subtle, complex and coherent than anything that could be built up from a descriptive list of attributes, however detailed. In particular, it affords far greater flexibility in adapting the idea of the person to a new context, real or imagined. We can imagine what he would have done, how he would have looked, with far more facility than if we had laboriously to deduce every predicted characteristic individually from some set of known past characteristics. And correspondingly if we look to such an ideal role for guidance in the complexities of life, we can often find it with much greater effect than if we try to apply some set of generalised moral rules.

It is relevant that the adoption of generalised plans taken from other people, such as parents or teachers or religious or legendary heroes, is part of the normal process of growing up and accounts for many of the earlier layers (including unconscious layers) of the idea of the Self in all of us. The anticipatory Self, providing as it does the projected continuation into the future of the plans we have already adopted, constraining our actions in accordance with long term purposes, is very largely an ideal Self. It does not reflect just what we are (though it has to accommodate itself to the hard facts of the environment as we know it, including the physical facts of our bodies and the historical facts of the past); it reflects what we want to be. The adoption of some ideal personality as the ultimate regulator of all our plans is therefore entirely normal and natural.

We have to bear in mind, however, that another part of the normal process of growing up is to discard, or at least dethrone, previously accepted ideal personalities. One reason for this is that an ideal personality, although up to a point much more flexible in its realisation in new contexts and its application in particular circumstances than a rationalised philosophy or theology, may be more restricted to a particular perspective and may lose its virtue and effectiveness if that general perspective is abandoned. Inevitably
it has, as it were, a narrower base. The philosophical or theological approach will at least attempt the greatest possible generality. Marxist philosophy (or science or theology, as it may variously be regarded) is founded on certain basic rules about the course of history derived from philosophical argument. Theology has usually been based on a cosmology (as for example in the first chapter of Genesis or the first chapter of the gospel according to St. John). As against this, the ideal person is always that of a man (or woman). However remarkable — even superhuman — he or she may be, he or she must have certain limiting characteristics which are not only those of basic features of human nature, but those of a time and place and a series of social roles. The great facility with which we can recreate such a personality applies within a certain range of experience, but usually not beyond. A Homeric hero can be vividly conceived in many circumstances, but he is not easily transplanted to modern London, whereas the philosophical theories of Plato or Aristotle can more easily survive the sea change.

Any great religion will tend to have it both ways. Marxism will supplement its philosophy with an infallible hero-figure like that of Lenin or Chairman Mao. Christianity, having surrounded Jesus Christ with saints and hierarchies, superimposes on the ideal role a great edifice of philosophical rationalisation, "that great panoply in which Dante and Aquinas walked entire" as C.S. Lewis called it. The Christian version of the ideal personality however does show important differences to which attention should be drawn.

In the first place the adoption of the ideal personality is absolutely central to Christianity. The New Testament is penetrated by the conviction that there is no salvation through the law, "the ministration of Death engraven upon stones"; and the alternative it offers is not any systematic philosophy at all, but that of putting on Christ, of being conformed to Christ, of believing not so much in a series of credal propositions as "on Christ", who is the Resurrection and the Life. This personality is not regarded, however, merely as a suitable crown or Jungian reconciling symbol for all the various plans which the Self adopts, harmonising them together. Christianity
makes the extremely radical demand that a man must die to his old Self altogether, before he can be born anew and "come in the unity of the faith and the knowledge of the Son of God unto a perfect man, unto the measure of the stature of the fullness of Christ".¹

Moreover to be conformed to Christ is not in effect to adopt any specific and therefore limited profile of human pride. It is to be conformed, not specifically to the carpenter and rabbi of Galilee, but to "the man for others", the man who said "inasmuch as you did it for the least of my brethren you did it unto me". A Christian, it may be argued, can identify himself with Christ only to the extent that he sacrifices himself totally and identifies himself with others; he has to sell all he has in order to gain the pearl of great price; and the ideal personality, it may be suggested, is therefore free of the limitations of perspective which apply not only to other ideal personalities but also, in the last resort, to all the philosophies as well. The corresponding drawback is that the role begins to appear more and more ideal, more and more impossible of achievement.

Note In connection with the Christian ideal role the question is often asked how far it is possible for men of later ages to know Jesus Christ at all, or even to be sure that he existed, when effectively the only information available about him comes from four short gospels written some time after his death and liable nowadays to be nibbled and shredded away by modern textual criticism, gospels which in any case leave great areas of his life undescribed. This is not the place for an attempt to answer such a question in detail; but it may be relevant to indicate the form which an answer might take that grows out of the arguments used earlier concerning the ways in which we create our own ideas of persons. The gospels, it may be suggested, are remarkable documents, providing us with information in a form corresponding much more closely to the pattern of our own ideas of people we have known than any long, detailed coherently rationalised biography would do. The gospels contain an astonishingly large number of brief, vivid vignettes of the man, his circumstances and his teaching, the teaching itself

¹ Ephesians 4, 13.
being reflected almost entirely in stories and parables, hardly at all in abstract generalisations. The 107 verses of the Sermon on the Mount in St. Matthew's gospel deal, on my count, with over 50 individual situations that can be separately visualised. There are considerable differences in perspective in the different gospels, and even minor inconsistencies of narrative. In all this, however, the material we have about Jesus resembles the sort of material our minds accumulate about people we have known in life, with its layer upon layer of relatively disconnected incidents and situations, and its lack, in the ordinary way, of any comprehensive historical sequence and rationalisation. A biography of its nature gives one view from one angle, but this is the sort of material from which the mind can best create its own profile of the man in any given situation. Admittedly one man's recreation of Christ will not be precisely the same as another man's; but it has been suggested on an earlier page that this is true anyway of all our knowledge of other people. The sheer copiousness of the gospel material, when considered in this light, is sufficient to ensure that anyone who knows the New Testament stories well can probably recreate Jesus in his mind, and so can know Jesus, much better than he can a contemporary public figure about whom he reads regularly in the newspapers; and again the copiousness of the material should be sufficient to ensure that, although different people will inevitably have different images of him, they will be recognisable and reconcilable images of the same man. The essential proviso is that they should base themselves directly and freshly on the gospels, not on selected recollections of anything from Sunday School hymns to Hollywood epics.

Duty, Desire and Freedom

This section undertakes an exploration of the nature of freedom in terms of the mechanism of choice elaborated earlier in the chapter. This establishes a basis for the further discussion of freedom and determinism within a wider framework in Chapter VI.
We noted earlier that in a situation of choice the mind would attach a different emotional weight to each of the imagined future plans which it was considering, and that the decision would appear to go in favour of the alternative with the greatest emotional weight or pull in the context. The actual emotional tinge of each plan, governed by the moving cloud of association which it provoked, was individual and specific to itself and the situation. But the mind seemed able to weigh disparate roles, like that of eating a cake and that of catching a train, in a single balance. That is to say, it would seem able to assign a value (in the context) to each of them in a single register of desire. Yet there seem to be two kinds of desire. To be free, on the face of it, is to be able to do what you want. And not to be free is to be prevented from doing what you want, as when you are locked in a cell and want to get out. But this leaves out of account the distinction between the pull of desire proper, which tends to be related to a short term plan, and the pull of duty, which tends to be related to a generalised long term plan.

Whenever there is a conflict between a long term and a short term interest we tend to feel it as a conflict between duty and desire. The difference in emotional tinge between the two can emerge even in so limited or trivial a case as that which we were considering of the choice between a cake and an apple. It emerges much more strongly in a case like that of the traveller and the crashed motorcyclist. It is to be noted, however, that whether a particular plan exerts a pull as duty or as desire is a relative matter and depends on the alternatives available. The traveller's desire to get quickly to his destination is felt as desire when it is balanced against his duty to go to the help of the motorcyclist. Earlier in the day, however, it may have been felt as duty when it was balanced against the desire to lie longer in bed.

It is possible to be faced with a conflict of duties, as with a conflict of desires, but this often resolves itself into a situation in which the lesser duty becomes a desire rather than a duty. I may for instance be in a position in which I ought to keep an appointment with the dentist, but, if I do this, I shall not be able to take my
sick child to the doctor. I will resolve the problem by a process of contextual elaboration. How urgent is my need for the dentist? Here I undertake a closer evaluation of the short term plan. I consider specifically, first, the degree of toothache—which is swung as an equal and opposite charge into the strength of my desire to go to the dentist (it is significant that the word in this context is desire, not duty). Secondly, I consider the embarrassment caused by cutting an appointment (in this context the word might be duty, not desire). Then I consider how sick the child is. Here I elaborate the predictive scenario unrolled from the child's symptoms and consider the alternative consequences of myself adopting different plans within it. Can my wife take the child to the doctor instead? Here I consider the predictive possibilities and then, if I conclude that she could do so, I match the plan of myself leaving her to do it with the plan of the anticipatory Self which might be labelled "Self helpful to busy wife", and I obtain a negative value. Assuming that the child is not very ill, the conflict becomes one between the more selfish desire to go to the dentist and the less selfish duty to help my wife, in effect between a shorter term and a longer term plan. Duty by no means necessarily wins; nor perhaps necessarily ought it always to win. If my toothache is bad enough I go to the dentist with a relatively clear conscience, leaving the chore to my wife and knowing that she will do it more or less willingly, since she has herself a plan which might be labelled "Self helpful to suffering husband".

Consider now, however, the difference if the child seems to be really ill. There is no longer a question of a conflict of duties or desires. I have an overwhelming desire to take the child at once to the doctor myself; and my wife does too. We both go, and the appointment with the dentist is brushed aside. This is not a matter of a stronger duty supervening. I love the child, which means that I identify myself with it; if the child suffers I suffer, if the child needs medical help, I want to get it. Love is related to an immediate short term plan. To adopt this plan is to satisfy a desire, not a duty.

In one sense if I do what I want, I am exercising freedom, whether I do it in conformity with a sense of duty or in conformity with desire.
Yet subjectively duty is felt as a constraint imposed on desire. In attempting to sort out the difference between the two it may be best to begin with physical desires and appetites like hunger, thirst and sex. These are fundamentally gene-determined. Although the form in which they express themselves in a particular individual may depend to some extent on the course of his upbringing and experience, they are directly related to certain physiological variables in the organism. It is fair to say that just as the normative values of the variables themselves are gene-determined, so is the satisfaction conveyed by any event that brings the actual values closer to the normative values—like eating when a man is hungry. Within this limited context the exercise of freedom is the taking of voluntary actions which lead to pleasure or satisfaction.

In practice we find simple pleasure in many events which are not directly linked to essential variables—in playing a good stroke at golf, for example, or climbing a mountain, or winning a competition, or listening to a symphony or in giving pleasure to someone we love. It seems reasonable to suggest that there is pleasure to be gained in any successful exercise of the capacities of the Self, provided it involves overcoming some difficulty, whether physical or mental or both. We may note too that, although such an exercise may be of no direct biological value, yet insofar as it extends the coordinating capacities of the Self (and anything once achieved can more easily be done again), it makes it more likely that the Self will be able to deal with complex threats to the essential variables in the future. In other words by developing skills it increases the regulative capacity of the Self and so, potentially, its capacity for survival.

Any successful exercise of this kind involves the adoption of a plan and its effective achievement. Insofar as we adopt painful short term plans in the effort to achieve a desired long term plan (as in climbing a mountain, for example) we are deliberately constraining our short term desires for the sake of a greater, but delayed, satisfaction. On the other hand we often have to sacrifice short term desires not in order to adopt a specific plan that can be achieved in a precise moment of pleasure, like the moment of reaching the top of the mountain, but

1. This idea is described by Professor John Rawls as "the Aristotelian principle" and he defines it as follows: "Other things equal, human beings enjoy the exercise of their realized capacities (their innate or trained abilities), and this enjoyment increases the more the capacity is realized or the greater its complexity." ("A Theory of Justice", Oxford 1972, p.426).
in order to conform to the requirements of society or of our long
term interests, that is, to avoid prejudicing a highly generalised long-
term plan applicable not to a single specific occasion but to a whole
class of occasions.

It is evident that if we always followed direct desire, with no
thought for stern obligations, the result would not only be poor
regulation from the point of view of the survival of the organism, but
poor results, over a period, from the point of view of satisfying
desires. For the sacrifice of prudential forethought would soon mean
a restriction of opportunities. We should have less control over our
destiny, not more. It would seem to be the case that we can maximise
satisfaction for the future only by pursuing a policy of moderation.
If we are always sacrificing for the future we get no present
satisfactions. If we always go for the short term plan we restrict
the scope for satisfaction in time to come. Man cannot do without
duty and obligation, even though he cannot live by them alone. Yet
there is no doubt that subjectively duty feels different from desire.
It involves effort and constraint whereas desire does not. There is an
element of compulsion in duty and the work of the psycho-analysts
suggests that it is coloured unconsciously by fear or by aggression
directed against the Self.

A man is not free if his decisions are ruled in this way by the
"atavistic unconscious roles of his anticipatory Self. One road to
freedom is therefore that of understanding. This does not only involve
a man's understanding his own motives, it also requires him to bring
into the light of consciousness the full implications of the alternatives
with which he is confronted. The case which we considered of the choice
between going to the dentist and taking the child to the doctor provides
an example. The alternative plans, each as a single undifferentiated
form, will immediately yield conflicting emotional values. If however
we avoid rushing to a decision and try instead quietly and patiently
to sort out the implications by the process of contextual elaboration,
we are likely, first, to take the immediate emotional steam out of the
situation and, secondly, to articulate the alternatives in a somewhat
different and much more detailed way. As the examination on an earlier
The page has already shown, the more we analyse, break down and articulate the alternatives in detail, the more we are likely to dissipate their emotional force, and the more we are likely to end up with a sense of understanding, and of what feels like a free choice between alternatives, rather than a conflict of duty and desire.

Admittedly in the case of the tiger in our path it was suggested (perhaps somewhat against probability) that the initial reaction might be none of sang-froid, only later to be overwhelmed by the reaction of panic as the implications of the situation became clearer. In the circumstances however this panic reaction would not be an irrational one; and it is noticeable that there would be no particular sense of freedom about the decision to run away. We would feel there was no choice. It would be a simple emotional act; and correspondingly there would be no complex articulation in our understanding of the situation.

Choice is always a matter of balancing one emotional pull against another, but where the alternatives are articulated in detail the situation is reminiscent of the case in which we approach closer to a picture and distinguish, instead of a single undifferentiated patch of green, a large number of blue and yellow spots. The whole is broken into facets of mood and spread over a longer period of time; and if, after this analysis, we reintegrate the role and realise it again as a whole, it retains something of this complexity and its emotional tinge will tend to be different from what it was before. On the other hand, if the emotions which it inspires are related to contours of the anticipatory Self of which we still remain unconscious, it will yet retain most of the strong emotional colouring which it had originally.

Through understanding we can achieve philosophic freedom, which is a rational comprehension of the situation, a rational formulation of alternatives, and a relatively calm and unemotional choice. This is the most efficient type of regulation. It does not imply an escape.

1. Cf. two remarks from Spinoza's "Ethics": "The more an emotion becomes known to us the more it is within our power and the less the mind is passive to it" (Part V Proposition 3); "Insofar as the mind understands all things as necessary, it has more power over the emotions or is less passive to them." (Part V Proposition 6).
from what might appear to be the ultimate determinism of the world. Even the most refined exercise of choice by the most philosophic of minds seems to be the product of the genes with which the philosopher was equipped at conception, as they have interacted with the environment over the rest of his life till the particular moment in question. But just as the reality of determinism in this sense cannot be proved, escape from it is an unreal conception. It implies an uncaused event, and this to our minds is inconceivable; we can postulate if we wish a supernatural world which produces through its interventions occurrences in the natural world that appear to be uncaused; but then we are faced with detecting the cause of the supernatural cause; and the regress is infinite.

In fact freedom, as we think of it subjectively, is the exercise of foresight, the formulation of alternatives and decision between them. If there is no choice there is no freedom. But if we are faced with an inescapable course and yet pause long enough to accept the situation and recognise that every imaginable alternative is impossible, we are already choosing. If there is some degree of choice there is some freedom. If we are moved to immediate action as soon as our mind has established a goal and imagined a plan leading to it, we are moving forward along a predetermined path, just as a bucketful of water poured at the top of a sandy bank will trickle down a path of least resistance, predetermined by the weight of the water and the structure of the bank. But if we pause, formulate alternative goal images, imagine appropriate plans, and weigh the choice between them we are exercising freedom in a way that has meaning. To articulate and understand what one is doing is to be free in a sense which is true even for a member of a chain gang.

It is significant that it is essentially at such moments when we pause and choose between alternative roles that we become aware of ourselves. If I am absorbed in watching a football match I am fully conscious of the match, but I am not aware of myself until something brings my attention back to Me Here Now and I have some choice of my own to make. It is true that I can make choices of a kind without being aware of the fact, as when I take the right turning on the way home, or
scratch my nose when it itches. But these are not true choices, they do not involve the formulation and weighing of alternatives, they are an automatic, programmed reaction to a stimulus foreseen in the programme — whether an innate programme (as in the case of the itch) or an adopted long term plan (as in the case of the turning).

Admittedly the propensity to pause, formulate and choose may also be programmed into the man; but this is a very different process, programming for freedom, as it were. And it has great practical advantages in a complex situation like that of the world in which we find ourselves, where it is impossible to have enough inbuilt rules to cope efficiently with all contingencies. It makes it possible for the organism to make effective use in its reactions to the environment of a far greater amount of information. It no longer has to have a ready made rule for reacting usefully (that is, in the long term interests of the survival of itself or its race) to whatever may occur. Instead it articulates imagined plans and weighs them in the scales of emotion. This is a sort of reaction. Out of the confrontation of the environment and the anticipatory Self a new plan is synthesised. But it is not automatically sealed into the Self. On the contrary we keep it detached from our anticipatory Self until we have synthesised others to compare with it (including the alternative of continuing as before); then we adopt one of the alternatives; and it is in this process of detachment and adoption that we become conscious of ourselves. The quasi-identity of decision and self-conscious perception, on which comment was made earlier, derives from this. It is possible to argue that our moments of self-consciousness and freedom are the only reality we know; that the rest is mere articulation, extension of units in the dimensions of understanding; and that this articulation, including memories of the past and imagination of the future, serves essentially to give form to the reality of the self-conscious moment, not vice versa. The field of space and time is merely the means to articulate the span of consciousness with its hopes and fears and strivings, its freedom of choice in which alone we become aware of ourselves. The deterministic world is no more than a frame for freedom.

This is a way of thinking which has recurred in human history among those who are of a mystical mind. It is perhaps one aspect of a
truth which is always beyond our grasp. But freedom itself can be understood in other ways than this and I shall return to the subject in the last chapter of this study.

At this point, however, I conclude my account of the way in which the purposive cycles of conscious life lead to the adoption of successive personal plans of varying time span. To summarise, these plans are superimposed on each other like overlapping scales; each represents the creation of a new profile of the Self adapted to a new situation, but before it can be adopted it has to be matched to the existing profile in this situation of the existing idea of the Self—specifically that part of the idea of the Self which projects into the future and consists of plans already adopted which have not yet run their course, and so constrain the choices that can be made. The relevant structure of the idea of the Self, as it is brought to bear in determining a man's decisions, is essentially, according to my account, this structure of overlapping plans projecting into the future, which I call the anticipatory Self, the personality of the man. And I have tried to show in some detail, with the aid of thought experiments like that of the Traveller, how the process of decision and progressive self-creation actually takes place. In the next chapter I turn to the question of how we can make judgements about this process, in particular about whether it is working well or badly, for good or ill.
What Holds a Man Together

The preceding chapter has brought out the importance of maintaining the coherence of the idea of the Self, and in particular of the anticipatory Self, if effective regulation is to be achieved. This section provides an initial analysis of the patterns of motivation through which coherence is maintained.

Freedom in everyday terms usually means something much simpler than the arguments of the preceding section might suggest. We tend to think of it in terms of the purpose for which a plan is adopted. I have the sense of freedom if my choice derives from a purposive cycle related to a goal image (and hence animated by feelings which we classify as desire or duty). I do not have the sense of freedom, even though I have made an unfettered choice, if the decision derives from a purposive cycle related to an aversion image (and hence animated by feelings which we classify as prudence of fear). This is one of the ways by which, in our everyday judgements of people we distinguish what holds a man to a particular plan or obligation. It has nothing in particular to do with philosophic freedom or with questions of ultimate determinism; it reflects an understanding of the word which is perhaps not the most profound or interesting that man can develop, but one which almost certainly represents what it most often, and most usefully, means in the ordinary occasions of life. A closely related, though not identical, classification, and one which is again reflected in our ordinary use of words, is that which would divide the motives that hold a man to his plans or roles into three categories—those of integrity (obligation to himself), of good faith (obligation to others) and of fear. It may be helpful to attempt some analysis of these three categories, one by one.

Integrity concerns the interrelationship of the personal plans which a man adopts, in particular the need for consistency and, where
appropriate, hierarchical ordering between them, so that the
anticipatory Self which he builds up is coherent and feasible. The
practical need for integrity in this sense is reflected in a psychol­
logical need which we can express as a raising of the thresholds of
transition against personal plans which are directly or potentially in
conflict with other plans already adopted, especially those of longer
span. The pull of integrity we associate with the pull of duty; and
in our judgements of other people we admire those who show integrity.
We may not think much of the longer term plans and principles which a
man has adopted and we may think he ought to change them; but if he
adopts sub-plans, even ones that we approve in themselves, which are
inconsistent with his major plans, he can command no respect from us.
Conversely if a man sticks to his principles and maintains his integrity
we do not withhold our respect on this account, even if we disapprove of
his behaviour strongly on other grounds.

Integrity is a matter of a man's obligations to himself. It is
not the same thing as good faith, which is a matter of his obligations
to others, expressed in the social roles he adopts. The adoption of a
personal plan need not have any implications for a man's social roles.
I may decide to go on a diet without that affecting other people's
expectations from me. But that is not usually the case when I adopt a
plan. Even when I go on a diet I shall probably have to agree with my
wife about altered arrangements for family meals. And a major personal
plan - such as that of earning my living by holding down a particular
job in a business or Governmental hierarchy - will entail, as we have
seen earlier, the adoption of large numbers of social roles in relation
to other people or classes of people. Every social role implies the
obligation to do certain things in certain circumstances, whether it
is a specific agreement to meet a particular train tomorrow, for
example, or a doctor's general undertaking to abide by the Hippocratic
oath in all the hypothetical future circumstances in which it may apply.
The carrying out of an obligation under a major social role is in effect
the adoption and carrying out of a hierarchically subordinate role, a
sub-role. The fact that people in general meet their obligations and
in general carry out the roles which they have adopted is what establishes
and maintains the whole complex fabric of human society; and the
psychological force which holds men freely to their obligations to others, even when they are not immediately palatable, is consequently of crucial importance. This force is good faith, which is itself at the root a very generalised personal plan, but one that anybody who belongs to a social group must adopt, implicitly or explicitly, as a condition of his membership; and which indeed, insofar as men cannot live outside society, he has to adopt in some degree as a condition of his humanity.

Difficulties can arise if a man finds himself, through accident of birth or circumstance, as a member of a social group which he did not freely choose. In the case of a child his social responsibilities are in the first place adopted, by proxy as it were, by his parents or relations; but as he grows up he is expected to take on more and more social roles in varying social groups as his own responsibility; and social groups often have initiation rituals of various kinds to mark the transition from tutelage to full membership. If he freely and enthusiastically adopts the appropriate social role, which then becomes related to his own personal plans and part of his own anticipatory self, no difficulty should ensue, provided he has the integrity to maintain the role and no conflicts arise with other major plans or roles which he may have adopted. But he may consciously reject the role required by a social group in which he finds himself, or which may be established round him against his will (for example after a revolution). Alternatively a man may remain both vague and lukewarm in his allegiance to a group without consciously and forcefully rejecting it; this seems to occur most frequently in the case of the larger enveloping groups such as the state which we do not initially choose ourselves; people may become consciously keen and loyal citizens of their states, but in many cases, to say the least, this would be a considerable exaggeration of what they feel about the obligations of citizenship.

Sometimes a man can simply withdraw, or be ejected, from the group in which he finds himself; his obligations then cease and he has no further commitment in good faith to the role in question. In other cases this may not be possible and then he may find himself under some coercion to maintain his allegiance to this role. The worker who refuses to join a trade union may find himself pressed, for fear of
ostracism or other sanctions, to become a member and accept the consequent obligations. A citizen who does not feel much identification with the state or its rules concerning private property may not be restrained by any strong obligation of good faith towards other citizens from stealing their goods; but he may then find himself subject to the coercion of public law. There is an immense variety of situations in which people find themselves under pressure to conform to social obligations of one kind or another simply for fear of the consequences; and fear therefore must be added to integrity and good faith as one of the forces which hold men to their roles. Fear, however, is in a different category from the other two, since it is in no sense a plan or role which the individual can consciously adopt or sustain; rather it is an emotional charge which affects the threshold settings in his mind-manifold and so makes it harder to adopt some types of plan but easier to adopt others.

Sometimes these pressures reinforce each other. My rather weak, though genuine, resolve to be a brave soldier and go over the top to attack the enemy trenches may be reinforced by the obligation of good faith towards my comrades, and also by fear both of what they will think of me if I fail, and of the legal penalty which, if I do fail, a court martial will surely enforce upon me. Sometimes however the pressures can go in different directions (even in this case fear is pulling two ways). Again, if I am a pacifist, my private integrity may require me to refuse to fight; but if I am a loyal comrade and citizen good faith may pull me another way. In another case again fear of public opinion may pull me one way, but fear of the law (which is not always supported by public opinion) may pull me another way; and in some circumstances fear of a local gang of thugs might pull me yet a third way.

Whereas integrity and good faith will always be pulling in the direction of some coherence - though coherences may conflict - fear need not do so, it can be an entirely disintegrating force. Theoretically we can distinguish three kinds of fear: first what we might call providential fear, which reinforces a man in a course which his integrity requires; secondly what we might call prudent fear, which dictates
the adoption of certain plans rather than others where integrity is not at stake; and thirdly disintegrating fear, panic fear, which does have to be resisted if there is not to be a surrender of integrity. Courage itself is integrity in conflict with fear, and courage we always admire, even when we do not like the cause in which it is deployed.

A problem can arise when the acting out of a plan or role leads a man into commitments or conflicts which he had not foreseen when he undertook it - when for example a man who takes on a public office finds himself let in for heavy private expenditure which he has not foreseen. In such cases we tend to feel that a man is in "honour" - i.e. in integrity and good faith - bound to carry out his obligation if the undertaking he made definitely covered it, unless he is formally released from it by the others concerned. We are dealing here with communication between human beings, which is clearly a crucial matter wherever social roles - which by definition involve obligations between human beings - are concerned. The precise words, or other signs or symbols, that are used are important, and this is true especially in two types of context. First of all, if I use words in such a way as to deceive others either about my own roles, or the personal plans supporting them, or else about other things which are relevant to their roles, I am infringing the obligation of good faith; that is to say, I am betraying them. Lies and deceit are forms of the betrayal of good faith. Secondly a man is bound by his word and this is no superficial embellishment of behaviour, but a structural principle of human society; for it is by means of words or their equivalent that we communicate, and so formalise and make effective our adoption of particular social roles.

A commitment may be absolute and so binding in all conditions, or it may be partial or limited or conditional in some fashion; and we have to use words or other signs or symbols to communicate precisely what it is. Correspondingly it is the words or signs in which a given commitment is expressed that the law, when necessary, will seek to interpret where there is doubt or vagueness. And if a man says certain words he is taken to commit his own integrity and good faith to the role, even if he does so under some degree of duress. It is not for
a quibble that a man gives up his life when, for example, he is one of the thousands in history, including Jesus Christ himself, who have gone to their death rather than declare a false allegiance or deny a true one. It is one thing to perform under coercion, that is, out of prudential fear, some particular action which is repugnant; but it is quite another for a man to have to declare in words, or by means of some symbolic act, his adherence to a role which is inconsistent with the major plans of his anticipatory Self; and it is another thing again to do something under duress which is not only repugnant but actually and explicitly violates one of those plans; duress, for example, may mitigate but cannot excuse an act of murder.

It is important to bear in mind that a social role relates to a particular social group. Any one role is always complementary to another role carried by another member or other members of the group. The two roles (which in some cases may be identical with each other, but usually are not) between them sustain a relationship; and relationships are the constitutive elements of social groupings - or, perhaps more precisely, of social organisations, for these are expressly not merely amorphous aggregations. Any system of relationships enshrines its own values or principles - which are rules or laws - and any person whose own principles and governing roles, whether as an individual or as a member of some other social group, represent a threat to the principles of the initial group, will be regarded as an enemy.¹ Towards a recognised enemy we feel no obligations of good faith; even lies and deceit may be justifiable in our dealings with him, unless we have mutual obligations arising out of common membership of some other group - which is to say unless he is not, in the wider context, an enemy at all.

It is possible for us, especially if we have adopted principles, or governing personal plans, of the kind enjoined by some of the major religions, to regard ourselves as members of a group embracing all mankind, so that no man to us is an outsider or enemy; but even if

¹ "Principles" are here equivalent to highly generalised long term plans, as I am using the word "plans".
integrity requires that this should dictate our own behaviour, the desired relationship in given instances can only be established if the other people we encounter adopt appropriate complementary roles; if that man is shooting at me, even if I regard him as my brother, I cannot establish a brotherly relationship with him until he is persuaded to think differently about me. We may note that, just as consistency between personal plans tends to be achieved by a hierarchical ordering of the more specific, shorter term plans under more general longer term plans, so narrower social organisations tend to be ordered under more generalised, inclusive organisations, of which the state is the most important. In general enmity between two organisations is not allowed to go to destructive extremes because in a wider context the members of both also have roles as members of a more inclusive organisation, and where there is conflict the values and roles of the more inclusive one have the superior claim. Ultimately at the level of the state overall social values expressed in terms of law may be enforced by the public coercion of a police force. But when there is enmity between states there is no superior regulative authority with effective power above them and the uncontrolled expression of enmity may result in war.

In effect, if our everyday use of words is anything to go by, we make two kinds of judgement in this context - first as to integrity and secondly as to desirability. Successful regulation by any biological or social system in its environment must involve some coherence of strategy if the essential variables are to be preserved within necessary limits; and our recognition of the virtue of integrity is in some sense the recognition of a duty falling on each individual to live and make the best he can of his life. We regard as true integrity that which is maintained by the free choice of the individual, otherwise it is not his own life that he is leading, or his own Self that he is creating; indeed if a particular required kind of behaviour is secured from an individual by social pressure or compulsion it is the integrity of the social group which is being maintained, possibly at the expense of the individual's own integrity. On the other hand (and here we move into questions of desirability) it has to be recognised that the choices available to a man and the things that he wants must be governed to a
large extent by the social environment in which he has grown up; and furthermore that as our existence depends on the maintenance of a social fabric it is not wrong in all circumstances for social pressures to be exerted in the interest of the group and at the expense of the individual. Nevertheless, just as we admire most an individual whose behaviour is determined by motives of integrity and good faith (which, as we have seen, becomes part of his integrity) rather than by fear, even of the prudential variety, or by incoherent desire, so we reserve our admiration for a social system which achieves coherence but does so with a minimum of compulsion and a maximum of consent.

This line of argument can lead us to the straightforward conclusion that what is good is the full development of individual human beings, that this means that each individual should achieve, through his own freely determined action, a pattern of integrity of his own choice, and that a social system is good to the extent that it facilitates this for all its members and without detriment to those outside it. Unfortunately, however, this does not get us very far. One man's pattern of integrity can often only be realized by infringing the freedom of others. One social group can only realize its aims if those of others are frustrated. Within a large social system almost invariably some social groupings have better opportunities than others. How then ought a man's pattern of integrity to be formed? and how ought social systems to be organized? These are great questions to which I cannot hope to give good answers. They cannot be entirely separated from each other, yet they are very different in their orientation. In the remaining sections of this chapter I attempt to indicate a possible approach to the first question; the second forms the subject of a separate study.

The Origins of the Idea of the Self (1)

An attempt to identify and to describe, in terms related to the model built up in preceding chapters, the earliest beginnings of the idea of the Self - not merely as a body given identity by location and memory of past events, but as an anticipatory structure projecting into the future.

Let us go back to the earliest days of life and consider how, in
terms of the model built up in this study, the idea of the Self can first be seen to emerge. It seems a reasonable speculation that a baby's first focussed mental activities are concerned with wanting and getting food. He sees the breast. This stimulates excitement and consequent activity; first positive, directed activity, grabbing with hand or mouth; then, if the grabbing is unsuccessful, negative, undirected, random activity, kicking and crying. The directed activity can be regarded as functional, if not strictly purposive; the undirected activity is not obviously so, but it may have the function, in cybernetic terms, of provoking at random a step change in the parameter variables of the system (i.e. the mother's behaviour) which may or may not ultimately help the baby to achieve his original goal.

If he is to do all this, does the baby need to have any idea of himself? Arguably no. He could be an automaton programmed to react in such ways. But I have put forward the hypothesis that if he is awake he is conscious; that, if he is conscious, his mind is making successive predications; and that every time he makes a predication he is grasping some subject as related to some predicate in space over time. On this hypothesis does he need to have an idea of himself? The answer is, I think, that if his reaction is coloured in any way by past experience, then memory must be involved; any memory which affects him in this way must be connected with his body, and must be remembered moreover because of this connection; and this in turn implies the existence of an idea complex of the Self in the mind-manifold, though not necessarily a conscious recognition of the Self. For the memory need not be of a specific occasion; our model of the mind suggests that the stimulation of memories may produce a collective emotional coloration of the current experience rather than any explicit evoked image, and this is no doubt likely to be the case with a baby who sees the breast and immediately, on the basis of past experience, focusses his attention on it with a feeling of pleasure and desire. The subject of consciousness is the breast, not any specific memory; but memories nevertheless affect the quality and intensity, if not the subject, of the experience.

This is not to deny that even a small baby may have a memory reaching back perhaps even to the womb, or that these memories may begin straight
away to create a complex of ideas connected to each other because they are linked to one body with a continuous existence. Biological man is there anyway from the moment of conception. Some kind of idea of the Self must accompany the most rudimentary set of conscious predications and it has been my contention that you cannot remember anything of which you were totally unconscious at the time of the experience, or which was not, at the very least, called into consciousness with the aid of some residual "iconic" image, immediately afterwards. Admittedly the status of our own very earliest memories is particularly hard to determine. Often we seem to be remembering indirectly by recalling — and even refurbishing — our own past recollections of events still further in the past, rather than directly recalling the events themselves. But against this there is now ample evidence that people can in certain circumstances recall the events of their birth, and even something of their life in the womb, with a vividness and emotional power which strongly suggest a recollection that is direct rather than second-hand. For the purposes of the present rather schematic argument, however, it is not necessary to resolve these interesting, if speculative, issues. It seems at least a plausible hypothesis that at the very beginning of its life a baby is likely to have little, if any, self-conscious awareness of a continuing Self; it tends to react anew in each situation without reference to the past and without consciously choosing between alternatives. Further, it seems a plausible hypothesis that as a child grows, as his capabilities develop and his needs become more complex, it becomes desirable and necessary for him to achieve some coherence in his successive responses. How does he do this?

I would suggest that the crucial step must come when the baby begins to recognise behaviour, that is, change masking identity — not a breast which is available or unavailable, but a person giving or withholding the breast, pursuing a plan, acting a social role. As a counterpart to this there emerges the idea of his own Self persisting through change, a body existing continuously in time and doing

1. See for example Frank Lake: "Tight Corners in Pastoral Counselling" (DLT) 1981.
different things at different times, otherwise pursuing plans and acting roles. Each occasion of action may still be unconnected with its predecessors. Insofar as the actions of the parent figure in giving or withholding the object of desire are entirely arbitrary and unpredictable, there is still no scope for purposive thought and no advantage in recognising a person rather than an object. But a further step now becomes possible, namely recognition on the baby's part that his actions may be taken as messages — signs or symbols of what he wants — to which the parent figures may respond. A whole new perspective is then opened up. The baby is impotent to control the environment directly except insofar as he can grab at what is immediately in front of him; but through communication he can achieve some power to control it indirectly, through the intermediary link of the parent figure who may give him what he wants.

This process involves the acquisition of new behavioural roles for the baby: noises or gestures which are not simply directed activity, like grabbing, or merely undirected activity, like yelling, but are coded signals of something else — basically indications of need, of pleasure and of displeasure. Correspondingly he learns to interpret actions by parent figures not merely as givings or withholdings, but as signals of pleasure or displeasure. First he will just try it on, signal what he wants and himself register pleasure or rage according to whether he gets it or not. But then he may note that this can be a two-way traffic. His mother's actions too may be interpreted as signals of what she wants or indications of pleasure or displeasure at what she is getting; moreover her own pleasure will often be accompanied by actions giving pleasure to the baby, while her displeasure may be accompanied by the opposite. In each situation the baby communicates to the parent what action by the parent will please him; while she in return communicates to him what action by him will please her. If pleased the baby will award the parent smiles and, if displeased, yells; while the parent, if pleased, will give him what he wants and, if displeased, withhold it.

In this fashion the possibility of choice based on prediction, and hence the possibility of purposive thought cycles on the pattern we
described earlier begin to come into view. Such thinking involves the possibility and necessity of an idea of the Self, not merely as a body given an identity by location in space and (through memory) in time, but also as an anticipation projecting into the future; for when we imagine and choose we adopt a personal plan leading towards a future goal; and this is perhaps the root from which the anticipatory Self will grow. Initially it is still not a continuing Self except insofar as it relates to a body with a continuing identity and a cumulative history; even so, there may be no idea of the whole body as distinct from parts concerned in particular plans. The adoption of one plan is unrelated to the adoption of any other; it is a piece of new thinking related to signals made and received in the given situation. We have therefore a succession of ideas of the Self which are hardly to be distinguished from ideas of particular actions or experiences by parts of the body. They may be very similar ideas, because they arise in connection with the same body in a succession of very similar environments, but they do not form a single coherent idea complex. There is no need for anything more so long as each plan is of so short a span that it is envisaged and completed before the next one comes within range. But as a child grows, as his capabilities develop and his needs become more complex, a situation begins to emerge in which there has to be some coordination of his different responses over a longer span. Such coordination requires a much more complex mechanism of response. It involves deciding on a particular activity with a view not merely to its immediate effect, but also to its secondary effect; and in the simplest case this means its effect on subsequent activity by the parent figure. If the parent figure is pleased, she will do child-pleasing things; if displeased, child-displeasing things. And with this recognition we arrive at a new world, that of differentiated persons with continuing identities playing mutually complementary social roles.
A discussion of John Shotter's views on the development of personal powers.

Before proceeding any further with these speculations it may be helpful to consider how they relate to certain current theoretical ideas about the development of personality in the very young child. John Shotter has suggested\(^1\), on the basis of experimental work by Spitz, that:

Within the totality of the child and his mother she constitutes a mechanism via which he can execute actions in the world. (That even very young children (4-18 weeks) will execute intentional actions if given access to the appropriate mechanism has been strikingly demonstrated by Bruner (1969)). It is only via her instrumentality that he comes to differentiate the forehead-eyes-nose sign Gestalt as a meaningful entity. She appreciates in his movements, his manifestations of affect, the nature of his mental state and responds to them in such a way that she presents him with the characteristic Gestalt just at the time she is gratifying his needs. It only appears and functions within the ongoing circular affective exchange which has its source and terminus in the child but which is mediated via the mechanisms the mother now provides. The child could not have distinguished the sign Gestalt entirely by his own devices. Currently he can only act because his mother acts 'as if she understood' him, and it is in this sense, that the child of 3 months is in 'psychological symbiosis' with his mother. He can only differentiate himself from her by constituting within himself some of the mechanisms the mother now provides...

According to Shotter the end of the period of psychological symbiosis with the mother comes with the development of the child's ability, around the age of 15 months, to say 'no' to his mother. As he learns to move around she has to curb some of his initiatives, and this he will often resist. "The period of social games can now begin... Knowing how to open and close the social link at will must be the first social skill a child acquires if he is to play social games and acquire personal powers."\(^2\).


2. Ibid. p. 35.
This description corresponds well enough with my earlier speculations. But when it comes to the interpretation of what is happening a significant divergence comes to light. The core of this lies in the fact that Shotter, following Mead, Macmurray and others, appears to regard the Self as essentially a social construction built of social rules or roles, whereas in my view the Self is built of individual plans which often include social roles but are not identical with them. Shotter describes the child in the earlier, symbiotic stage as a natural agent who may manifest natural powers in an apparently directed and regulated way, executing intentional actions, but who nevertheless does not know what he is doing. Only later, as he learns social skills, does he become an individual and monitor his own behaviour.

Concerning the processes between mother and child: what begins as a physiological contact, moves through a period of purely idiosyncratic exchanges mediated via affect in which the mother is instrumental in bringing the child's vague intentions to fruition, and finally ends with a period of social games. It is on acquiring the skill to conduct games with others that the child embarks on the path to true personal powers. In playing with others he will ultimately acquire the skill to play all the parts of the game himself, and in his dialogues with himself conduct reflective thought. At first it was his mother who reflected him back to himself, but ultimately he will be able to do everything without her help at all, and even, in the invention of new games, go beyond her personal grasp of the world to the realisation of new and unimagined powers, relying always, though, on forms of expression negotiated with others.¹

There are important and valuable insights in this complex of ideas; but there are also, in my view, some crucial weaknesses of analysis which are reflected in the odd and contradictory terminology which Shotter uses in regard to rules and regulation. "While the observed behaviour of natural agents, he says, "may indeed be regulated, it may not be rule-regulated at all. Regulation is characteristic of all processes in 'open systems' maintained in a 'steady state' according to 'system parameters' (v. Bertalanffy 1968); that is, it is characteristic of all organic systems, human beings included." But strictly, he suggests, "rules must involve agreements between people.¹

¹ Ibid. p. 41.
Thus rule-regulated processes, strictly, are processes regulated... by the individuals involved in them all agreeing to perform their activities within certain acknowledged constraints or a system of interlocking constraints. Now this, strictly, is an odd use of words, since to regulate, according to the Concise Oxford Dictionary, and as the etymology suggests, is "to control by rule". Regulation that is not by rule is in effect a contradiction in terms. (My own use of these words is defined in the opening section of Chapter I of this study.) An odd, if consistent, terminology does not necessarily do any harm; but here it does seem to have the effect of leading Shotter to pass over the problem of the regulation of the "spontaneous" activities of natural agents, and in particular not to recognise that the regulation of any organic system must be in some sense a self-regulation.

As I have already suggested on an earlier page, such regulation could in some instances be entirely a matter of reflex responses programmed in the genetic constitution of the organism; but as soon as we come to learned responses — that is, responses which are neither pre-programmed nor of a random nature, but intelligent — we have to deal with a process which must include some model of alternative possibilities and hence some mechanism for selecting between them in accordance with the preferences of the Self (which are expressible as rules); and this in turn must involve some structure, however primitive, that represents the Self in the circumstances and so constitutes the rudiments of what I call the idea of the Self. This, I have also argued, may also include some kind of consciousness (though not of course self-consciousness), some sense in which the organism knows or takes cognizance of what it is doing, even though it does not know that it knows.

Shotter talks about "simple" regulation as distinct from rule-regulation; but he does not recognise that even simple regulation involves that application of a rule or rules (they could be called constraints if it was desired to avoid the word rule). He refers to

1. Ibid. p. 26.
2. See page 32 above.
'system parameters', but does not recognise that if any particular parameter has any intelligible effect on a system, then its effect must be definable as a rule or rules. He says that a very young child simply plays out the possibilities inherent in an imaginary situation without any understanding of what he is doing; but he does not recognise that every imagined situation brings its imagined constraints, otherwise rules, and these define what the possibilities are; moreover that if the child is conscious yet does not understand what he is doing, the further question has to be asked: what then does he understand, what is he conscious of? Shotter does not answer, or raise, this question. He refers to Wittgenstein's remark that we do not use or learn language by means of strict rules; but he does not go on to the corollary that it would be impossible for us to use or learn a language, or, for that matter, for a child to play at anything, without any rules at all. Without some very general rules we could not even differentiate talk or play from other activities.

The upshot of my argument is that we have to accept that the Self has an inward as well as an outward face; a human being has plans and purposes which are personal to himself as well as roles (supported indeed by plans) which are mediated by a social structure; he can be regarded in different perspectives not only as biological man and behavioural or social man, but also as psychological man; he has thoughts which follow the regulation of the purposive cycle and are by no means merely an internal dialogue with himself in roles negotiated previously in a social context. In other words it is not possible to reduce plans to roles or roles to plans. In a sense the roles are carried on the backs of relevant plans, but even so they are not determined by them; as Shotter rightly emphasises, they are negotiated with an external social reality. And it is the Self of plans which is the negotiator.  

1. Shotter suggests that "to possess personal powers is to manifest not just directed, but self-directed activity... such as to express meanings in one's actions. That is, one has to make oneself intelligible to oneself in other's terms and in doing so make our actions relevant to other than our own immediate needs or interests. We must put ourselves in a position for which we are responsible, Read would say." (Op. cit. "The Development of Personal Powers", pp.240-1). I see no reason to accept, however, that we are unable to recognise meanings in terms of our own aims and purposes without reference to other people's terms; I would define meaning as "use in relation to a purpose". Nor do I believe that responsibility can adequately be defined by identifying it with the acceptance of externally determined, even externally negotiated, social values (see the final section of this study).
There is hardly space here to deal in detail with the internal dialogue theory of thought; but it may be sufficient for present purposes to say that it is usually asserted on the basis of insufficient analysis of what a dialogue is (often no analysis at all). My own view of dialogue, developed in "The Grammar of Social Interaction", is that it is always related to a purposive cycle or cycles, just as individual thinking is, but that in this case the cycle is one which is common to the participants.

At each step of the dialogue participants make statements, or ask questions in answer to which others make statements; and at each step assent is tacitly assumed or explicitly given to any statement just made, or else is explicitly withheld so that more discussion must take place before the cumulative process of building up common understanding and agreement can go further. Every step in the cumulative process is effectively an agreement, at least for immediate purposes, though participants may not regard themselves as fully committed; they arrive at what Erving Goffman described as "not so much a real agreement as to what exists, but rather a real agreement as to what claims concerning what issues will be temporarily honoured."

Of course not every dialogue leads to an agreement on common action; frequently it will go no further than the first phase of the purposive cycle, that of exploration and orientation; but every effective dialogue does lead to some degree of common understanding (which may include understanding that there is a difference). In any case for present purposes the point is clear: when I think, this does not mean that I am conducting a dialogue with myself; on the contrary thought by the individual is logically prior to dialogue of any kind.

To say all this, however, is not to say that Shutter is wrong in ascribing great importance to the emergence of the social self, which I, like him, would distinguish as the person. I entirely agree with him that to become a person the child has to distinguish between people and things, to learn how to open and close the social link at will and thereby to recognise "the humanity, the autonomy and cognitive status of the other by some form of greeting - even if only a smile"; moreover that the emergence of this power grows out of a kind of dialectical

exchange with the mother, or parent-figure. In the next section I turn to a closer examination of the nature of this momentous step in development.

The Origins of the Self (3)

Consciousness, self-consciousness and the origins of abstract thinking; the relationship between this and the development of the individual's capacity to become an object to himself.

I have suggested that a child's purposive activity in its earliest stages involves a succession of disconnected episodes in which there emerge a succession of disconnected ideas of the Self which are hardly to be distinguished from ideas of parts of the body. There is no need for anything else, because each of his plans is envisaged and completed before the next one comes within range. Memories of the past do affect the present but not in the form of explicit cognitions, rather in the form of emotional overtones or "effect". Shotter quotes with approval the argument of Spitz that:

When the infant experiences a need, it will provoke in him an affect that will lead to behavioural changes which in their turn provoke an affective response and its concomitant attitude in the mother.

This I accept. I would only add that the nature of the infant's feelings will be affected by its own past experiences and will therefore be liable to change over time both in quality and intensity. My theory of the synchronic resonance of association (see pages 116 - 124 above) suggests how the simultaneous impact of associations, working like overtones at the unconscious level, can generate the qualities and intensities of emotional experience, and at the same time shift the thresholds of association, thereby helping to determine the action that the individual takes.

The question that arises now is: how does the child learn to develop an idea of the Self which has continuity from one experience

to the next and which thus makes possible the coordination of his responses over a longer span? The answer, it has already been suggested, lies in the beginning of his differentiation of persons—of his mother as a person and so of himself as a person interacting with her. But how does this happen and what does it imply? It has been suggested by George Herbert Mead, and by many who have followed him in this, that it is only as the individual becomes an object to himself that he becomes self-conscious, indeed develops a Self at all; and Shotter argues that it is at this stage that the individual begins to know what he is doing and to exhibit "monitored behaviour". But I think the crucial point is a different one.

I see no reason for not accepting that a baby (when awake) is conscious from the time of birth; and consciousness, I have argued, involves the recognition of predications, that is of forms emerging in a space (which may be an analogical space with a synchronic time dimension) and over a span of diachronic time. As the period of "psychological symbiosis" comes to an end, the baby begins to be aware of himself and his mother as separate forms; he becomes aware of "me", as Mead would put it. But I am not sure that in terms of pure consciousness any major development is thereby involved. It may indeed be true that what is most distinctive about man is that he is aware of himself. As Pascal put it in a famous passage: "Man is but a reed, the feeblest in Nature; but he is a thinking reed... If the universe were to crush him, he would still be more noble than that which kills him, because he knows that he is dying..." But this refers to a degree of awareness which even adults do not rise to very often or for long periods. It is an awareness of the Self being aware, a consciousness which in Mead's terminology includes the "I" as well as the "me". It has no relevance to the stage of development which we are now considering. Monitoring of the Self's activities is always necessary if they are to be properly executed at all, but, as I have argued in discussing the relevant stage in the purposive cycle (that of "Actualisation", otherwise "Action and Monitoring"), nearly all our self-monitoring takes place below the level of consciousness anyway.

What we do have to reckon with here, I suggest, is the emergence of abstract thought, that is, thought which depends on links of
classification with the past. For what distinguishes a person from a mere perceived form or process is that a person has continuity and sameness even through changing aspects of behaviour. Continuity implies location in time and space extending beyond the span of immediate perception. Sameness implies classification. And the idea of the same thing behaving in different ways at different times, thereby exhibiting different powers, implies the interdependent concepts of person, behaviour and role (or type of behaviour). I do not mean that the child consciously realises these specific abstract ideas, but rather that his thinking comes to reflect the functions to which they refer. We may note that at this stage the distinction between persons and things may still be fairly blurred; a small child tends to personify things and may well be encouraged to do so by his mother.

The thesis I am putting forward thus takes the following form. In a child's earliest months of life his explicit consciousness, which is of perceptual forms (mediated originally, in all likelihood, by innate perceptual schemata), does not extend in time or space beyond the immediate perceptual span of the moment. His experiences leave their deposit on the mind-manifold and increasingly, therefore, a resonance of associations from the past may colour his perceptual consciousness; but such memories are not ordered and do not become individually explicit at the focus of consciousness. As he grows older, however, the ideas in the mind-manifold are gradually brought into order in the two ways noted on a previous page - first, through the construction of a model or map (initially perhaps a number of unrelated maps) extending in both space and time, on which events past, present and future can be located and so related to each other; and, secondly, through classification, the formation of complexes of ideas linked by similarity of form or past association, complexes which are identified by perceptual markers or symbols (e.g. "Mama", "Dada") and can be recalled by memory or imagination as well as by direct perceptual experience. Once this is achieved, we have a basis for thinking about persons and roles, places and things. This is precisely what the baby proceeds to do as he emerges from the period of "psychological symbiosis" with his mother; and it is his mother who, in the ways Shotter has described, encourages him through their
exchanges to develop this recognition of himself as an independent person in an objective world. In the process, as thinking is liberated from the immediate perceptual span, the purposive cycle can begin to separate itself from the narrower predications in which it is realised.

The Origins of the Self (4)

The plan of the good child as the core of the anticipatory Self.

We noted earlier that the coordination of a child's responses over a longer period involves deciding on a particular activity with a view not merely to its immediate effect but also to its secondary effect - essentially its effect on subsequent activity by the parent figure. If the parent-figure is pleased, she will do child-pleasing things; if displeased, child-displeasing things. From this we can straightforwardly derive a simple basic classification of the possible activities, the plans, which are open to the child, distinguishing (i) those plans which lead to pleasure both directly in themselves and also indirectly because they are approved by parents; (ii) those plans which do not lead to pleasure directly but do so indirectly because they are approved by the parents; and (iii) those plans which lead to pleasure directly but are liable to be followed by punishment or deprivation. Of these (i) and (ii) can be described as sub-plans of the generalised plan of being a good child; while (iii) consists of sub-plans of a generalised plan of being a bad child. There is also however a fourth category of plans: (iv) those which lead to relief from hurt or frustration - a kind of relative pleasure - by means of aggressive or destructive moves against the parent figure. A child may as a primary choice adopt plans in any of the first three categories, but he will not make a primary choice of one in the fourth category; this can only be a matter of secondary choice arising out of the frustration of a primary choice. Plans in the fourth category are also sub-plans of the generalised plan of being a bad child. It is my suggestion that plans in categories (i) and (ii), building up the wider plan of being a good child, become the core of a continuing anticipatory Self; but that the same does not apply to plans in categories (iii) and (iv), building up the wider plan of being a bad child.
Why not? To answer this question we need to recall once more the distinction drawn earlier between the idea of the Self in the mind-manifold and the idea of the continuing or anticipatory Self. The former includes all that the mind has recorded both of the history and of the accompanying environment of the physical body, and of its past and present plans and roles and their scenarios. But the latter, the idea of the anticipatory Self, which is part of the former, consists only of those physical and social predictions and those generalised plans, with their generalised scenarios, which are of long span, leading on into the future, and so exercise constraint on future decisions. Thus the idea of the good child, with a variety of sub-plans hierarchically subordinate to it, continues as a sort of ideal projection into the future; and insofar as it constrains the future decisions of the Self it imposes a degree of coherence on the Self, matching it to a generalised image which comes from the requirements of the parent figures and is in effect a creation of the parent figures.

Now every baby is unique and his uniqueness expresses itself in particular wants and desires in particular contingencies. But this does not amount to any unique core of the anticipatory Self. Without any conscious intent, but as a kind of pragmatic wisdom, he is bound to adopt the plan of being a good child insofar as he learns to want to do things that please his parents in order to gain the benefits that accrue from doing so. But other wants and desires falling outside our categories (i) and (ii) will keep springing up. At times he will succumb and adopt plans in category (iii) or fail to adopt those in category (ii). At times, furthermore, either because he has done this or for other reasons, he will encounter frustration and will consequently adopt the aggressive and destructive plans of category (iv), the category of rages and tantrums. Whereas the plans of (i) and (ii), however, build up a consistent positive pattern, that of the good child, those of (iii) and (iv) do not build up to any consistent image that could exercise constraint on future decisions. They are either unconnected with others, as in (iii), or, as in (iv), they are consequential, secondary plans which would never be adopted as a primary choice. The only unity they possess is a negative one, that of being incompatible with the plan of being a good child. The bad plan is not
a positive one, it can be defined only by negatives. So, either way, it is the good plan, with its sub-plans, which forms the lasting core of the Self, providing an element of identity (which is sameness from one occasion to another) and stretching on into the future, constraining future decisions. The good plan becomes a sort of compass by the aid of which a course is plotted through the contingencies that a human encounters in his life—though he may at times be blown off course by strong wants or desires leading to the adoption of bad plans, or as a result of sheer inadequacies in the compass mechanism.

Although this plan may be the core of the anticipatory Self, it is, in its origins, obviously very little differentiated, of a rather standard pattern (though with some variation dependent on the parents and the particular situation), and of no striking interest or idiosyncrasy. But we noted earlier that according to Dr. W.R. Ashby the mind is developed over time into a regulator \( R_2 \) of immensely increased capacity by the use of "design and information" (as variety derived from the environment itself) to amplify the quantity of design in the fundamental regulator \( R_1 \) supplied by the gene pattern. So too that aspect of the mind-manifold which reflects the anticipatory Self is developed enormously in detail and idiosyncrasy by the cumulative effect of experience in the individual's life, which is unique to him—particularly in its pattern of cumulation over time. But this anticipatory Self, the only continuing integrator of the choices which the mind makes, is always, if by argument is accepted, the result of accretion upon the foundation of the plan of being a good child, laid down in early childhood, the prototypical "ideal role". As this implies, the true Self is always fundamentally the good Self, of which the bad Self is only the negative counterpart. The problem of identifying the right plan for the Self in a given situation is that of ensuring that it is truly laid on this foundation; and it follows that if earlier layers have not been truly laid there will be faults and incoherences deep down in the foundation which it may take major excavation and rebuilding to set right.

This conclusion is of central importance to my understanding of

1. See page 191 above.
the way in which the coherence of the idea of the Self is established
and maintained, and consequently to my understanding of how we can make
judgements about wholeness and lack of wholeness, health and ill-health,
good and evil, so far as they concern the Self. I recognise that much
of the argument of this section has been theoretical and schematic,
without much support from empirical evidence; but this can hardly be
avoided in view of the fact that I am concerned here with what happens
in consciousness, not directly with externally observable behaviour.
I maintain that the fourfold classification of the basic plans open to
a baby, and the conclusions which flow from it in regard to the basis
of the continuing personality, are not only derived from a coherent, if
speculative, argument, but are also very much in conformity with
ordinary experience and common sense. Indeed the fourfold classification
applies with equal appropriateness to the plans of activity open to my
cat; on the basis of ordinary experience and common sense I am very
sure that the cat (who appears to be conscious, though not self-conscious)
not only adopts at different times plans for activity in each of the four
specified categories, but is perfectly well aware of the distinctions
involved.

Finally it may be worth while to draw attention to the fact that
these arguments link up with the ancient and redoubtable philosophical
argument, going back to St. Augustine and beyond, that evil is the
privatio boni, the deprivation or damaging of good, not a positive
reality which can exist on its own. A closely related idea has been

1. An interesting question arises concerning the language of sounds
and symbolic movements by which a dog or cat which is at home in
a human family communicates with the members of the family and
reciprocally understands their communications. A whole vocabulary
of signs and symbols is mutually accepted through a process of
negotiation, as Shotter would say, which reflects the social rules
and roles defining the social situation in which the intercourse
takes place. A cat, for example, can develop a whole repertoire
of sounds (purrs, cries, gurgles) and gestures (back arching,
curling round furniture in greeting, pushing the nose against the
human hand, standing up against the food cupboard, and so on)
which are accepted symbols of communication; and correspondingly
a variety of human gestures and tones of voice come to be
recognised and interpreted in different consistent ways by the
cat. Through the use of such a language as this the animal
comes to express a distinct personality within the family,
which is analogous to a human personality.
expressed in the saying that "Evil is good that has ceased to work for the whole and is working only for itself". It is a misunderstanding of the privatio boni principle to suggest that it waters down the concept of evil to any degree. Evil is not a mere lack of good, but an active deprivation or damaging of good. The direct aggressive power, threat and malevolence of evil as a force in the world is not in question. The point is that the criterion for identifying whether a force or a will or a person is evil is that it damages or threatens to damage the good. This is a negative criterion. The nature of what is evil depends on the nature of what is good, but not vice versa. There is no positive criterion by which you can identify something evil for what it is, there is only the negative criterion that it hurts the good. This problem is usefully discussed by Robert Nozick in the section on "Value as Degree of Organic Unity" in his "Philosophical Explanations". As he says,

"Evil is not merely the absence of good, someone else's not being there; it is itself a presence, a positive force - I mean a negative one. We have the picture of some natural scale where evil does not merely receive zero on a scale of goodness, it receives a negative value... Disvalue is not merely the absence of value but a counterforce of some sort... Opposition is not mere lack of supporting, negation not mere absence of affirming."

The Early Structure of the Idea of the Self

An examination of the process by which the plan of the good child is detached and internalised, together with internalised images of approving and disapproving parent figures; of how this enables the child to establish his independence as a biological unit; of how it legitimises an element of aggression in the personality; and of the nature and importance of ontological security.

In pressing on to these conclusions I have in one respect been moving on too fast. There is an obstacle to be considered. If the original idea of an anticipatory Self is the plan of the good child, which is ultimately determined by the approbation and disapprobation of parent figures, why should this process not go on, as the child

grows older, so that he develops all the time a more complicated continuing Self, but one still matched to the parent figures around, and consequently not fundamentally an own Self at all? The process does not in fact go in this way. At an early stage the plan of the good child is broken off and internalised. And the reason would appear to be threefold. The internalisation of a primitive good Self ensures first that the child has a compass within, by which it can be guided if the parent figures, with their signals of approbation and disapprobation are not around. Secondly it ensures that the task of integration does not become impossibly complicated; the internalised ideal Self, by reference to which he has to make his choices, does at least remain more or less the same, except for any new plans he adds himself; he does not have to dig up and reorganise his own past all the time in response to capricious signals from surrounding parent figures, signals which are bound to become more unpredictable and idiosyncratic to the parents as the circumstances of the life of the growing child become more complex. And thirdly - most importantly - it establishes the child as an independent developing personality, an own Self that is not a mere reflection of others and so can enable the whole mind-body system to function as an independent biological unit.

When the plan of the good child is internalised, it is evident that the parent figures have to be internalised too, since without the attraction of their approval and the fear of their disapproval the incentive to be good would be lost. They represent in fact part of the scenarios of the possible plans of the continuing Self, certifying some of them by their approval as "good" plans and giving a bad taste of disapproval to possible "bad" plans. On the face of it this means that the child, as he or she grows up, has to internalise two continuing persons, not only that of the good child, but also that of a sort of composite parent figure expressing encouragement of this and discouragement of that. But these are not parallel persons, their functions are quite different. In terms of the model developed earlier in this study, the first is the core of the conscious idea of the Self, to which, after consideration and weighing of alternatives, new plans are added, layer upon layer, as life proceeds; the second have the function of influencing
the choices of the first and this means affecting the nature and intensity of the emotional coloration of alternative courses as they are imagined and weighed in the balance, making some appear desirable and others repellent, with all shades between.

The suggestion developed in this study is that the emotional coloration of conscious life is due not to the ideas grasped in explicit succession as logical forms at the focus of consciousness, but to the accompanying groundswell of innumerable ideas not separately and explicitly recognised at all but contributing simultaneously and in aggregate as the overtones, harmonies and dissonances of consciousness to the nature of the conscious experience. Thus if they are to carry out their function the parent figure associations must operate at the unconscious level, adding their emotional impetus to the purposive cycles which occupy the conscious mind, but distinctly separated from the explicit conscious plan of the good child, which is that of the continuing, independent Self.

Indeed they need to remain unconscious and separated from the Self not least because in the normal case there is a continuing relationship in the real world with the real parent figures, who may well on occasion do things which are strongly dissonant with the associations of the introjected parent figures. This relationship can now develop on a new basis as between free, separate, but interdependent personalities. In the earliest stages, it would seem, the boundary between the child’s Self and the parents is often not clearly drawn in the child’s mind, since its own identity is so closely linked with those through whom alone it can exert any effect on the world. The fact that they do not always do what the child wants is not immediately incompatible with this, because the child still does not have an established continuing identity. It can identify itself with the angry parent at one moment and the rebellious child at another. The emergence of a continuing Self makes it possible to establish a continuing identity over and against that of the parent figures - and over against not only the real parent figures but also the introjected rewarders and punishers; for the rewarders and punishers cannot affectively perform their functions if they are identified with the recipient of their attentions.

The new relationship with the real parent figures is still normally a very close one, but it is one in which the participants are recognised
as separate and free, yet at the same time part of a wider complex whole, in such a way that what hurts the one hurts the others, and what gives pleasure to the one gives pleasure to the others. This is love, a relationship of freedom combined with acknowledged interdependence. If I love my neighbour as myself, I do not confuse my identity with his, but I do identify his fate with mine, I identify myself with a whole of which we are both necessary parts. The plan of the good child itself fundamentally implies the adoption of a social role, as we have defined the phrase, one pole of a relationship of which the opposite pole is represented by the parent role. The child and the parent learn from each other how to join together in this relationship of mutual love. At the same time it is important to note that the emergence of the new independent role gives for the first time a sort of legitimacy—in appropriate circumstances—to aggressive behaviour by the child. In the earlier stage the accepted parent role includes both rewarding and also punishing, aggressive behaviour; but the child, when it is being aggressive, is not conforming to the role of good child; aggressive behaviour is naughty. Once the transition is made, however, to a continuing Self, with its own introjected if unconscious parent figures, the possibility arises that aggressive behaviour may be approved and supported by the internalised parent figures when it is directed not against them, but against others—usually in practice the real parent figures. This arises the more readily because the boundaries of the Self may not yet be firmly drawn and the tendency to identify the Self with the internalised parent figures, instead of clearly establishing its independence, may easily assert itself. If the real parent figures do anything which the child judges to be "unfair" (an idea which arises deep in the original layers of the personality and appears to be linked to the emergence of the idea of good faith and social obligation) they are more likely than anyone else to become the objects of this new-found righteous indignation. The harnessing of aggressive feelings on behalf of the new Self is no doubt essential to facilitate the establishment of a fully independent personality; but the integration of aggression into the approved plan of the Self is clearly a matter of great moment for the future.

The establishment of an independent personality must inevitably bring with it a sense of the precariousness of that personality and a need to
sustain and defend it. It seems likely, therefore, that this is the stage at which we can identify the beginning in human consciousness of a certain preoccupation with what other people think, and consequently with what Erving Goffman called the presentation of the Self. Rom Harré has argued strongly that the preservation and maintenance of honour and reputation is in fact the chief concern of all human beings and the structuring principle of human society.1

It will be evident that in much of what I have been saying I have been describing, from a different angle and in terms of a somewhat different model, the process which Freud described as the emergence of a special modification of the "Ego" which "stands in contrast to the other constituents of the Ego in the form of an Ego-Ideal or Super-Ego." 2 Freud describes the Ego-Ideal as "a precipitate in the Ego" consisting of twin identifications with the father and the mother "in some way combined together", the relative intensity of each reflecting the preponderance in the individual of the two sexual dispositions. He goes on "The Super-Ego is however not merely a deposit left by the earliest object-choices of the Id; it also represents an energetic reaction formation against those choices. Its relation to the Ego is not exhausted by the precept: "You ought to be such and such (like your father)"; it also comprises the prohibition "You must not be such and such (like your father); that is, you may not do all that he does; many things are his prerogative."

This double aspect of the Ego-Ideal Freud describes to the effect of the repression of the Oedipus complex. It seems to me that there is a tendency here to treat the adoption of a role placing to the parent figure too easily as an identification with the parent figure. There is indeed a certain link; love, as we have seen, is always a kind of identification with the loved one; what hurts or pleases the loved one hurts or pleases me. But it is not strictly an identification, or ought not to be; it is a recognition of both as parts of a combined whole. There is distinction as well as combination and it is a commonplace of both the analytic and psycho-analytic schools that the establishment of this distinction is essential to the emergence of a

1. "Social Being" (Blackwell 1979). See also above page 143.
2. "The Ego and the Id" (Hogarth Press) 5th impression 1949, p. 44.
a truly independent Self. As Dr. Anthony Storr has put it,

"the hypothesis seems inescapable that the infant's world consists originally simply of itself; itself not separated from the mother who tends it, nor from the blankets which cover it... In the beginning was All and Everything, the wholeness which comes from total dependence... It is only gradually that the small child begins to be aware of himself as a separate entity and at the same time to be aware of other people as separate also. It is probable that this loss of the original or primary identification with the mother takes place partly by means of the child becoming orientated in space through the discovery of the boundaries of its own body... This realisation of separateness leads, I believe, to anxiety and fear... it becomes expedient for the child to try and please the adults for fear they may abandon it or punish it... and it is therefore expedient to assume the aspect and mimic the behaviour of those upon whose benevolence one's security depends."

The effect of successful analytic treatment is to enable the true personality to emerge and "to cast off identifications which have been made solely on grounds of security".1 Dr. Storr's account is in general admirably clear, but it seems to me that he also is too quick to regard a role intended to please the adults as identical with a role "mimicking the behaviour" of the adults. Both can occur, but they are two very different things; and in our present context, where it is our concern to try to establish the original nature of the independent Self, the difference is crucial.

Dr. R.D. Laing gives an account which is similar in its fundamentals to Dr. Storr's, but adds some points of interest:

"The initial structuralisation of being into its basic elements occurs in early infancy. In normal circumstances this occurs in such a way as to be so conclusively stable in its basic elements (for instance the continuity of time, the distinction between the self and not-self, phantasy and reality) that it can henceforth be taken for granted... The individual then may experience his own being as real, alive, whole; as differentiated from the rest of the world in ordinary circumstances so clearly that his identity and autonomy are never in question; as a continuum in time; as having inner consistency, substantiability, genuineness and worth; as spatially co-extensive with the body; and usually as having begun in or around birth and liable to extinction with death. He thus has a firm core of ontological security."


The suggestion that the initial differentiation of the continuing Self corresponds to the emergence of the role of the good child might seem to be at odds with the fact that this is precisely the role which is most often assumed as what Dr. Laing calls a "false Self" by schizophrenics and others who are lacking in "ontological security". Against this my contention would be that in such cases we are dealing with a false role of the good child; what Laing would call the true Self behind the false one is - insofar as it is an entity continuing from the past on into the future - the true role of the good child. For what else is the true Self but the good Self? How else can a true continuing Self find shape and definition? I think Dr. Laing would himself agree with this. "One's first social identity", he says in "The Self and Others", "is conferred on one. We learn to be who we are told we are." 1 It is necessary however to bear in mind that we are here dealing with psychological man. The actor, biological man, comes first before any continuing role is adopted, and it is he who carries the potentiality for love; but it is only at this point, with the adoption of the first continuing plan, the actuality rather than the potentiality of love, that psychological man begins. The basic role of love is the same for everyone, since it is on that foundation alone that the personality can develop in such a way as to realise the destiny of the whole man, biological man. The essential distinctions to be drawn are those between the primary identification with the mother in which, as Storr points out, there is still no differentiation of a real Self, the adoption of the role of a good child pleasing to the parent figures, and the superimposition on this role of secondary identifications (mainly, in the early years, of the parent figures themselves).

The adoption of secondary identifications is up to a point a normal part of growing up, but insofar as they are adopted through fear or anxiety they must eventually be cast off, as Storr suggests, if full maturity is to be achieved. There are many case histories to illustrate this, of which the case of Mary Barnes may be taken as an example. Dr. Joseph Berke says of her:

"She had to separate herself from relationships which had taken place in the past, apart from people or events in her present. The distinctions she had to make were not only

between the here and there, but also between the then and now. If she could manage this, she would probably find the 'real Mary'. This person had been buried under more than forty years of conflicting identifications with her mother, father, brothers, sisters, uncles, aunts, extended family members, school teachers, and everyone else whom she had incorporated, with or without projected fragments of herself."

The key to the puzzle is perhaps the need which Laing has identified for ontological security. As an infant I am ontologically secure if I am good and my environment, complete with the parent figures who dominate and determine it, is good. As a grown person I am ontologically secure if I am at home in the world, if I can accept myself as basically good and accept that my environment, with the fate that governs it, is good; as most men would say, that God is good. There is an element of tautology here because the very meaning of the word good is rooted in the sense of ontological security. Now it is clear that from the earliest days the child's idea of his or her parent figures, and of what they want him or her to be like, may not be accurate; and that once these ideas are introjected and cease to emerge into consciousness they may become widely at variance with what the child's own conscious assessments would suggest. Moreover there are from the outset many other elements in the Self besides the plan of the good child—notably an unruly throng of wants and desires, frustrations and aggressions. But I am proposing only that the idea of the good child, related to what these parent figures are thought to want, provides the core role of the anticipatory Self, not the total Self.

I should perhaps re-emphasise here the distinction between the long term plans which exercise constraint upon future action, and the


2. In Eriksen's terminology the equivalent of Laing's "ontological security" is "basic trust". ("Childhood & Society", Paladin edition 1977, p. 222-224). Frank Lake is another example of a therapist who has developed, as part of what he calls his "ontological model" a similar conception of the need for "acceptance", which makes possible "being-itself". He offers a detailed "ontological analysis" of the normal mother-child relationship and of the way in which flaws of different kinds in this relationship can underlie the different major types of neurosis. ("Clinical Theology", DLT 1966: "Tight Corners in Pastoral Counselling" DLT 1981.)
past plans or ephemeral present plans which still form part of the total idea of the Self as it exists in the mind. For the Self, as Laing indicates, is co-extensive with a body differentiated from the rest of the world, continuous in time and therefore possessing a history. Reverting to the terminology used earlier in this study, we can say that the total Self is biological man, with his life-course from the cradle to the grave, and the idea of the Self in the mind-manifold reflects this whole Self, with all its remembered past plans and their accompanying scenarios. But completed and discarded plans and past history have no relevance to purposive thought and decisions in the Here Now except insofar as they help to lead to the adoption of persisting plans that project into the future - again with accompanying predicted scenarios, though these must necessarily be highly generalised in nature. The form of the anticipatory Self changes with time, as plans of shorter span are acted out to their conclusion and as new plans extending significantly into the future are adopted; but, as already noted, it is always from the beginning an ideal Self. The infant does not always, by any means, act in accordance with the plan of the good child; nor does the adult, in his shorter term decisions, always adopt plans which conform to his own longer term idea of himself. But such delinquency brings punishment from the Super-Ego, as Freud would say; and although the Ego in particular situations may do things which are quite incompatible with the role of the good child, or of the established anticipatory Self, normally there is in neither case any question of a different, rival anticipatory Self getting established. This does indeed happen sometimes when within a person different, conflicting anticipatory Selves, reflecting different persisting wills, take root together, identifying their own goal images and personal plans leading to them. But this, when it happens, is always a more or less pathological situation. The deeper within the core of the Self the division lies, the more serious the situation is. What can produce mental illness at the unconscious levels of the coherence of the Self, as with Mary Barnes, can at other levels lead to moral delinquency and crime - which are also arguably to be classified as pathological phenomena. William Law was reflecting the traditional wisdom of the confessional when he said:

The multiplicity of wills is the very essence of fallen nature,
and all its evil, misery and separation from God lies in it; and as soon as you return to and allow only this one will, you are returned to God and must find the blessedness of his kingdom within you.

The name of the devil who entered into the herd of Gederene swine was Legion. Any independent centre or centres of will within the personality are dangerous; they are indeed what an older usage called demons, and the word fits even when they are relatively benevolent in nature, like the muse or "daemon" that may seem to a writer to take over and use him as an instrument of its own creative power. We may note that Jung has defined demons as "interferences from the unconscious" and Freud is quoted as saying "In our eyes the demons are bad and reprehensible wishes, derivatives of instinctual impulses that have been repudiated or repressed."

The Origins of Neurotic Stress

An account of the origins of neurotic conflict in the personality in terms of the incompatibility of plans adopted at different times by the anticipatory Self.

It will be recalled that in terms of the model which has been developed in this study the root of neurotic conflict in the personality lies essentially in the tension between plans which are incompatible with each other. In a given situation, through the processes of the purposive cycle, a goal is established, alternative plans are evolved for achieving it, they are compared and evaluated for desirability and feasibility, and then they are weighed, as it were, against each other in an emotional scale. One of the main criteria for evaluation is that of compatibility with the existing anticipatory Self, that is with the plans, long term and short term, which have already been adopted into the Self and which have not yet been acted out to completion. Any sharp dissonance between a new plan and the existing anticipatory Self, especially as represented by its most fundamental long term plans or "ideal roles" produces a painful emotional charge which is likely to outweigh the emotional attractions of the new plan. In the normal case the new plan is abandoned and

2. "Psychological Types" (Kegan Paul 1946) p. 139.
either a different way is found of pursuing the goal in question or the goal itself is abandoned as impossible of achievement. The abandoned plan or the abandoned goal are not repressed out of memory (though time may gradually obliterate any recollection of them). They remain part of the idea-complex of the Self but they are definitively not adopted, they are not part of the anticipatory Self.

Difficulties may arise, however, in two ways: first when a situation arises in which, as sometimes with bereavement, it is no longer feasible to work out any plan which is compatible with the preservation of a basic ideal role; and secondly when the pull of an incompatible plan is so great that the mind is unable to relinquish it and keeps coming back to it.

The first of these situations is perhaps the most threatening and is liable to arise at the deepest level when there is a threat to "ontological security", that is to the basic role of one who trusts and loves the enveloping power and knows in turn that he or she is loved. If a baby is separated for a prolonged period from his mother, or undergoes some comparable experience of deprivation, it becomes harder and harder for him to maintain this basic plan or ideal role, the one which grows in due course into the role of the good child. In his efforts to preserve this role, if we are to follow Frank Lake's analysis, he feels increasing separation anxiety which may grow into terror, dread and despair; and in reaction he may develop fantasy plans either of aggressive behaviour accompanied by rage, or of "libidinal" imaginations of the mother's return, accompanied by separation from reality. These are defences against ontological insecurity, a threatened disintegration of the continuing, anticipatory Self, of which the core is the role of trusting, loving and being loved. When the mother does return, or there is some equivalent restoration of security, in a favourable case all this experience recedes into the past and is gradually and healthily forgotten. But in an unfavourable case the experience leads to lasting damage.

Then the rage, the lust, the terror and the despair are repressed from consciousness, together with the plans to which they relate, plans directed towards goals of aggression, possession, flight and

1. Lake was here following Pavlov and applying what he called the Pavlovian theory of Transmarginal Stress, a theory also applied in a different context, by William Sargant (Cf. "Battle for the Mind": Heinemann 1957).
relief from pain; but in repression they are not obliterated, they are still in some sense incorporated, though unconsciously, into the palimpsest of plans which is the continuing anticipatory Self; and so they continue to distort the individual's pattern of reaction to life, mainly through the effort which is required to keep them from expressing themselves directly. We find, to use Lake's terminology again, the anti-libidinal super-ego, or the anti-aggressive super-ego; or we find compulsive or obsessive mechanisms, or mechanisms of denial or projection, all of which sap away at the individual's capacity to live in trust and freedom, as one at home in his world.

It would take me far beyond the framework of this study to develop these ideas in detail. My present aim is to show that widely accepted basic categories of psycho-therapy can be linked into the model developed here; and in particular to emphasise the importance which is attached, on this model, to the issue of whether a particular plan is or is not adopted as part of the anticipatory Self. If it is, then it becomes part of the Self which reacts to the contingencies of the world; but if the Self's reactions are to lead to effective regulation of the individual's life, it is essential that the profiles which it presents in particular contingencies should be related to a reliable assessment of the facts and probabilities of the real world. If this is not the case, if the anticipatory Self includes plans which are in some sense based on fantasy or denial or projection, then either the individual is living in a dangerously unreal world, or else, in order to carry on normal life, he has to expend great effort on the repression of what is incompatible, so that suffering or distortion of the personality results in one form or another.

Why need this ever happen? Why does the Self not simply reject the unrealistic plans and roles? The answer seems to be that it is usually prompted to these defences by the danger of disintegration. The fantasies, denials, projections and so on which the Self does adopt are defence mechanisms, whose function is to protect it from ultimate horrors which cannot be faced — life, for a baby, total separation from its mother. A bereaved person also has to face a drastically changed reality and the process of adjustment, even in a normal case, may well involve a degree of delusion or living in fantasy for a certain time.
But in the pathological case the adjustment is never fully made. Similarly if the baby's fear of ultimate rejection is never fully exorcised, the defensive fantasies that go with it are never entirely rejected, even though they may be repressed from consciousness. And one reason for this may be an inability to face the reality of the unacceptable past because of the explosive power of the emotions of fear, rage or hatred that would then be released. It has in fact been suggested that a defensive mechanism such as depressive withdrawal may sometimes be brought in at the very beginning, specifically so as to prevent the full effect of other defensive fantasies and the emotions they would generate from being experienced even at the outset; and this may be one reason for the ferocity with which these emotions sometimes break out when they are eventually released.

Since the early investigations of Freud it has been known that the bringing of repressed material into consciousness can lead to an "abreactive" experience of great intensity, and that this in turn can lead to a process of healing if the buried experiences can thereafter be accepted and in some sense integrated into the conscious Self. Such integration is possible if the established structure of the anticipatory Self is strong and coherent enough and if the buried experiences can be seen in a new perspective in which they no longer represent a threat to the coherence of the Self. As psychotherapists generally recognise, a sufficient degree of "ego strength" is necessary if the Self is to have the capacity in this way to absorb and integrate what was previously kept out of consciousness.

Attention needs to be focussed, however, on what is meant by "integration" in this context. According to the model developed in this study it does not mean the integration of formerly repressed plans into the continuing anticipatory Self. On the contrary it means the final definitive exclusion of plans and fantasies which the Self was previously not strong enough to abandon. If I discover that as a small child I felt a fierce anger and hatred towards my mother, linked to aggressive fantasy plans, it may be very salutary for me to realise and face this fact. But if I am effectively to "integrate" this discovery my first need is in fact definitively to exclude it from my
continuing idea of my Self. At the same time I allow the facts of the past experience and the force of the emotions involved to take their part as elements in the total idea-complex of the Self in the mind-manifold, no longer barred from retrieval into consciousness; and this requires not only abandonment of the original fantasies as part of my continuing anticipatory Self, it also requires abandonment of the "super-ego" plans or ideal roles which previously applied instant repression to ideas drawn from the forbidden past.

This section represents of course no more than a sketchy indication of how the model of the mind developed in this study can be related to models widely accepted in the world of psychotherapy. But it may be sufficient for this purpose. The point I would wish to labour, and one to which I shall return in a later context, is the point just made that healing does not entail the "integration" of previously unacceptable ideas into the continuing anticipatory Self, rather it means their final definitive exclusion from the continuing Self and their release, together with their associated memories, into the more or less accessible store represented by the total idea-complex of the Self in the mind-manifold. Models of the mind - and I am thinking of Jung's in particular - which are not able to accommodate this sharp and important distinction are liable to lead to serious misapprehensions.

The Growth of the Self

An account of the process by which the adult personality grows to maturity and of the problems of sincerity and authenticity which emerge in the process.

There is simplicity in children's reactions, mainly because the roles they adopt are of relatively short span. To be a good child is to adopt the immediate behaviour which pleases the grown-ups around; and as a child one may do this simply because one loves them and wants to please them, or simply because one is afraid. At another moment one may rebel because one is being frustrated by the grown-ups and is angry with them, hates them; or else because one is no longer sufficiently afraid and thinks one can get away with it. While a child is loving he is very loving, while he is hating he is very hating, and he does not
bother about trying to reconcile the two in some longer term consistency. Because he is one thing at a time and is not trying to remember one plan while he adopts another, and because the range of possibilities he is dealing with is so greatly restricted by the shortness of the span over which he is looking, questions of integrity hardly arise. There is thus a genuine innocence about childhood which is reflected in the directness of the works of art which children produce.

This innocence is not lost with the establishment of a continuing, anticipatory Self. Children commonly produce good naive works of art up to the age of eight or ten, long after the emergence of the Ego-Ideal. What then happens eventually to destroy simplicity? The answer seems to be: the increasing possibility of alternative choices. The "shades of the prison house" which close, as Wordsworth complained, around the growing boy, are shades of complexity and calculation that come with longer spans of thought. We have already noted the immense complexity of alternatives to which a situation of sequential choice can give rise. The initial idea of the Self as good child is sufficient to carry a child through early years within the protection and certainty of the family, providing a core of coherence round which his personality is gradually built up. Through this he can elaborate in exchanges with people and things in the environment his initial understanding of the world; but it is nevertheless not enough to enable him to deal with a wider world.

In this early phase a child passes through a great wave of learning, concerned primarily with two kinds of knowledge: first of people and relationships within the family or its analogue; and secondly of the means of learning and communicating - that is, of language itself. By the age of six or eight, however, a child is usually beginning to come into effective contact with the outside world, and by eight his powers of language acquisition are already falling fast; never again will he acquire a mother tongue. As school age, or its equivalent, approaches, a child in almost any society begins to become personally aware of a great many more people and ideas, both in his own experience and (at least in some environments) through media such as books and films and television programmes. Most of all he is likely to become aware of a
peer group of other children of the same age who remain a strong influence throughout the middle years of childhood. At the core of him there remains the plan of the good child, which was always his own plan, even though in elaborating it he might be guided, encouraged, driven by the surrounding adults - and even though he might fail to carry it out: for a small child’s naughtiness is essentially, to use an ancient word, concupiscence, the pursuit of incoherent short term desires, not pride, the adoption of some long term counter-plan. Now, however, he may find that his peer group defines for him a different plan which is hard to reconcile with his first identity. The range of his knowledge, his capabilities and his purposive activities is rapidly extended and, with this extension, situations are constantly arising in which the limited central plan of the good child does not give sufficient guidance. He extends it therefore by taking models for imitation - older or more dominant children, teachers, heroes from books or the television screen, even the original parent-figures. For it is only at this later stage - again in the normal case - that a child will become, if he can, proud of his parents or parent-substitutes in relation to other people, identifying himself consciously with them and taking them as models for imitation in defining his own plans and his own identity. (It must be remembered that performing a plan that pleases people is not the same as imitating them).

It is thus not unreasonable as a generalisation¹ to describe the whole period of middle childhood and early adolescence as one of learning and of borrowed identities. The child is trying on all kinds of plans, not in a random way because they have to be accommodated somehow to the identity built up in his early years, but as it were experimentally, with a readiness to discard plans as easily as he tries on new ones, and with a certain licence from society, which does not yet hold him fully responsible for what he does. In this phase the direct simplicity of the small child tends to be lost. His identity is extended, but to a large extent with borrowed and fluctuating plumage; and the consequent loss of first hand authenticity is reflected in the works of art produced at this age. The poem which follows, written by a child of nine, shows something of the transition from the

1. Indeed it is generally accepted doctrine. See e.g. Erikson’s "Childhood and Society".
first state to the second:

O garden sweet with scent of roses
And flowers of every hue,
Where the great red poppy grows
And mignonette grows too.

Go away weeds
We don't want you
To choke the poppies
And cornflowers blue.

Varied sweet william
Grows just here
By the brook
So clear, so clear.

Green leaved ferns
Live by the brook
And make it a fairyland
In a book.

There are different voices here. The first verse has a rather grown-up air; the second has more of the directness and vividness of a child’s own reactions; the last two give a more uncertain sound; and the final line shows why – the fairyland comes from a book. The whole is a mixture of the authentic and the second-hand.

When an adolescent becomes an adult, usually with some formal change of status, he finds himself thenceforward held responsible for his actions, and in particular for maintaining in good faith and consistency the major roles which he has adopted. He is expected to stick to longer term social roles which are coherent with each other and to carry out the obligations which they entail. This is necessary because, as we have already seen, good faith in the carrying out of obligations is the warp and weft of human society. And there goes with this need a social regard for sincerity, which is essentially the characteristic of a man who is to be relied upon because he is acting in a role that fits into a plan fully adopted as part of his continuing Self, and fully coherent with it. The effect of sincerity is simply that a man's plan in adopting a role, and consequently his motives, whether of desire or of aversion, for carrying it out, are what they seem to be; otherwise that his actions are not the expression of some hidden plan, related to hidden motives. It follows that there can be two kinds of insincerity, the first that of the Machiavel, where concealment is conscious and deliberate, and the
second - which can be distinguished as inauthenticity - that of the 
neurotic, where it is due to a flaw in the anticipatory Self, a lack 
of inner coherence which means that a man cannot do what he intends 
with conviction because there is some deeper allegiance within himself 
that pulls him away from it, or towards something else that is 
inconsistent with it.

The consolidation of the Self at this stage represents the 
emergence of the adult personality. Inevitably this personality is 
shaped to a considerable extent, in its constituents even if not in 
the more idiosyncratic whole, by the social environment in which the 
man or woman has grown up. It is hardly surprising that initially the 
personality is often insecure and variable, nor that conflict may 
develop between the need for coherence and the roles which society 
offers or demands. Integrity requires that a man should adopt plans 
and roles that are consistent with each other, compatible with the 
state and nature of his physical body, and feasible in the circumstances 
of his life - though ultimately there can be situations in which it 
requires the sacrifice of life itself. As this implies, however, if a 
man is to maintain his integrity in all circumstances, he needs to have 
an idea of himself which is clear enough to enable him to know in all 
circumstances what course is consistent with his "true" Self and what 
course is not. But we know that this is often not the case. Hamlet 
might have agreed with the advice of Polonius to Laertes "to thine own 
self be true"; but, as the whole play shows, this was not for him a 
simple matter. The problems and difficulties of being true to oneself 
arise partly because a man's governing plans are inevitably generalised 
in nature and can be worked out in particular detail only as his life 
unfolds; and as the detail is worked out inconsistencies and conflicts 
can appear between plans which in the broad were compatible enough. 
Moreover, as life unfolds, new purposes and new plans develop whose 
implications for the integrity of the continuing Self are not always 
immediately evident. More subtly and fundamentally a man may not be 
able in a particular situation to identify any clear structure of the 
Self which is relevant in the circumstances, or, if there is one, it 
may seem to him or to others false or insincere - not the real man. 
If the others around him continually reject, brutally or (as is more
often the case) subtly and even without being consciously aware of what
they are doing, his own idea of himself, he can be placed in a desperate
situation.

It is useful here to distinguish the physical plans from therrest.
By physical plans I am referring to those which are associated with the
needs and capabilities of a person's own body. This is like other
bodies but none the less unique - not only in its own precise details,
but more particularly in its unique trajectory through space and time,
leading through situations which are different from all others (at least
in their details) and which in their succession build up a history that
is cumulatively still more unique. From the point of view of identifying
the authentic idea of the Self, however, what matters is not so much
the uniqueness or otherwise of the plans associated with a given body,
but their necessity. For certain purposes the existence of a given
body with a given history restricts sharply the plans which it is open
to a man to adopt, and gives a certain inescapable authenticity to those
which he does adopt. If I was crippled in a certain way with polio
in my youth, I will be confined to a wheelchair and my physical plans
will be restricted accordingly; the wheel chair man is then in relevant
perspectives my 'real Self; there is no choice and so no question of
doubt.

Up to a point the same kind of argument can be used in relation
to personal plans and social roles. If I am an Englishman brought up
in England and speaking only English as my mother tongue, there will be
various things about me that are inescapably conditioned by these
circumstances, and which, being inescapable, are in a simple way
authentic. With an adult in a modern Western society this argument
does not reach very far; there remains an enormous range of possibility
over which I have to decide myself who I am to be. Here the distinction
drawn earlier between personal plans and social roles is important.
A plan is a pattern of behaviour leading the Self positively along a
path towards a goal image or negatively away from an aversion image -
though the goal may be remote or even timeless, as when it takes the
form of being like a particular hero figure. The anticipatory Self is
built up of personal plans, and preponderantly these are of the positive,
not the negative, kind. Social roles, by contrast, are patterns of
behaviour which represent the appropriate roles of particular social relationships. A particular situation in a particular society offers only a limited number of social roles and may require, under penalty, that given roles be adopted in the interests of the coherence and persistence of the society itself. A particular individual lives in a particular place and time and has to imagine and adopt his personal plans within the range of what is conceivable and possible in that place and time; and his personal plans are bound to embrace a great number and variety of social roles.

If some or many of these are obnoxious to his continuing Self and adopted only under compulsion he can still up to a point retain his integrity if he is clear about this himself and frank about it to others. He may be unhappy but he will not be insincere. But this is true only up to a point; if the plan adopted under compulsion is fundamentally contradictory, rather than merely obnoxious, to his continuing Self, and in particular if it has effects on others which are incompatible with what can rightly be called his honour, then integrity is inevitably sacrificed. If he deceives others about it, he will be insincere in the Machiavel's mode. But it can often happen that he is at odds within himself about it, and hence insincere in the neurotic's mode. Every society and every thought community within a society will have its own values endorsing and requiring certain roles and frowning upon others; and there is likely to be some coherence between these general values and the patterns in which children are brought up, so that in a stable, unchanging society the core of the continuing Self tends to be relatively well adapted to the requirements of the environment in which the individual is to live. In growing up we all of us have to lose the naive integrity of the small child, but even so there are adults who somehow retain all their lives a kind of primal integrity growing straight out of their childhood. These are cases where a person's governing plans have effectively been defined without conflict by the society in which he has grown up. They are so totally enclosing and unreflective as to be beyond question and beyond choice. He makes decisions and adopts a variety of plans as he pursues his life, but the enclosing framework of his Self is given and linked to the framework of the social environment, which in turn is accepted just as the facts and necessities of nature are accepted.
In his admirable book "Sincerity and Authenticity" the late Professor Lionel Trilling makes the remark that we cannot say of the Patriarch Abraham that he was a sincere man; the question of sincerity can hardly arise with such a figure. Again he suggests that it would be absurd to undertake an assessment of the sincerity of that epitome of grief, Wordsworth's "Michael", the old shepherd whose son was drawn away to the city and destroyed by its corruption; the old man continues to work on slowly by himself at the sheepfold which he and his son had begun together:

and 'tis believed by all
That many and many a day he thither went
And never lifted up a single stone.

In either case the man's integrity is beyond our questioning because there is so much of inevitability about it. For it would not conceivably be in character for Abraham to sneak off with a few camels for a tour of the fleshpots of Egypt; nor can we conceive that old Michael is putting on an act; the wound is deep in his fundamental being, it is irremediable and we know it, as he knows it (even though perhaps, in a sceptical modern way, we may wonder whether he is not sometimes a little aware of the figure he is cutting before his neighbours). There is an important sense in which it can be true of people in simple societies and small groups, as it is of children, that there is no choice or ambiguity about their governing plans or their understanding and interpretation of the world around them - and this not because they are compelled by exterior force (though compulsion there may be) but because that is the way in which they have grown.

The distinction with which we are concerned is akin to that which was drawn by William James, following Francis W. Newman, between the once-born and the twice-born. The possibility of the once-born type of natural unreflective integrity in an adult however is usually dependent on the existence of an unquestioned social framework with given roles and a given understanding of the world. These conditions are more likely to be found in a tribal society or, within a more complex society, in a sub-system which reproduces something of the settled scheme of things that might be expected in an ageless tribal framework. It


has been argued that pockets of rural society in England before 1914, for example, have sometimes afforded conditions of this kind. Such natural integrity, however, becomes a rarer flower when great social changes take place over a short span of time, so that the environment in which a man grew up has much less relevance or appropriateness to the world in which his adult life is lived; as it does in any case when society grows more complex, social mobility increases, and correspondingly the range of possible roles and the scope for ambiguity in relationships is increased. Men begin to wear masks and then, with an access of self-consciousness, to wonder who they are and which mask fits them best. Often they find no answer.

The Achievement of Authenticity: A Historical Excursus

An attempt to indicate in the broadest terms how, since pre-classical times, human sensibility has evolved in relation to the search for sincerity and authenticity, in the countries of the West.

There is a historical perspective to this question and we shall need to give this some separate consideration, though I shall be able to provide no more than a few scattered generalisations rather than a systematic review. Different historical situations lead to different problems and different patterns of integrity. It is in a world far removed from Abraham's, one that has known captivity by the waters of Babylon, that the psalmist cries: "Lo, thou requirest truth in the inward parts; and shalt make me to understand wisdom secretly... Make me a clean heart O God; and renew a right spirit within me... O give me the comfort of thy help again; and establish me with thy free Spirit." War, captivity, trade and the growth of empires put an end to the isolation of nomadic and village communities, and thereby, in some degree, to the simplicities of the patterns of the Self available to men. In the classical world and in the world of the New Testament we are dealing already with complex societies, criss-crossed with the survival of age-old ways and imperatives, sometimes rural and pastoral, sometimes military and heroic. In the funeral oration of Pericles a questioning self-consciousness is strikingly extended beyond the individual to the nation, seeking out a justification for the policies
of Athens not simply in the magnification of the city's power or its Gods, but in terms of its virtuous role in the world: "our city is an education to Greece".

After classical times the Dark Ages swept some of this complexity of consciousness away, but in time a new complexity developed within the framework of mediaeval Christianity and feudalism. Yet it is important that mediaeval Christendom, though far from being a tribal society, remained a world with a fixed and given frame, in which people were born into their station within a strict social hierarchy, and broadly were held to it; in which the Church provided all the explanations and there was no serious questioning of the conceptual system by means of which she enabled people to come to terms with the world. The rules of social hierarchy and theological commandment were constantly being broken; but by and large even those who broke them did not much question their legitimacy, the necessity for "degree", or the real danger of hell-fire. And as a generalisation it is not unfair to say that mediaeval people tended to be unreflectively themselves. They had no lack of character or individuality, as "The Canterbury Tales", for example, so vividly demonstrate, but the framework of mediaeval society left little room for questioning or ambiguity in relation to their governing plans and roles. The faces in mediaeval pictures reflect this; a picture is first of all of a king and only secondarily of a differentiated individual. It is with the Renaissance that we find the development of a self-conscious interest in the individual person and his possibilities; and this is expressed in a new kind of portraiture of extraordinary power.

The Renaissance found its origin in the rediscovery of a lost ancient world, and this was matched by the discovery of new worlds overseas and an increase in wealth and the scope for social mobility at home. These new frontiers lay beyond the mediaeval framework of understanding and they led to an enormous enlargement of possibility. But they led also to the loss of old certainties. There was a new sense of the great potentialities of man, of man as the measure of all things, but also a new sense of man as an actor with multiple roles and uncertain identity, no longer sure where he was going or who he was.
As Trilling emphasises, "the sixteenth century was preoccupied to an extreme degree with dissimulation, feigning and pretence... 'I am not what I am' could have been said not alone by Iago but by a multitude of Shakespeare's virtuous characters at some point in their careers."

The man of the Renaissance still expressed themselves largely in Christian categories; but faith was no longer inevitable. The attitude of educated people to religion had become ambiguous, aware of alternatives, searching for new answers both within the Church and without, looking for means of expressing the new consciousness of the individual. Stoicism, a philosophy of self-discipline and self-cultivation, exerted a widespread attraction. Men were fascinated by the heroic ideal, the cult of the great man, but at the same time, with good reason, sceptical of it. The idea that greatness, achievement, the full development of a man's own potentialities, is its own moral justification begins to emerge, for instance in Marlowe, or in such a Shakespearean character as Macbeth. But it was never developed. For as the claims of religion became less dominating, those of the social order grew stronger.

This was the age in which the modern nation state began to emerge as a developed social order centred on a sovereign. It was the age which produced in such as Machiavelli, and later, as the nations became more established, in Hobbes, Grotius, Locke and their successors the first great modern theorists of the state and of sovereignty. The feature that draws our attention in the present context is their elaboration of the claims of society on man. Machiavelli begins not from the nature of man, or God's purpose for him, as a mediæval writer might have done, but from the given existence and necessity of the state, and his concern is essentially with how strong and effective government is to be established and maintained. To quote John Plamenatz, "the approved most strongly the moral qualities that make political societies free and strong, and individuals enterprising, bold and public spirited"; deceit for him was contemptible if it arose from cowardice or muddle, but not if it represented a bold stratagem adopted for a desirable end. Those of Bacon's essays which deal with morality and practical statecraft reflect an essentially similar view - no doubt in part derived from Machiavelli.

This is not the place to attempt an analysis of the way in which these ideas developed over the years; but it may suffice to suggest that with the consolidation of the modern European state came the consolidation of a conventional morality, endorsed by established religion but rooted more fundamentally in the maintenance of an accepted social order. This is not to say that it was a false morality; it has already been argued that any system of relationships must enshrine values of its own and some tension between individual values and those of society is inevitable. Nor was it static; there were differences in different countries, and within each country there were changes over time. But everywhere it reflected the acceptance of a more or less stratified society and the importance of knowing and accepting your station.

This was no reversion to the Middle Ages. It is significant that the problems of the individual seeking his individual integrity and identity within the given order were the recurrent theme of the great writers of the French "Grand Siècle". But integrity was not to be divorced from the conventional code of honour. The tragic conflict of passion with honour and duty is characteristic of Racine and Corneille. By contrast La Rochefoucauld is concerned to show up continually the underlying baseness and self-seeking of human beings acting apparently generous and honourable roles. The exposure and denunciation of hypocrisy is characteristic of the century and in particular of its greatest comic writer, Molière. This kind of exposure and denunciation, as we find it in "Tartuffe", is in a fundamental way a defence of the social order, expressing the requirement of society that men should not only act their proper roles but do so with integrity and conviction. The hypocrite is potentially subversive of established values, and the satire of the "Grand Siècle" is generally directed to seeking out the crannies of deception and self-deception in human nature, with a view not to questioning the existing code but to exposing departures from it and helping or compelling men to be honest in their adherence to it. This task could be pursued in a sympathetic as well as a mocking vein, as it was most notably in the case of Molière’s most famous character, Alceste in "Le Misanthrope", a profound study of the difficulty, perhaps the impossibility, of ever achieving true honesty.
in a human social environment.

By the middle of the 18th Century, though the framework of conventional society and conventional morality was more strongly established than ever, it was increasingly felt as a constricting cage within which it was impossible to be sincere. Things began to break. The hallmark of classical art is the capacity to achieve integrity and power of expression within the rules of a common and indeed conventional language. But the language had begun to seem dry and the expression trivial. In art the dams were first breached by the German Sturm und Drang, soon followed by the flood tide of Romanticism. In politics the French Revolution and the Revolutionary Wars created a great divide; they swept away for ever the certainty and assurance of the old order, even in countries where the old order survived or was in some degree restored. In morals the integrity of what Trilling calls the honest soul, the "honnête homme", straightforwardly at home within the old order, was replaced - not altogether but to a significant extent - by the sincerity of the anguished or defiant individual. There were attempts to create a new conventional morality of the revolutionary era, drawing on Rousseau and the stoic virtues of an idealised Republican Rome. These attempts, which we associate with the names of Robespierre and David, failed to take root, but they were followed by persistent further attempts throughout the 19th Century and after, by socialists and revolutionaries of every type, to generate a revolutionary consciousness within which individual sincerity could march with the full assertion of the values of a new social order. Marx argued that:

> the actual individual man must... in his individual work and individual relationships become a species being; man must recognise his own forces as social forces, organise them, and thus no longer separate social forces from himself in the form of political forces. Only when this has been achieved will human emancipation be completed.¹

In parallel a variety of attempts were made to purge and revitalise the traditional order, by harking back to an idealised Middle Ages, by turning to evangelistic religion, by developing the utilitarian ethic. But nowhere did it prove possible to build a new moral and social order.

either revolutionary or traditional, which men would take for granted, and within which a classical art could take root and grow. "Once-born" individuals there were; but the art which has been most influential and has seemed to strike the widest response in every national culture has tended, since the first outbreak of the Sturm und Drang and the later works of Mozart, to be that which reflects the individual's attempts to build his own integrity out of the material - or the ruins - of his own life.

Often indeed the subject is not so much the positive attempt to build a new individual coherence as a rejection - regretful or scornful, cold or passionately hating - of the accepted ethos of wholeness altogether, and a desperate turning to authentic feeling wherever it leads, however much it fragments and destroys the personality. Trilling has analysed this process with percipience. He draws attention to Diderot's remarkable dialogue "Le Neveu de Rameau", perhaps the first open confrontation of the "honest soul" and the "disintegrated consciousness", and to Hegel's equally remarkable discussion of this work, in which he argues that the disintegrated consciousness, abdicating integral selfhood, is a means of advancing Spirit to a higher level of conscious life". Rameau in the dialogue, like the hero of "The Sorrows of Young Werther", does not personally reject the accepted "noble" ethos of society, he simply cannot live it. Later, from Shelley and De Sade to Nietzsche, Baudelaire, Rimbaud, Kafka, Lawrence, Beckett, Sartre, and many others, the rejection may be far more violent. The pressures of society and morality are sensed as tending constantly towards the creation of a false person, made out of other people, not the real Self at all. The social roles, in our terminology, take over the personal plans. But the alternative is seldom another, more authentic, coherent person, it is a fragmented Self whose authenticity is bought at the price of disintegration and ultimately perhaps self-destruction. The search for authenticity leads easily to a cult of sensation or of strong feeling for its own sake, since in passion and sensation a man can experience a real, though fleeting, unity of mind. We may recall the revolutionary Decoud in Conrad's "Nostromo" of whom the narrator says: "He had recognised no other virtue than intelligence and had erected passions into duties".
The most sustained attempt to develop the idea that a man's self-fulfilment is its own justification was made by Goethe in "Faust", which occupied him at intervals for almost all of his long life. But Faust, a somewhat neurotic representative Man, in effect maintains the coherence of his personality only by ceaseless desire and activity:

Ein jed' Gelust ergriff ich bei den Haaren
Ich habe nur gewünscht und nur vollbracht
Und abermals gewünscht, und so mit Macht
Hein Leben durchgestürmt.1

Once the figure of Care, creeping through the keyhole, is able to reach him he is destroyed. In a Prologue and an Epilogue in Heaven an explicit attempt is made to justify Faust as "a good man in his dark striving" who, in spite of his crimes, at least never stopped trying. His ultimate redemption is shown as occurring through the intervention of the "eternal feminine" (in the shape of Gretchen with three female penitents led by Mary Magdalene making their applications to the Mother of God); but that conclusion is singularly unconvincing, essentially because it represents redemption without repentance by Faust himself.

England escaped revolution or invasion during the Napoleonic period and, as Trilling suggests, the solidity of the old order of society may in general have been stronger than it was in most parts of the Continent, so that it was perhaps more often possible to achieve the old-fashioned kind of sincerity growing from simple acceptance of one's place in an accepted world — that is, to be a character after the fashion of one of Dickens' worthies. He points out that in England one major novelist, Jane Austen, stood firmly for the sincerity, morality and truth that can be grown in a world accepting traditional values in a conventional way. Even in the early 20th Century this line finds a late, uneasy prophet in Rudyard Kipling (an admirer, as might be expected, of Jane Austen) and a mourner in Yeats.2 But the counter-current flowed too through 19th Century England and increasingly became dominant; while on the Continent, from the Revolutionary Wars onwards, even the traditionalists were self-conscious ideological rebuilders, not the simple inheritors and sanctifiers of a

1. I have grasped every pleasure by the hair; I have desired and achieved and desired again, and so I have stormed through my life.

2. Things fall apart; the centre cannot hold...
The ceremony of innocence is drowned.
settled tradition.

The hundred years or so from Nietzsche to the painter Francis Bacon have seen a continual intensification of the expression of man's alienation from himself and increasingly despairing attempts to overcome it. The Rilke of the Duino Elegies is characteristic in this respect:

Und wir: Zuschauer, immer, überall,
den alien zugewandt, und nie hinaus!
 Uns überfüllte. Wir ordnens. Es zerfällt.
Wir ordnens wieder und zerfallen selbst!

Characteristic also is the Eliot of "The Waste Land", with its famous epitomising lines:

These fragments I have shored against my ruins.

The scream of the expressionist, the nausea of the existentialist, the taste of dust and ashes that is so pervasive in the early Eliot, in Greene and Waugh and Hemingway, all are reflections of this situation. Its persistence as a major preoccupation over several centuries, and the rising pitch of hysteria with which it is liable to be expressed, are remarkable phenomena and suggest strongly that, although there have been many prescriptions — moral, political, aesthetic or religious — against this sickness, so far no lasting cure has been found. Yet there is often a sense that this anguish cannot be altogether in vain.

Fundamentally the point is Hegel's, that disintegration is a necessary price for advance to a higher level of consciousness.

Throughout his work Rilke shows a nostalgia for the once-born, for simple being. He develops a sort of iconography of those who come near to escaping what Hölderlin called the law of succession and thereby seems to reach a pinnacle of being: the child, the lover, the acrobat, the hero, the mourner. But man can never quite achieve, let alone rest in, the perfect moment, he cannot quite combine being and consciousness. Rilke turns from his nostalgia to develop the alternative that man's task is essentially to grasp the world and become conscious of

1. And we: spectators, always, everywhere,
 Turned towards the all, but never out beyond!
 It fills us to overflowing. We order it. It falls apart.
 We order it again and fall apart ourselves!
of it with intensity. Every age, he says, has its "disinherited ones" to whom neither the past belongs nor yet the immediate world; but our task is not to try to escape our tribulations, following the cheap distractions of the market place, but to face and accept them with joy and praise:

Sie aber sind ja
unser winterwähriges Leib, unser dunkles Sinngrün,
eine der Zeiten des heimlichen Jahres —, nicht nur Zeit —, sind Stelle, Siedlung, Lager, Boden, Wohnort. 1

In his recoil from the inauthentic he shows his affinities with the existentialists. But this is still not much more than a courageous gesture. Rilke does not tell a man how to establish his true Self; nor indeed any of the poets and artists take us far along this road. They describe or express the sickness — and they seem in no doubt that it is a sickness — but they do not offer a cure.

Note: The foregoing can claim to be no more than a broad, illustrative sketch. I have drawn examples from the history of ideas and from literature. But a similar evolution of sensibility can be traced in all the other arts. Perhaps it is clearest in architecture, the art form most directly related to human living. The Middle Ages saw an efflorescence of great architecture in an evolving but coherent style, for the most part by anonymous architects, and directed to the glory of God and the service of the Church. At the Renaissance there was a shift towards secular buildings and the expression of individual personality, especially that of great and dominant people — in Italian palezzzi, in French Renaissance chateaux, in the "prodigy houses" of Elizabethan England, like the Hardwick Hall of Bess of Hardwick. The classical language of architecture was rediscovered and although it was spoken at first with some strange inflexions, at least in countries at a distance from Italy, in due course a coherent, though again steadily evolving, classicism, reflecting a formal social order, established itself in different local varieties across Europe. This provided a language of splendour for palaces and cathedrals but also a civilized vernacular for humbler purposes. By the beginning of the 19th Century, however, some men were finding such a style inadequate for what they wanted to express. They looked for something more exotic in which to reflect their romantic natures, turning to Cathay or Morocco.

1. They are our winter foliage, our dark thought-evergreen, One of the seasons of the hidden year — not only Season — our point, position, ground and dwelling place.
or ancient Egypt or a revived Gothicism for inspiration. An earnest and in part successful attempt was made to speak a coherent and evolving Gothic language again, but this was applicable only in the limited corner of life now remaining to the Church. The classical tradition, meanwhile lived on — in England till the 1840s, in parts of the Continent much longer — only to give way ultimately to individualism, eclecticism and fancy dress; a capitalist individualism reflecting power and energy but often at the core an individualism alienated, not securely at home in the world. In the twenties and thirties of the 20th Century a new style began to emerge, one that seemed perhaps capable of becoming the true evolving architectural language of the machine age. But its development was halting and slow; a comparison with the amazingly rapid early evolution of the Gothic style, once the language of the pointed arch and vault had been invented, provides an instructive contrast. And after making a certain amount of progress the style began by the late 1960s to fall apart. Instead of a steady evolution architecture seemed to move by waves of fashion, made possible by photography, which rapidly exhausted themselves, like the short-lived but world-wide epidemic of matchbox slabs in the 1950s. The public themselves became disaffected to a remarkable extent from the ruling style, but could only express their revolt by turning to the sometimes undiscriminating preservation of all things old. The revulsion was perhaps mainly against an industrial society of vest organisations reflected all too faithfully in its building artefacts. But a significant element in it may perhaps have been due to the availability of means of unlimited reproduction — photographs in this instance — which in any art can easily lead to the dominance of fashion as against the slow evolution of a general language which each artist speaks with his own individual accent. The resulting inauthenticity is not that of a false, deceiving identity, but rather that of a collective, anonymous identity within which the individual feels that his Self cannot be expressed at any deeper level and within which in consequence he does not feel at home. The converse of this trouble arises when the artist, as perhaps happens more often in the fields of painting and music, finding no language available in which he can express himself authentically, proceeds to invent his own — necessarily an instrument of limited vocabulary by comparison with any developed language of art, and one which members of the public anyway may not easily be persuaded to bother to learn.

The Psychology of Wholeness (1)

The concepts of mental illness and mental health as they relate to the coherence of the idea of the Self.

Perhaps then we should turn to the doctors. Alienation used to be a name for madness. Modern psychiatric medicine is rooted in the
conception of madness as a mental illness affecting the integration of the mind, and of the doctor's task as that of restoring mental health, or wholeness. Its tradition goes back to the work of Charcot at the Salpêtrière on dissociated personalities, and to that of his most famous pupil, Freud. Freud did not discover the existence of unconscious mental activity, but he developed for the first time techniques for exploring and mapping the unconscious, for identifying sources of conflict in the mind and for bringing what had been hidden to the surface in order to make possible its reintegration with the conscious mind. His work has proved perhaps more relevant to the troubles of the alienated neurotic personality than to the extremities of the madhouse, and from an early stage it was seized upon by writers and artists also preoccupied from a different angle with the conflicts of the mind. The theory of the Id, the Ego and the Super-Ego gave a new expression to the problems of the disintegrated consciousness and the honest soul, new ways of identifying and investigating failures of sincerity or authenticity; and Freud's emphasis on the central importance of sex pointed to new patterns of wholeness to which the individual could aspire.

It has been said that for Freud a person's degree of mental health was to be measured by his or her ability to live in civilization with the minimum of unhappiness or the maximum of gratification; and his objective criteria of measurement were the ability to work and the full development of genital sexuality. But these are limited and relative measures. In a certain sense Freud denied the possibility of wholeness. Not only is there an inevitable conflict between the pleasure seeking of the Id and the requirements of society, but society has a protagonist within the gates of personality itself in the Super-Ego, a protagonist moreover who is distinguished by cruelty and malevolence. For Freud there does not seem to be any such thing as a single Self, there is no question of trying to achieve a closer approximation to some real authentic person who is there in potentiality, only a question of achieving the best ad hoc accommodation of conflicting elements with which to cope with a hard and tragic world. In a strange way the persons with whom he is dealing are not whole human beings, but those sub-
personalities, the Super-Ego, the Ego and the Id, and these in turn are but channels of expression for the fundamental instincts Eros and the death instinct. Of the Id he says that it "cannot say what it wants; it has achieved no unity of will". But the Id nonetheless has strong multiple wills and the Ego is conceived in relation to it, to use Freud's own simile, as a man on horseback, a separate personality in touch with the external world as the Id is not, trying to control and guide the Id; while the Super-Ego is conceived as the "harsh taskmaster" of the Ego. "The Ego develops from perceiving instincts to controlling them, from obeying instincts to curbing them. In this achievement a large share is taken by the Ego-Ideal, which indeed is partly a reaction formation against the instinctual processes in the Id. Psycho-analysis is an instrument to enable the Ego to push its conquest of the Id further still." It is perhaps fair to say that for Freud the true Self is the Ego, but the ego has no special identity, it evolves ad hoc as in effect the interface between an inner instinctual world and external reality, and the inner world will always continue to be populated by the multiple wills, or "object cathexes" of the Id and the separate personality of the Super-Ego, with its own separate roots in the Id, as well as the Ego itself.

Freud uses a very different model from the one developed in this study, and it is a model which does not lend itself easily to our present purpose of trying to identify an "own Self" to which, following Polonius, we can be true. The underlying image is that of a container within which there wells up a flow of blind instinctual energy, either libidinal or destructive. This energy has a sort of inherent directional urge towards appropriate objects in the external world, but can only make its way towards them through the interface of the Ego which channels the flow according to its perception of external reality, and subject to the interference of the Super-Ego, which is itself powered by deflected streams of the same origin. What is desirable is simply to achieve an adjustment to reality which permits the maximum unobstructed flow of instinctual energy. The Super-Ego has a function in this - though one which is often carried out with crude insensitivity - because it is a force which approximately reflects the interests of society, and

2. Ibid. p. 82.
so also the long term interests of the individual, as against the ruthless short term egoism of the Id. Freud's account remains a brilliant speculation which opened up important new territory for investigation, but his model seems to me to be ultimately unworkable, mainly because there is no clear distinction between the sources of energy, the roles, and the personalities or sub-personalities which act the roles. This is reflected in the lack of a clear distinction, at least in "The Ego and the Id", between the Ego-Ideal and the Super-Ego: elsewhere Freud refers to the second as the "vehicle" of the first, but the implications of this are not worked out, nor, to my mind, could they be in terms of the model.

The Psychology of Wholeness (2)

A discussion of the views of Jung, particularly in relation to the integration of the "Shadow".

In contrast to Freud, Jung laid emphasis on the unity or potential unity of the psyche. The underlying image with which he works is still by implication that of a sort of container within which the psychic energy or libido wells up. There are three levels within the container, that of the conscious ego, that of the personal unconscious and that of the collective unconscious, and at this lowest level the container opens into the limitless sea of the collective experience of the race. The psychic energy is in part channelled into the conscious activities of the ego or the persona; but this inevitably involves the differential development of some elements of the individual's potentiality and the repression of other opposed elements, which form the "shadow". There is a law of opposites whereby the more one side of a man is developed in his conscious life, the more the opposing side of his nature gains strength in his unconscious.

The persona is the mask, "the individual's system of adaptation to, or the manner he assumes in dealing with, the world... One could say with a little exaggeration that the persona is that which in reality one is not, but which oneself as well as others thinks one is."

1. "New Introductory Lectures on Psycho-analysis" (Hogarth Press)
   4th impression 1949, p. 88.
The conscious ego includes not merely the persona but also other elements of the Self brought into consciousness. It does not however correspond to the true Self, since this

"is a quantity that is superordinate to the conscious ego. It embraces not only the conscious but the unconscious psyche"; and

"however much we make conscious, there will always exist an indeterminate and indeterminable amount of unconscious material which belongs to the totality of the Self."

"The Self is not only the centre but also the whole circumference which embraces both consciousness and unconscious; it is the centre of this totality just as the ego is the centre of the conscious mind."

Beyond this, however, the Self is also the most central of the Archetypes. Each of these "is an irrepresentable unconscious pre-existent form that seems to be part of the inherited structure of the psyche... The archetype underlies the feeling-toned complexes and shares their autonomy." The archetype of the Self coincides with God's image, from which it cannot be distinguished empirically. "One can then explain the God-image... as a reflection of the Self, or conversely explain the Self as an image Dei in man."1*

The persona is not the true individual. In order to realise the true individual it is necessary to bring out repressed elements of the psyche and integrate them with the conscious elements; and this in turn can only be achieved through an upheaval, often of shattering impact, which involves the sacrifice of the "differentiated function" and the establishment of the "transcendent function", bringing about a free equilibrium of forces that reconciles the opposites. The means of reconciling them are provided by the archetypal symbols which emerge from the collective unconscious, and in particular by the archetype of the Self. The latter can find expression in symbols of many kinds, but does so typically in the concentrically arranged figures known as mandalas.

The whole process is that of individuation, defined as "the process of forming and specialising the individual nature."2. It leads to a

1. Definitions from various of Jung's works and quoted in the glossary to "Memories, Dreams, Reflections" (Fontene Edition 1967).
2. "Psychological Types" (Kegan Paul 1946) p.561.
sense of reconciliation and acceptance: "It is as if the leadership of
the affairs of life had gone over to an invisible centre... and there
is a release from compulsion and impossible responsibility".1 Jung
emphasises in "Psychological Types" that:

the saving factor is the symbol which is able to reconcile
the conscious with the unconscious and embrace them both...
The synthetic method develops the symbolic phantasies
resulting from the libido which is introverted through
sacrifice. Out of this development a new attitude to the
whole arises whose very difference generates a new potential.
This transition to a new attitude I have termed a transcendent
function. ...

Jung is very much aware, however, of the problem with which we
have been concerned of the adjustment of the Self to society. Referring
to the emergence of previously repressed material into consciousness,
he says:

Now herein lies the danger that the very forms with which
these things reappear, as well as their new and wonderful
brilliance, may so intrigue the individual that he either
forgets or repudiates all former values... This reversal
of values is tantamount to a destruction of previously
accepted values; hence it resembles the devastation of a country
by floods... When, in spite of all, the reconciliation of
the pairs of opposites transpires as a force majeure, the
danger of inundation and disintegration necessarily follows,
and in a peculiarly characteristic way, since the dangerous
counter-tendencies get smuggled in under the cloak of
correct ideas... Under no circumstances can individuation
be the unique goal of psychological education. Before
individuation can be taken for a goal the educational aim of
adaptation to the necessary minimum of collective standards
must first be attained. A plant which is to be brought to
the fullest unfolding of its particular character must first
of all be able to grow in the soil wherein it is planted...
The opposition to the collective norm however is only
apparent, since on closer examination the individual standpoint
is found to be differently orientated but not antagonistic to
the collective norm. The individual way can never be actually
opposed to the collective norm because the opposite to the
latter could only be a contrary norm. But the individual way
is never a norm. A norm arises out of the totality of
individual ways... [Individuation] though certainly concerned
with the individual bypath, precisely on that account also
needs the norm for its orientation towards society and for
the vitally necessary solidarity of the individual with
society. Hence individuation leads to a natural appreciation
of the collective norm, whereas to an exclusively collective

Introduction to Jung's Psychology" (Penguin 1953).
orientation to life the norm becomes increasingly superfluous; whereupon real morality /said elsewhere to be dependent on freedom/ goes to pieces.

Jung is clearly concerned, much more than Freud, with the discovery and expression of a truly unified Self. The aim of therapy is not simply to remove obstructions to the free discharge of instinctual energy, but rather to achieve a free equilibrium of forces, appropriate to the individual and taking account of his natural endowment as a human type (whether he is introverted, for example, or extraverted), an equilibrium that bubbles gently, as it were, in the container, and can be maintained without intolerable effort and repression. This idea may have some affinity, as Dr. Anthony Starr has claimed, with the concept of a homeostatic, self-regulating system, though it is to my mind a cloudy affinity, not supported by any detailed model. The equilibrium of forces, which involves interchange with the external world and consequently some adjustment to the "collective norm" of society, defines in effect the circumference of the Self; but its inner nature and form can be expressed only by an archetypal image which is also, as we have seen, a divine image.

Jung is a considerable figure, a man of many important insights. But I find myself thoroughly uncomfortable with his basic model and his terminology. His model is an elaborate one, but it seems to lack the precision of "clear and distinct ideas". He says that an archetype is "irrepresentable", yet in the same sentence claims that it can "manifest itself anywhere". His concept of the Self as archetype seems at one point to come close to what in another context might be called the Holy Spirit; but at a second point it appears to represent, more conventionally, the totality of the conscious and unconscious contents of the mind; and the quasi-identity of these two concepts seems to me to be unconvincingly presented as an assertion rather than as the outcome of analysis and argument.

Jung's concept of the Shadow as a relatively autonomous splinter personality, built up of elements which are repressed from consciousness because they are incompatible with the conscious persona or ego, is an interesting one; but I am far from convinced that these repressed

1. Quotations from "Psychological Types" to H.G. Baynes (Kegan Paul) 1946 impression.
elements in fact normally coalesce into a coherent Shadow personality, even though this may indeed happen in some cases. To treat R.L. Stevenson's creation Jekyll and Hyde as in any sense a prototypical pattern of human psychology, as at least one Jungian has done, seems to me totally unjustified. Since Freud opened up the field of the unconscious, it has been common ground among all who accept the general validity of "depth psychology" that to bring repressed elements into the light of consciousness may be the means of achieving a new integration of the personality; and Jung's insight into the relevance of symbols in this context seems to me important. But he does not offer any precise model of what is integrated or how; and his theory that the achievement of wholeness requires in some sense the integration of the Shadow, and thus of evil tendencies with the good, represents to my mind a dangerous half-truth which leads Jung and many of his followers astray.

I have already indicated in the section on "The Origins of Neurotic Stress" the way in which I would translate this problem into the terms of my own model. In particular I have emphasised the argument that psychological healing does not entail the "integration" of previously unacceptable plans into the structure of the anticipatory Self, but rather their final definitive exclusion from this continuing, reacting Self to which, in a submerged way, they have previously been attached, and their release into the more or less accessible store which is the total idea-complex of the Self in the mind-manifold. Jung's account of "Individuation" does not accommodate this distinction. According to him the repressed contents, including the darker elements of the shadow side of the personality, are brought into consciousness, transformed in some sense by being placed in a different perspective, and integrated in a new equilibrium, with the aid, it may be, of an appropriate emergent symbol. "Historical Christian psychology", said Jung, "thinks rather of suppression of evil than of a complexio boni et mali. Thus alchemy tried the idea of a certain transformation of evil with a view to its future integration." And Jung, the conscious successor of the alchemists, sought a similar theoretical conjunction of the opposites, an attempt in which, to my mind, he failed as decisively as the

alchemists themselves.

It is no doubt a fair criticism of traditional morality that it tended to look for the suppression of unacceptable tendencies by harnessing the brute force of the super-ego; but it is not an improvement on the traditional view to justify individuation in a form which brings good and evil into a sort of balance. Jung's clinging to this concept of integration led him into some of his odder theological views, including the view that the Trinity should be replaced by a Quaternity. It also underlies his rejection of Augustine's view of evil as a privatio boni to which I have referred earlier. The root of this attitude is to be found in Jung's sense, on the face of it reasonable, that the traditional Christian ideal of trying to achieve perfection and to be conformed to Christ is quite impossible and leads only to hypocrisy. But Jung, with all his clouds of argument, was never able to square this circle, to make clear sense of his idea of the Self as an "unfathomable union of opposites".

My contention here, contrasting with his, is that the only continuing pattern of the Self is the anticipatory Self, which is of its nature a kind of aspiration never quite embodied in actuality. To grow in health involves, on a Christian view, the purification of this Self of aspiration, bringing it closer into conformity with the Christ ideal and with the inner ideal of the good child, trusting, loving and loved. But the actual manifestations of the Self as Ego from minute to minute are always compromises between the aspirations of the anticipatory Self (at the best of times an imperfectly integrated structure) and the reality - not only the reality of the environment, but also the reality of the total accumulated idea-complex of the Self, built up as a store of experience over the whole of the individual's lifetime, as this is expressed in the emotions generated from it in particular contingencies.

1. See p. 272 above. See also in this connection John A. Sanford, op. cit. Sanford, a convinced Jungian, develops a contrast between the ethic of Jesus and the ethic of Paul which represents, in my view, a travesty of the teaching of both. He makes Jesus out to be a Jungian who teaches the recognition and acceptance of the Shadow as part of the integrated individual, and Paul, that great critic of the Law, to be a legalist imposing a standard ethic by collective authority. On the question of the privatio boni, however, Sanford argues effectively that Jung was in the wrong and misunderstood Augustine's argument. I think that fundamentally Bung was making the logical error of failing to distinguish a negative from a contrary. Evil is the negative, not the polar opposite, of good. The distinction corresponds to that between all the directions that are not North and therefore lead away from the North and the one direction which is the contrary of North, namely South.
The issue which arises here is important, because on this point I am at odds not only with Jung, but also, when allowance is made for differences of terminology, with more or less all the current schools of humanist psychology and psychotherapy. The disagreement is partly on a technicality: it could be argued that what Jung describes as the transformation of the previously repressed material and its subsequent integration corresponds to what I call its definitive exclusion from the anticipatory Self and its release into the accessible general store of the total idea-complex of the Self. If that argument is accepted, then all I have done is to develop a clearer and sharper interpretation of what happens, and there is no irreconcilable conflict. Jung's "individuation" corresponds then, in my terms, to a reorganisation of the anticipatory Self in such a way as to eliminate contradictions and improve the integration of the structure. But even if this is conceded, there is nevertheless a deeper disagreement, which arises on the moral, rather than the psychological, level.

The issue can be crystallised in the question: What is health (or wholeness)? If we straightforwardly interpret moral good in a man as good will and moral evil as ill will, the will to harm others, does wholeness lie in a complexio boni et mali, a well-balanced integration of good and bad elements, of benevolence and aggression, of self-transcending and self-assertive tendencies (to borrow Koestler's terms)? Or does it lie in such a purification of the anticipatory Self that the bad elements are eliminated, that there is no ill will left, that the self-assertive tendencies become identified with the self-transcending tendencies (which is not the same thing as their being suppressed)?

On one point we can be agreed straight away. Psychological healing, as we normally encounter it, seldom goes beyond a better integration of benevolent and aggressive elements. Frequently it involves digging out and expressing all sorts of negative feelings - resentment, jealousy, hatred, fear and so on - which have been denied and repressed in earlier years. But the modern psychotherapist is not

2. (p. 310) From the introduction to "Psychology and Alchemy". Jung's Selected Writings, ed. Anthony Storr (Fontana 1983) p. 271.
ordinarily trying to abolish such feelings. The last thing he wants is more repression and he is much more likely to encourage their open acknowledgement and adoption. What is more, my own arguments have suggested that it is necessary at the oedipal stage to internalise elements of aggression and incorporate them in the anticipatory Self, as the price of establishing the child as an independent individual. It seems unrealistic to imagine that it is either possible or desirable at a later stage to manage altogether without the will to do harm to others.

This I accept so far as it goes. But I would argue that it still leaves us without any firm psychological basis for morality. A man is relatively whole if his aggression and ill will are out in the open, understood and relevant to the world in which he finds himself, rather than buried and distorted, working through the unconscious, growing out of long past situations, not the present world. Again he is relatively whole if thereby he is enabled to adjust himself to his environment, reducing to a minimum the conflict and stress within himself and releasing his aggression in ways which go with the grain of the social order and bring him success within it rather than failure. But is this goodness? Is this wholeness? Is this the moral idea by which we should be guided?

I believe the answer is no. This flawed ideal, this relative integration incorporating elements of malevolence into a more or less balanced whole, is not to be scorned. It is usually the best men can aspire to; and at its highest it can be a heroic ideal in pursuit of which a man may lay down his life for his tribe. But it is intrinsically flawed, it represents always an accommodation with evil, it never can be an integral expression of love. It cannot ever be regarded as the "real" Self to be achieved through therapy or any other means; it is just another, even if perhaps better, version of the anticipatory Self.

Yet is anything else possible? It is my contention that there is an alternative which is the ideal expressed by the life of Jesus, the man for others, the ideal of the saint. This is probably never attainable for more than a very small fraction of mankind, and even by them, I suspect, only fitfully in times of grace, not as a personal
possession or permanent achievement. Nevertheless I believe this is the only true wholeness, the only true Self, the ideal which puts all human strivings into perspective. It is in a sense unnatural, because it involves going back beyond original sin - beyond the oedipal assumption of aggression into the Self - to the image of God in man. It is not the adoption of a rigid plan of virtue enforced by a fierce super-ego, it is a retrieval of innocence and joy, the plan of the good child. In the last analysis it is not to be distinguished from what Jesus was constantly preaching, the coming of his Father's Kingdom.

This theme I shall develop, in its psychological aspects, in part of the next chapter. Meanwhile I turn my attention to one further method of conceiving the whole man which should not be left out of account.

The Psychology of Wholeness (3)

A brief consideration of the relevance of the work of psychologists concerned with the measurement of behavioural traits, in particular Raymond B. Cattell.

I have suggested that the anticipatory Self is a matter of aspiration rather than actuality; the actual manifestations of the Self which we recognise from minute to minute are compromises that emerge at the interface between the anticipatory Self and the surrounding real world. These successive Selves are always unique to the moment, each is different from those that come before and those that follow after. Yet in a sense they represent the actual man much more closely than his continuing aspirations, and it could be argued that the right way to reach the actual man is to work out a sort of average of the features which distinguish his successive actual manifestations. After all that is precisely what we do in everyday life when we form our own estimates of other people and how they are likely to behave. We can even apply a similar technique to ourselves, as when we fill in the questionnaires that certain psychologists lay before us.

The definition of the personality by some such method of measuring and averaging the ad hoc manifestations of the individual has indeed been the preoccupation of a major school of psychologists
today. In contradistinction to Freud and Jung and their followers, they are concerned with the classification and measurement of personality in ways which may possibly owe something to Jung's theory of psychological types, but which trace their own descent from Galton, Spearman and Thorndike. With the aid of a battery of tests, measuring a person's score in a considerable variety of dimensions, such as those of introversion-extraversion, anxiety, pugnacity, intelligence or ego-strength, a profile of the personality is obtained, which may be compared with the set of measurements which a tailor takes when he is cutting a suit. But whereas the tailor's measurements can be systematically related together to create the unique form which is the suit, matching the man, the psychologist's measurements cannot; and it is much to be doubted whether they are sufficiently comparable entities ever to be made commensurable in this way. While these techniques may have a good deal of practical value, particularly in relation to specific problems of adjustment to the social environment, they have little to tell us about the inner nature or form of the Self.

Professor Raymond B. Cattell, a leading representative of this school, says very candidly:

A trait... is not something existing in a person; it is a concept and a measurement derived from his relations with the environment. From another aspect behavioural traits are the necessary negotiations or compromises between the physiological demands of the organism on the one hand and the physical and social demands of the environment on the other... If the reader asks what has happened to the soul, one reply would be that the modern psychologist is as afraid of mentioning the word in public as a Victorian curate might have been of mentioning sexual intercourse. Each is showing respect for something a little outside his area of specialisation, yet in neither case can it be ignored... As we reach the rather cloudy heights of such concepts as 'adjustment' and 'integration', and try to put them into measurement form, we realise that we are approaching the neighbourhood of what has intuitively been called the soul.

Professor Cattell does not rule out the possibility of ultimately measuring the soul, as he calls it, with the aid of concepts and mathematical models more sophisticated than those at present available; but he recognises that this is still a long way off. He continues:
Essentially we mean by a well-integrated man one whose various purposes cohere in a single harmonious life goal... The concept is hard to get into measurement form because what 'interferes' depends so much on individual values. By values we mean the social, artistic, moral and other standards which the individual would like others and himself to follow. Most value attitudes are found embedded in the self-sentiment and super-ego structures. The calculation of the degree of integration present in the individual's values is a social calculation, as well as an individual one, for it requires us to find out how well society would do with various combinations of values; and this is something for the future.\(^1\)

In this passage Professor Cattell goes some way towards defining from a different angle an approach the problems which we have been examining in this study; but he does not take us any further towards solving them and I doubt whether any of the test battery psychologists can do so.

In our present context there is clearly more relevance in Jung's consideration of the need to reconcile the emerging individuated Self and the "collective norm". However it does not seem to me that Jung, even in his later works, ever successfully came to terms with the problem of what should happen when we cannot accept the collective norm, otherwise the laws and customs of our society; or the problem of how we should decide whether the collective norm with which we are faced is one which we ought to accept, and to which therefore our Selves should be adjusted, or one which we ought to resist. And, although I cannot claim a detailed acquaintance with all their work, it seems to me that the same comment can probably be made about the general theoretical ideas of other distinguished therapists such as Carl Rogers and George Kelly. A doctor's job is essentially to restore us to "fitness", appropriateness, for living in the world in which we find ourselves and so to produce well-adjusted people. We do not expect him to do more, and are perhaps rightly inclined to feel a bit suspicious if he claims or sets out to do more. Yet the world in which we live extends into the future and includes the potential as well as the actual. Too close an adjustment to an existing state of affairs could leave a man dangerously ill-adjusted to possible change. But if possible change is to be taken into account, it is necessary also to consider what a man can and ought to do himself, not merely in order to adjust to changed circumstances,

but also to impose change on the environment to match existing or potential patterns in himself. In the last analysis therefore, as Jung would probably have agreed, it is impossible to separate altogether the psychiatrist's task of bringing his patient to fitness for the world from the moralist's task of deciding on much more absolute grounds what kind of world ought to be brought about, and how individuals ought to behave.
A section in which I take stock of the position we have now reached and set a new course.

We have been trying to achieve some understanding of the nature of psychological health or wholeness and of how it can be pursued and achieved. The conclusions to which we have been led so far imply that we shall not be able to find answers to our questions within the strict confines of psychiatric medicine, nor of science itself, nor even of analytic philosophy. We need to identify some principle or principles of value such as science of its nature cannot provide, and which must therefore eventually be adopted as an assumption, on some kind of faith. This brings us to a kind of impasse in which it is necessary to consider carefully where our argument has been leading us, and what objective we can reasonably set ourselves.

It may be sensible to begin with a brief recapitulation of some of the principal steps through which the argument has taken us. We began by considering the organism as a self-regulating system and developed a model exhibiting, as the basic elements of this system's purposive activity, individual steps of predication. In each of these steps a subject form, recognised synchronically, is related in diachronic, historic time to a predicate form, and these predications are integrated into purposive cycles through which the system articulates possibilities and arrives at decisions. The forms which are brought to a focus of relationship in the successive contingencies of consciousness are derived on the one hand from the unceasing input of the senses and on the other hand from the reflections and reverberations evoked by these stimuli in the context of the moment across the immense internal system of the mind-manifold.

This manifold, it has been suggested, is ordered in two ways, under the markers of a sort of flexible space-time map of the world and history as understood by the organism in its lifetime to date, and under markers of classification by all the codes and languages,
including perceptual and verbal codes, acquired in this experience. Not everything that a man perceives is recognised, not everything recognised is retained, and even that which is retained is subject to the decay of memory. Nevertheless there is built up in the mind-manifold a highly detailed record both of the environment in which a man has lived and also, within this environment, of his own past development and activities, an image of his own Self which can be grasped from different angles as his biological Self, his behavioural Self, and his psychological Self. This growing record of biological, behavioural and psychological man we have described as the idea of the Self, the dominating feature of the mind-manifold, a feature of such vast complexity that only small fractions of the whole, or vastly generalised impressions of larger aspects of it, can be brought to focus at one time.

One part of the idea of the Self is the anticipatory Self, consisting of those personal plans adopted by psychological man which at any given time have not yet run their course, but stretch out into the future, often the indefinite future, and so constrain directly the regulating decisions which the individual takes as he works through the purposive cycles of his consciousness. Each decision is related to the particular aspect or face which the anticipatory Self presents in the perspective formed by the ideas and impressions spreading across the mind in the sequence of predications momentarily focussed into consciousness; for a decision amounts to the adoption of a personal plan which is then grafted for good or ill on to the idea of the Self. However the choice between possibilities is determined not simply by the logical compatibility of the plan with the relevant aspect of the anticipatory Self; ultimately it is determined by the emotional tides generated across the manifold by the associations of the different possible plans as they interact with those of the anticipatory Self. These associations make their impact simultaneously and collectively, without individually emerging into consciousness, but it is they that bring emotional colour and intensity into the experience. The strong desires and aversions which they generate can simply overcome the pull of the anticipatory Self, while in other cases the dissonances they evoke within the anticipatory Self may lead to confusion and malaise.
In the attempt to understand these processes we have tried to give an account of the origins of the anticipatory Self in the continuation of the plan of the good child who responds to the approval or disapproval of parent figures; and thereafter to give an account of the way in which the pattern of the individual Self develops upon this core through continuous interaction, first with the family, then with people in a wider world, and all the time with the values of a given society. In this fashion we arrive at two complementary concepts, that of the good person and that of the mentally whole person, of sincerity and authenticity. The good person, in making his decisions, follows with courage and integrity the long term plans of his anticipatory Self; he is not led astray by the pull of incoherent desires or aversions, nor does he build himself up in false images of pride. The mentally whole person is one whose anticipatory Self is coherently constructed on the true foundation of the good child, not confused by unresolved identifications, introjections and projections, but united in a loving relationship with parent figures and ultimately with other people; a Self whose succeeding plans adopted in elaboration and extension of the original, are compatible with each other and do not give rise to hidden faults and tensions in the structure.

So far as sincerity is concerned, we recognise that there is nothing to stop a person abandoning a given plan and substituting for it a different and quite incompatible one, so long as other people are not concerned; but if they are, he has obligations to them arising out of his necessary social role of man of good faith, which he cannot unilaterally repudiate without moral fault. These are the obligations of honour which help to maintain integrity. Situations can arise in which a man cannot avoid adopting one or another of two plans which are in conflict, and this means abandoning the other in betrayal, it may be, of other people to whom he is committed. In such cases the plan of longer span will normally have priority; and coherent hierarchical arrangement of plans can help to reduce the likelihood of conflict. But when such conflict occurs, even if it is unavoidable, a fault emerges in a man's integrity; and if a man is pulled hither and thither by his desires without any set frame of consistency, these faults can only be multiplied.
So far as authenticity is concerned, it is evident that anguish, paralysis of will and mental breakdown can follow if the plans which a person consciously adopts are too much at odds with the deeper layers of the anticipatory Self which do not emerge into explicit consciousness but powerfully affect the emotional tides of personality. Logically there can be no way out of this dilemma except either to adopt conscious plans which conform to the underlying pattern of the idea of the Self, rather than to the requirements of society, honour, other people; or else to undertake some radical transformation which digs out what was repressed and makes it possible to abandon or reconcile the buried dissonant and irrelevant plans, leaving as the anticipatory Self an integrated hierarchy of conscious personal plans that fits into the existing world. The first is the way of "1'homme revolte", the rebel, the bohemian, the artist for art's sake, the existentialist, all those who try to achieve authenticity in despite of the conventional values of society. The second is the way of the patient who undergoes analytic treatment in the hope of understanding and accepting himself and finding a new pattern of "individuation" which will be adjustable to the "collective norm"; or of the Marxist who tries to become a "species-being", denying or in some way eliminating all the elements of himself that are at odds with the collective norm established by the vanguard of the proletariat.

The first way tends to lead towards the "disintegrated consciousness" and sometimes to crime (as with Faust) rather than to a new developed coherence of the Self; while the second, even if successful in digging out what was repressed, runs into the problem of deciding what kind of society is both good and feasible, and so worth being adjusted to. The second way also runs into further problems, whatever the norms which may be chosen, when it comes to deciding how the individual is to deal with the previously buried and dissonant plans of the "shadow" Self (to use Jung's terminology). The catharsis of recognising and expressing what was previously buried can often be beneficial in itself, making it possible to abandon or reconcile much of this material; but the type of psychology that seeks to accept, integrate and by implication to approve all sorts of conventionally unacceptable plans is liable to lead back to a doctrine of cultivated self-indulgence and anarchism that is in practice
dangerous and self-defeating.

In short the ideas we have been developing provide some means of describing where we stand and so of diagnosing our condition. They are insufficient to provide us with the further guidance we need in order to lead our lives. Nevertheless they do perhaps provide some pointers which are worth following up. The most important of these is that our argument already rests upon one arbitrary assumption which comes so naturally that we are hardly aware of it—namely that survival is good and we are in favour of it; and correspondingly that we are in favour of health, which reflects full development, and of moral wholeness or coherence, which makes for efficient regulation and so for the survival of the organism. There is no way however in which we can prove that this assumption is justified in any absolute sense. When we examine it we find it full of ambiguity.

At a first glance it might seem that in attaching ourselves to this principle we are at the least placing at the centre of our judgments a life force which is inescapable, expressing itself in the mysterious but certainly elemental drive of evolution. But to espouse the drive of evolution does not get us very far. To begin with, the evolutionary struggle for survival takes place at several levels. Some have argued that the underlying struggle for survival is that of individual genes; but it can hardly be denied that it also takes place at the level of the organism and at the level of the social group; and in reaching moral judgments of any kind it makes an enormous difference to which level you give the priority. The principle of reverence for life to which many people may be drawn, and which is associated, for example, with Buddhism and with the views of Christians such as Albert Schweitzer, is directly in conflict with the drive of evolution; for evolution, however its mechanisms are understood, has no regard for the less fit individuals or the less fit species.

Sometimes it is persuasively argued that with the advent of civilisation and the consequent accumulation of knowledge from generation to generation, the competitive forces of the evolutionary struggle have been replaced by the immensely more rapid evolution of

human civilisation, involving as it does competition between ideas and cultural patterns rather than between races or individuals; ultimately, it is suggested, this offers the prospect of some degree of conscious human control over the development of the planet's affairs. This argument has force; but in no way does it bring us nearer to solving the problem, it only makes a solution more urgent.

Yet, in spite of all these complications, we have to return to some form of humanism, that is to say, some value system which favours the fullest possible realisation of individual human potentialities. This is essentially because there is no positive alternative; the only conceivable alternatives are negative, arbitrary and destructive, and therefore cannot form the basis of any coherent value system. They cannot do so for precisely the same reasons as made it impossible, as we saw, for the values of the bad child to form the basis of a coherent, developing personality. Nihilism is not a philosophy, it is an anti-philosophy. What does not make for coherence makes for disruption or corruption - words which define evil in all its negativity. In St. Augustine's words, "If evils cause no damage to anything they are not evils; if they do damage something they diminish its goodness ... and if they swallow it up altogether nothing of its nature is left to be damaged. And so there will be no evil by which it can be damaged since there is then no nature left whose goodness any damage can diminish." The basic trouble about this world is that what makes for coherence in one direction is all too liable to do so at the price of disruption in another direction.

If we can accept, then, that we have to begin from the standpoint of humanism, we find our ideas moving in one of four possible directions, depending on the priorities we determine - directions which we can label as those of the species-being, of the free individual, of the great man and, finally and paradoxically, of the man of sacrifice, otherwise the man for others. I do not argue that there are only four possible solutions to the problem of human values; rather that no totally satisfactory solution has ever been found, but every attempt to create a coherent system of values - that is to say every coherent moral

1. "Contra adversarium legis et prophatarum" I 4 f, quoted by C. G. Jung in "Aion".
philosophy, and every universal religion—tends to develop in one of these four directions. Sometimes the attempt is made to develop in more than one direction at once, but this inevitably exacts a price in terms of incoherence.

Accordingly in the first of the four following sections I will examine briefly the implications of the concepts of the species-being, the free individual and the great man; while in the second and third I will turn to the concept of the man for others, which is the Christian concept. In the fourth section, under the heading of "Saints and Heroes", I will consider how these contrasting concepts in practice affect human lives and human societies. Before proceeding, however, I need perhaps to devote a few words to explaining what I am trying to do in all this, and how it is relevant to the central theme of my study.

I said in the preface that I would not approach the problem of the Self with definitions and philosophical argument; rather I would adopt the approach of a descriptive, phenomenalist psychology, describing in as comprehensive a way as possible what happens in consciousness and so observing where and how the Self emerges. Along this path I have come to describe the idea-complex of the Self in the mind-manifold, and how the anticipatory Self emerges in different contingencies of life in different aspects or profiles which are major determinants of the individual's decisions. In looking more closely at the anticipatory Self I have been trying to work out how it brings a degree of coherence into its decisions; and this has led to the suggestion that the idea of the Self will tend to be shaped, consciously or unconsciously, by a humanistic value system falling basically in one of four categories, each of which I have identified by a particular model or type of man. I am concerned, however, not merely to describe how the pattern of an idea of the Self emerges, but also—a much more important question in real life—to decide how we are to identify the real, the true, the authentic idea of the Self, that is, the pattern by which the individual's decisions rightly ought to be determined, by contrast with the false, inauthentic profiles which all too often show themselves. Again my object is to proceed, not by a priori philosophical argument, but rather by trying to find ways of
identifying and describing a true Self as it emerges, in contrast to false selves, to recognise its hallmarks, to define its idiosyncrasy and style. The final two sections of this chapter will be devoted to this perhaps somewhat unusual enterprise.

Three Currents of Humanism

A brief discussion of three possible ways of interpreting the humanistic principle of self-realisation – the model of the species-being, the model of the free individual and the model of the great man.

If we are looking for the fullest possible realisation of individual potentialities, we are likely to turn first to the assumption that society ought to be organised for the greatest good of the greatest number and that to the extent possible the pattern of individual selves should be adjusted to make them well adapted for this. If as many people as possible are to achieve as many of their desires as possible, a coherent social order is needed and hence a considerable degree of uniformity over basic values; when this is not the case, one individual's achievement will all too often be at the expense of another's. The society has to be of an appropriately egalitarian kind, but, given this, the individual ought to conform to it and the efforts of parents, educators, rulers and doctors should be directed to enabling him to do so without alienation or insincerity.

It will be evident that the logic of this tendency can ultimately be a totalitarian one, at least in the hands of ideologues who consider that they know what form the society should take and how it should be brought into being. For Marx the solution is in

"the formation of a class in civil society that is not a class of civil society, of a social group that is the dissolution of all social groups, of a sphere that has a universal character because of its universal sufferings and lays claim to no particular right, because it is the object of no particular injustice but of injustice in general. This class can no longer lay claim to a historical status but only to a human one. It is, finally, a sphere that cannot emancipate itself without emancipating these other spheres themselves. In a word, it is the complete loss of humanity and thus can only recover itself by a complete redemption of humanity. This dissolution of society, as a particular class, is the proletariat...." 1

1. "Deutsch-Französische Jahrbucher" quoted in David McLellan "Marx" (Fontana 1975) p. 32.
This eloquent passage has a curious ring of Pauline Christianity about it; but Marx looks for redemption to a collectivity, a class hypostasised, that bears the universal sufferings of mankind and thereby in its final exaltation emancipates all mankind; whereas the Christian looks to an individual, sacrificed and redeeming, with whom each man, accepting his own sin and responsibility, has individually to be joined. The root of the difference between them is that the Christian accepts his share of responsibility for the sin and miseries of the world and is redeemed by dying to his old Self and being individually reborn; while the Marxist regards evil as the responsibility of other classes, not his own; for him redemption is to be achieved through the triumph of the collective proletarian.

The second direction in which our minds can move is the one adopted by people who consider that all alienation and inauthenticity are due to the constrictions imposed by society and the family. The individuals are not mad or bad, it is madness and badness in society and the family that makes them so. What is needed is to set man free. The logic of this tendency is ultimately anarchistic and it is one that is reflected in the inclination of some psychiatrists to regard the attempt to make the individual well adjusted, in the sense that he is able to conform to the expectations of society and the family, as a betrayal of his true inner needs and indeed a cause of madness. It is rare to find anyone who consciously takes such views to their logical extreme. But in the permissive society of today, as the barriers of convention crumble, the influence of this ethic of "self-determination" is extremely widespread; and it leads increasingly to a world of isolated, atomic individuals, with commitments to each other which are no more than matters of temporary convenience, as each does his or her own thing. There may be no lack of cant about caring, sharing and loving, but the commitment is strictly limited; the selfish need or want has the overriding claim.

The dangerous implications of this type of ethic when taken to an extreme were described with characteristic vehemence by Dostoyevsky in "The Brothers Karamazov":

What is the outcome of this right of multiplication of needs? Among the rich isolation and spiritual suicide and among the
par envy and murder, for they have been given the rights but have not been shown the means of satisfying their needs...

Today everyone is still striving to keep his individuality as far apart as possible, everyone still wishes to experience the fullness of life in himself alone, and yet instead of achieving the fullness of life, all his efforts merely lead to the fullness of self-destruction, for instead of full self-realisation they relapse into complete isolation.

This was written a century ago. One wonders what Dostoyevsky would have had to say about the world of the rich fantasised in modern television sagas like "Dallas" and "Dynasty".

In more recent times such ideas as "self-realisation", "self-actualisation", "self-mobilisation" and "personal growth" have been associated with the school of so-called humanistic psychology, which has flourished especially in the United States. This school has given rise to a proliferation of systems of therapy, life enhancement, creativity, personality development and counselling of many shades and varieties. As means of helping people to face their problems and to accept the need for change, some of these techniques have proved their worth, and through their application a large amount of valuable clinical experience has been accumulated. But it is not always recognised that, as they are usually presented, they tend to express and support a whole system of implied values which are largely unexamined. These underlying theoretical presuppositions, reflecting a remarkably optimistic and permissive view of human nature, are far from strongly established; and in this context it is a fair point to make that the protagonists of self-realisation do not appear so far to have produced any theory of what they mean by the self that is remotely adequate in philosophical or scientific terms.

These issues have not often come sharply to attention, no doubt because the ideology is generally more implicit than explicit, and tends anyway to mirror the ethos of age (which it has done a good deal to shape). But it has not been without its critics and I would draw attention here to a forceful polemic against humanistic psychology by Dr. Paul C. Vitz entitled "Psychology as Religion: the Cult of Self-Worship". Dr. Vitz is a Professor of Psychology at New York

University and he writes, as it were, from within the establishment, having himself at one time taught the doctrines which he now criticises. In his book he focuses initially on four high priests of the movement, Carl Rogers, Abraham Maslow, Rollo May and Erich Fromm, but he goes on to develop a more wide-ranging critique of "selfism" as the dominant value system of modern consumer society. A less polemical but equally penetrating critique of this movement, set against a wider historical and theological background is given in the long chapter "Direction, Counselling and Therapy" in Kenneth Leech's "Soul Friend".

Less fashionable today than either the first or the second is the third direction in which our thoughts can move if we are judging from a humanist standpoint, that which accepts that some men have much greater potential than others and maintains that the fullness of their living justifies itself even though others may suffer. The great man in his achievement and defiance attains authenticity of the only kind that matters. In Yeats's words:

A great man in his pride
Confronting murderous men
Casts derision upon
Supersession of breath.

The implication, which may or may not be consciously drawn is that inferior men, who lack the authenticity of greatness, have only the mentality of slaves and are not worth substantial consideration. This attitude has affinities with the heroic traditions that go back far into history. Any war psychology will always make appeal to it. But the heroic tradition is also linked to tragedy, irony and mystery - as it always is in Yeats:

'The work is done' grown old he thought
'According to my boyish plan;
Let the fools rage, I swerved in naught,
Something to perfection brought.'
But louder sang that ghost: 'What then?'

It tends to go perhaps with a stratified society and the poverty of resources which means that there cannot be much opportunity anyway for more than a few. In more modern humanistic form it can be seen in

Goethe's "Faust", and in Carlyle's "Heroes and Hero-Worship", but it reaches its full development in Nietzsche, for whom God is dead and true value can only be expressed by the Superman. This tendency has no great overt following at the present day, but the cult of greatness has deep roots in human nature, it appeals to the followers as well as the leader, giving legitimacy to both the exaltation of pride and the exhilaration of contempt. It can grow easily out of the ruins of idealistic illusion. We shall hear more of it yet.

I recognise that the foregoing paragraphs amount to no more than a few brush strokes. I am making no attempt here to develop or analyse in any detail the implications of these three possible ways of looking at the world; such a task cannot be fitted within the frame of this study. But I believe these few indications will nevertheless be sufficient to draw attention to the familiar patterns of thought I have in mind, which will not be difficult to recognise. Each of them reflects something of the truth about human nature; each has had, in one form or another, a very wide currency; yet none of them, as it seems to me, can release us from what William Law called the multiplicity of wills, from sickness, corruption and evil; none of them can bring us to simplicity, health, integrity, wholeness, sanctity, wellbeing—words which all point the same way towards an ideal which seems to draw all men, yet seems to be always beyond attainment. Attempts are often made to find a path of compromise between these three different ways, and a compromise is perhaps always better than any one of them in extreme form; but I do not think any logically convincing compromise has ever been found.

What, then, can we hope of the fourth, the paradoxical pattern of humanism, which looks for the fullest realisation of the Self through the fullest sacrifice and denial of the Self. This pattern too, exemplified in the figure of Jesus Christ, has had a very wide currency

1. Some aspects of it are tackled in a further study "An Approach to a Just Society", which, inter alia, deals in some detail with Professor John Rawls' important book "A Theory of Justice".

2. It is clearly exemplified also in some degree in Buddhism and other religions and philosophies. But of these I am not qualified to speak with any confidence. Buddhism, as it seems to me, is ultimately a religion (or philosophy as some maintain) of the annihilation of the Self, whereas Christianity is a religion which involves putting off the old Self and putting on the new Self conformed to Christ, a sharing in Christ's resurrection life.
Christian pray for all sorts and conditions of men that God should make his ways known to them, his "saving health unto all nations"; and they believe that in their faith is offered to all men a means of grace, a way of integrity, a healing redemption, a rule of life. Yet there have not been over many takers, particularly in recent years, for a more than conventional Christianity; and Christians themselves have certainly not been exempt from the moral division and the sense of alienation from a true Self that characterise so much of Western society. Is this because Christianity does not work? Or because, as G.K. Chesterton said, it has been found difficult and not been tried? In the next two sections I will consider some of the points at which Christian teaching might be said to bear upon the questions with which we have been most fundamentally concerned here. I shall thus be dealing with the fourth pattern of humanism, as I have called it, in considerably more detail than the others, and this because I believe that in the present context it offers a new perspective of understanding upon our subject, the idea of the Self.

The Christian Idea of the Self (1)

An analysis of the Christian account of the Self as it relates to the model built up in this study.

The analysis with which the last few sections of this study have been concerned suggests that the problem of the integration of the Self has two main aspects, that of the deep constitution of the anticipatory Self as it has grown up through an individual's lifetime and that of the conscious, explicit rationalisation and determination of the decisions which the individual has to take from day to day. The first is a matter of his mental wholeness or sickness, the second a matter of his moral integrity. The two are necessarily connected. Our conscious living, as it takes place from moment to moment, consists of predications and decisions in the Here Now. The issues with which we are faced present themselves in forms determined largely by our conscious understanding of the world; and this in turn will inescapably be shaped to a great extent by the assumptions, the categories, the languages and the
social roles of the society in which we find ourselves. On the other hand our emotional reactions to the situations thus formulated and the roles we consequently adopt will be determined partly by our bodily nature but always in and through the deeper constitution of the anticipatory Self which has been built up through our lives, most crucially in the environment of the earliest years of our lives. To be truly whole we need to be integrated all through both the deep structure and the surface structure of our Selves.

Christianity claims to be the religion of love and liberation. Its moral teaching was summed up by St. Augustine as "love and do what you will"; and St. Augustine was following St. John and St. Paul: "This is the commandment, as you have heard from the beginning, that you follow love"; "For you were called to freedom brethren; only do not use your freedom as an opportunity for the flesh but through love be servants of one another. For the whole law is fulfilled in one word 'You shall love your neighbour as yourself'." The point is made over and over again in the New Testament; and almost as often come warnings of the danger of relying on the law, "the ministration of death engraven upon stones"; "You are severed from Christ, you would be justified by law; you have fallen away from grace". In psychological terms we might say that this means that a surface integration is not good enough; and indeed the New Testament requirement is not that we should reform our ideas or suppress our desires, but that we should be reborn. As Nicodemus is told: "Except a man be born again he cannot see the kingdom of God... That which is born of the Flesh is Flesh and that which is born of the Spirit is Spirit. Do not marvel that I said to you 'You must be born anew'. The wind blows where it wills, and you hear the sound of it, but you do not know whence it comes or whither it goes; so it is with every one that is born of the Spirit". This suggests that in order to be blown by the Spirit we have first to achieve a kind of weightlessness which requires being born anew of the Spirit. It is only then that we can be ruled by the Spirit and not the Flesh, and blown where the Spirit wills; it is only then that we can love in the Spirit of Christ as servants of one another, obeying the commandments of God which, because we truly love God, are not then burdensome at all."

1. 1 John 4, 11; Gal.5, 15-14; 2 Cor. 3, 7; John 3, 5-8.
Developing a closely similar line of thought St. Paul says that if we are to be born anew our old Self has to die first: "Do you not know that all of us who have been baptised into Christ Jesus were baptised into his death?... We know that our old Self was crucified with him so that the sinful body might be destroyed and we might no longer be enslaved by sin... yield yourselves to God as men who have been brought from death into life... Are we to sin because we are not under the law but under grace? By no means... You have died to the law through the body of Christ, so that you may belong to another, to him who has been raised from the dead in order that we may bear fruit for God."

St. Paul develops the idea of opposition between the Flesh and the Spirit in passages towards which the reaction of the contemporary world tends to be profoundly suspicious and uncomprehending: "For the desires of the Flesh are against the Spirit and the desires of the Spirit are against the Flesh; for these are opposed to each other to prevent you from doing what you would" (i.e. from being free). "But if you are led by the Spirit you are not under the law. Now the works of the Flesh are plain: immorality, impurity, licentiousness... But the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, gentleness, self-control; against such there is no law. And those who belong to Christ Jesus have crucified the Flesh with its passions and desires."

However it is only in the light of the doctrine of the need to be baptised into the death of Christ and reborn as a new creature that we can turn towards the appalling demands of the teaching of Jesus himself in the Sermon on the Mount: "Think not that I have come to abolish the law and the prophets; I have come not to abolish them but to fulfil them... whoever then relaxes one of the least of these commandments and teaches men so shall be called least in the kingdom of heaven... unless your righteousness exceeds that of the scribes and Pharisees you will never enter the Kingdom of Heaven... every man who looks at a woman lustfully has already committed adultery with her in his heart. If your right eye causes you to sin pluck it out and throw it away... If you love those who love you what reward have you? Do not the Gentiles do the same? You therefore must be perfect as your heavenly

1. Romans 6, 3-15; 7, 4.
F’ether is perfect... If your eye is not sound your whole body will be full of darkness... No man can serve two masters... You cannot serve God and Mammon. Therefore I tell you be not anxious about your own life... Seek first the kingdom of God and his righteousness and all these things shall be added unto you. 1 Christ does not reject the law, he transcends it in his teaching because for him it is not what you do that is subject to judgement, but who you are - not murder but the very thought of murder if unrepented, not adultery but the very thought of adultery if unrepented. What he taught was an extreme, immoderate and frightening religion, because, although it offers the pearl of salvation, it demands total surrender - the death of the old Self - first. This comes through unequivocally at many places in the New Testament and it is nowhere contradicted or qualified.

What are we to make of such teaching in the terms of the analysis developed in this study? To begin with it would indicate that we have to go back right to the earliest stage of the establishment of the Self as an independent entity based on the role of the good child, with introjected parent figures who react approvingly or disapprovingly to possible courses of action as they are formulated in the arena of consciousness. Fundamentally, as we saw, the good child has love for his or her parents and obeys their wishes gladly and freely, even when they run counter to immediate desire; this is because he feels integrated by this love in a wider whole of which the parents are also part, and consequently he feels pleasure when they are pleased, hurt when they are hurt. However any growing child will be frustrated from time to time and will have feelings of anger, aggressiveness and a will to destruction. These feelings and the behaviour to which they lead are essentially transient and ad hoc; they have no essential part in the role of the good child, which is a continuing as distinct from a transient role and an ideal as distinct from an actual one.

It is no exaggeration, on this thesis, to say that the only continuing personality a man has is an ideal personality, exercising some form of direction and constraint upon his actions, by no means always successfully. However we noted that in the process of establishing an independent Self the good boy or girl would introject parent figures and that one of the effects of this was to give a sort

1. Matthew 5, 17-6, 33.
of legitimation to aggressive feelings and actions which they would not have otherwise have received. In the more primitive stage, whereas the parent figures may, as part of their normal function, not only disapprove but punish what the child does, the role of the good child as it emerges is essentially one of compliance and obedience. Rages, tantrums and aggressive behaviour are never approved, partly no doubt because in the nature of things they are always inevitably directed against the parent figures themselves. The relationship is therefore unequal. The parent figures deal out reward and punishment in a way which may seem arbitrary but must nevertheless be accepted; the good child's role is one of love and obedience only, whatever the parents do; any aggressive behaviour is automatically treated as bad. We noted however that, as the independent Self is established, this changes; the child now has internalised parent figures which can legitimately show aggression in appropriate circumstances, he can be righteously, as it were, angry and aggressive.

This development seems to be inevitable and universal, a necessary prerequisite for the child to establish a decisively separate identity and to assert and develop it through the years of growth, so that he can stand up for himself in the world. Yet it involves a fundamental dissonance with the role of the good child - or rather it does so whenever elements of aggression and self-assertion are incorporated into the continuing roles of the Self; for disconnected episodes of anger or self-assertion in self-defence do not affect the continuing roles. If we try to interpret into such terms as these the Christian teaching about being born anew which we have just been considering, we arrive at the doctrine that it is necessary to repudiate from its very roots the Self that has been built up in this way, incorporating elements of aggression and self-assertion. It is necessary to be reborn as a new Self identified exclusively with what was always the true Self, the original role of the good boy or girl pleasing to the parent figures and finding pleasure in them, the role of love. Merely to suppress the aggressive feelings is not enough, the need is for a new birth in which they are no longer effectively there, in which the "commandments are not burdensome" because "you have died... so that you may belong to another".
This is not to return to a primitive state of identification with the parent figures, but a new birth in which the "new creature" recognises himself as a separate identity but one united in love with other members in the body of Christ, who is the word, the expression, of the Father. The parent figures who provided the whole world in which he lived in infancy are replaced by the almighty God in whom he "lives and moves and has his being". The tidal flow of his life is the love of God, to whom in obedience he is conformed, whose good will he utterly trusts, and with whom he is united in love. As a corollary he is united in love with all his fellow Christians who are also members of the body of Christ. Potentially he is united in love with all human beings, for all are the children of God, all in their true selves are obedient to God's will - which is to say that they have the potentiality to be conformed to Christ and so they bear within them the image of God.

Arthur Koestler speaks in "The Act of Creation" of "the dichotomy of self-asserting and participatory tendencies of behaviour at all levels... [which] derives logically, as it were, from the dual character of every sub-whole as a subordinate and super-ordinate entity"; but in the reborn Christian the participatory or (to use another of Koestler's terms) self-transcending tendencies should take over entirely and the self-assertive tendencies, which are alien to the fundamental role of the good child should be sloughed away. Passing anger or indignation he may show, as Christ did with the moneylenders, but he should never be possessed by the settled aggression which becomes hatred. "Be angry but do not sin; do not let the sun go down on your anger, and give no opportunity to the devil". The foundation of his identity, like that of the small child with his parents, should be the assurance of the love and goodness of God, even though God is beyond all human understanding and even though his providence is inscrutable, his justice beyond any human assessment of fault or merit. In Job's words "though he slay me, yet will I trust in him"; in St. Paul's words (and again those of the Book of Job which he quotes) "O the depth of the riches and wisdom and knowledge of God! How unsearchable are his judgements and how inscrutable his ways! For who has known the mind

of the Lord, or who has been his counsellor? Or who has given a gift to him that he might be repaid? For from him and through him and to him are all things. To him be glory for ever.\(^1\)

What is implied is the rebuilding of the Self from its foundations and the elimination from its foundations of those elements of aggression and destructiveness which in the natural course become incorporated at the origin. Clearly the material of the idea complex of the Self accumulated through past years must in general remain the same; but the structure of the anticipatory Self is to be rebuilt. Some plans projecting into the future have to be eliminated and others adjusted, but above all their priority and hierarchical ordering are to be radically changed, since all have to be brought under the domination of a new final plan, the ultimate contour of the idea of the Self, which is the image of Christ.

This is nothing less than the shedding of what may be identified as original sin, a radical therapy indeed. In a sense it is an unnatural process and the reborn Christian who results is not a natural inhabitant of this world; he is "in the world but not of the world". But in another sense he is a more natural person than the ordinary unredeemed man, because he has been brought back to his true nature, that of the good Self, obedient and trusting, full of love for God, without guile or hatred or self-assertion. Above all perhaps, because he has a total trust in God, he has no fear — for "perfect love casteth out fear" — and that is why he can stand up as a man without the need for pride in some human image of himself and the self-assertion that this entails. He does have an image within himself to which he is conformed — what we have called on an earlier page a heroic or ideal role — but this is not any rigid pattern of personality, it is that of Christ, who said "Inasmuch as ye have done it unto one of the least of my brethren ye have done it unto me"\(^2\); Christ "who emptied himself, taking the form of a servant... And being found in human form he humbled himself and became obedient unto death, even death on a cross."\(^3\)

What then must a Christian do to achieve these remarkable

transformations? He must confess his sins and worship his God.\(^1\)
Through confession his aim is to achieve humility, which is not a
groveling self-abasement, but a lucid self-knowledge, issuing in
simplicity. As George Herbert asked,

\[
give me simplicities that I may live; 
so live and like that I may know thy ways. 
\]

Herbert wrote a poem "Confession" which expresses the need and purpose
of simplicity in terms which a psychologist would recognise:

\[
we are the earth; and they our afflictions
like moles within us, heave and cast about;
and till they foot and clutch their prey,
they never cool, much less give out.
no smith can make such locks but they have keyes;
closets are halls to them and hearts highways.

only an open breast
both shut them out, so that they cannot enter;
or if they enter, cannot rest,
but quickly seek some new adventure;
smooth open hearts no fastning have; but fiction
both give a hold and handle to affliction.
\]

Humility opens the way to rebirth by removing the barriers of self-
deception and false ambition\(^2\); but only through worship is the
transformation itself achieved. In humility a man can open himself
to communion with his God; but it is the love of God, not any strength
of his own, which remakes him in a new image, conformed to another and
yet more truly himself than ever he was before, no longer driven by the

\(^1\) It may be relevant to quote here some words of Erik Erikson about
the psychological roots of religion: "The parental faith which
supports the trust emerging in the newborn has throughout history
sought its institutional safeguard (and on occasions found its
greatest enemy) in organised religion. Trust born of care is, in
fact, the touchstone of the actuality of a given religion...\nPrimitive religions, the most primitive layer in all religions, and
the religious layer in each individual abound with efforts at
atonement which... try to restore faith in the goodness of one's
strivings and in the mindness of the powers of the universe. Each
society and each age must find the institutionalised form of rever­
ence which derives vitality from its world-image... The clinician
can only observe that many are proud to be without religion whose
children cannot afford their being without it. On the other hand
there are many who seem to derive a vital faith from social action
or scientific pursuit. And again there are many who profess faith,
yet in practice breathe mistrust both of life and man." ("Child­

\(^2\) D.W. Harding, professional psychologist as well as literary critic,
old multiplicity of selfish wills, but willing one thing, the service of God.

Leaving aside for the present the question whether these procedures are efficacious, or their end result desirable, we may take note that they are concerned essentially with the deeper layers of the Self. When it comes to the law of love a general guide to conduct, but they obviously do not give unequivocal answers to the great variety of practical moral questions which arise in a world whose value patterns are not Christian and are often not compatible with each other. The New Testament has a general answer to this problem in the doctrine of freedom in the Holy Spirit. "I will pray the Father and he will give you another Counsellor to be with you for ever, even the Spirit of Truth... The Holy Spirit whom the Father will send in my name he will teach you all things and bring to your remembrance all the things that I have said to you... No longer do I call you servants for the servant does not know what his master is doing; but I have called you friends... When the Spirit of Truth comes he will guide you into all the truth." As St. Paul insisted, "for freedom Christ has made you free."

The Christian has to exercise his own judgement in the situation in which he finds himself; Christian morality is indeed a situation ethic in this sense. But it has to be a judgement enlightened by the Holy Spirit and so reflecting the mind of Christ. A man's freedom is to know and do God's will, not his own, to serve others not himself. If it is used as an "opportunity for the flesh" he is not led by the Spirit. Only in God's service - which leads to other people's service - is perfect freedom. This sounds paradoxical but is not so. It is only when a man takes the short view that to be free is to do whatever he wants whenever he wants it that he runs into paradox; for either this means

draws attention to the same point as made by T.S. Eliot in "The Elder Statesman": "Confession... is the first step, 'And perhaps the most important', that Claverton takes towards his freedom. His full freedom is gained by facing his ghosts and no longer trying to run away from them. It is after that that he can say

I've been freed from the self that pretends to be someone;
And in becoming no one I begin to live."


1. From the Gospel according to St. John, ch. 14 - 16.
the subordination of himself to varying and passing desires, "the multiplicity of wills", or it means the subordination of himself to a long term ambition, a single major image. Either way this is slavery to sin, which is the old Self in its two basic forms of concupiscence and pride. The one disintegrates the man. The other integrates him, but in a fixed image which becomes a prison to destroy him. The true Self is the Self obedient to God, continually remade and therefore free. There is only one true image, that of Christ, who emptied himself as the servant of others.

The Christian Idea of the Self (2)

A continued exposition of the Christian view of man and morals, as interpreted in terms of the model built up in this study, arriving at the final question: Is the whole edifice of Christian morality unrealistic and delusive?

The claim is therefore that the reborn Christian makes truly free choices, for he is not under the law, he is not driven by any external compulsion nor enslaved by the selfishness of the Flesh, he is led by the holy and free Spirit within him, interpreting the mind of Christ.

How then is it suggested that the Christian should acquire this holy Spirit? As we have seen already, the answer is through baptism into the death of Christ, which extinguishes the old Self, and rebirth into the life of Christ. This is essentially not an isolated but a shared life as a member of the church, which in St. Paul's great image is the body of Christ, and consequently animated by the Spirit of Christ. Each limb or organ of a body is different from every other; even when they are paired, the left differs from the right. Each moreover is self-determining so far as its internal processes are concerned. Yet each in isolation has no life and no effective self-determination. Its freedom is realised only in concert with the others, "the complete consort dancing together". The behaviour of any one member is constrained by its relationship of service to others in a whole which has a meaning much greater than that of its parts; yet in this participation and service the member's true freedom resides, the freedom to be itself and to
fulfil its natural function, that of a part not of an isolated whole.

The image is particularly apt because the coordination of the whole body depends on the head, not simply as the location of the brain, but also in a narrower physical sense; the balance of the whole structure under the force of gravity is critically determined by the position of the head in relation to the rest, and the mechanism of coordination works through this relationship. It is a matter of common observation that a social organisation, whether a school or a village or a factory or a battalion, can have a character or personality of its own, and one which changes in a remarkable way - much more than common sense would suggest - if the person at the head of it is changed. The function of a group is determined by a collective will and purpose expressed by the person at its head. To the extent that this purpose represents a human ambition, even a collective one, it imposes a pattern on its members of greater or less compulsion. But if Jesus is at the head the pattern is not one of serving any human ambition, it is one of serving each other and through each other the Christ who is poured into others. The Holy Spirit, who is the esprit de corps of the body of Christ, is the interpreter of the whole, speaking to each member individually but integrating in wisdom the needs of all in mutual service.

In any human organisation the unity of the body and the freedom of its members are at their highest in a relatively small, face-to-face group where each individual is known and has his or her own unique part to play. The more the parts are standardised, as may be inevitable in a larger group, the less the real sense of freedom and unity. Groups may be organised hierarchically within larger groups, level by level, but inevitably as the scale and complexity of the organisation increase, there is a loss of the sense of self-determination for the individual. The Christian however can claim to avoid these problems, for while his fundamental unit of organisation is a face-to-face group, the congregation, he will argue that through the Eucharist the same Christ can be present as the head of each congregation, so that the personal relationship can be preserved within a universal church. Each individual is known for himself, not as a standardised unit. As St. Paul made clear, there are diversities of gifts and functions, but there
is one body and one Spirit. "For just as the body is one and has many members, and all the members of the body, though many, are one body, so it is with Christ. For by one Spirit we were all baptised into one body - Jews or Greeks, slaves or free - and all were to drink of one Spirit".¹

If this be the Christian doctrine, how far can it be interpreted in terms of the model built up in this study? We can describe the reborn Christian conformed to Christ as one who has achieved, through the self-knowledge of confession, a true simplicity and has sloughed off his old Self with the elements of resentment and aggression incorporated into it, as he adopts the "ideal role" of Christ himself and becomes a member of a distinctive social group, the church. All the social organisations of which he is a member will exercise some constraints upon the way in which his continuing Self develops by allocating to him roles, which he will adopt from fear or desire or a combination of the two, in relationships with the other members of the group, all serving together the purposes of the group as a whole. If the organisation is a strong one it will have a strong esprit de corps leading its members to adopt their individual roles and to identify themselves with the body as a whole in free positive desire and acceptance, not negatively as a matter of prudence or even compulsion. We can describe the psychological effect of membership of the church and the operation of the church's esprit de corps in similar terms; we can note in particular that, although the church has coercive doctrines of punishment for sin which can operate as negative reasons for membership, and these prudential considerations may ultimately operate to the good, they are not the voice of the Holy Spirit which is always the voice of freedom; no Christian is satisfied with Pascal's argument of the wager as a final reason for belonging to the church.

There is however a significant difference. Men are always disposed to admire a person who is prepared to dedicate himself freely to an organisation greater than himself; this is what might be called first order unselfishness - the devotion, for example, of a soldier to his regiment or the patriot to his country. But if it is a human organisation it will always in its self-assertion - with which the

¹ 1 Cor. 12, 12-13.
individual member identifies himself — be pursuing goals of human pride or desire, having their share of the common admixture of aggression and destructiveness. The person or people at the head of it will reflect and in some degree determine these goals and the spirit or spirits with which it is imbued will correspondingly in different degrees be evil; sometimes exceedingly evil. But the church, insofar as she lives up to her own gospel vocation, becomes an organisation serving only positive, self-transcending, not self-assertive, goals, a servant church. And the fundamental role which a Christian acquires from the Holy Spirit through his membership of the church is that of his vocation from Christ himself, which is in an individual, personal calling related to his gifts and his situation, personal plan, not a standardised social role imposed by a group or dictated by a human leader.

A Christian's vocation is the basic way of life he adopts, the way in which as a rule he earns his living and occupies the main part of his time. This is intended to be his response to the call of Jesus to his disciples "follow me", the pattern by which he is conformed to Christ. As such it is the superordinate personal role with which all his other personal roles in whatever circumstances must be compatible if his integrity is to be maintained. We have already seen that such a plan should be one of free obedience to the Holy Spirit, without slavery to any pride or concupiscence, of complete trust in the providence of a loving Father and of service to God and other men. "Whosoever will save his life shall lose it; but whosoever will lose his life for my sake, the same shall save it".

On the face of it this would seem to require of every Christian that he should sell all his goods and live a life of poverty and service. Indeed the earliest Christians in Jerusalem, according to the Acts of the Apostles, "had all things in common; and they sold their possessions and goods and distributed them to all, as any had need". Throughout the history of Christianity some groups and individuals have lived in this way, but the great majority have not. The argument which seeks, rightly or wrongly to justify this is that vocation is an individual thing; Christ called the rich young man to sell all and follow him, but he did not say the same to his friend Lazarus or the sisters of

Lazarus, Martha and Mary. There are diversities of vocations, including those which are concerned with carrying on the economic life of the community and raising families. All occupations, it could be said, that are not (like the pimp’s) of their nature harmful to others can be made the channel of dedicated service and loving and generous concern, and so can become vocations; but conversely if they do not lead to lives of dedication and love they are not true vocations. "By their fruits ye shall know them"; and it is regrettably clear that often the fruit harvest is not impressive.

Jesus said "My yoke is easy and my burden is light" and we have seen that it is of the essence of a vocation that it should be freely accepted, from love, not from prudence of fear. This implies on the one hand that a Christian is not morally bound by any roles which he has not accepted or adopted of his own free will; and on the other hand that when he does so adopt a role he is bound in responsibility for his own choice. The society in which he lives will have its own laws and customs and if he has grown up in it the very categories and concepts through which he understands the world will in some degree be shaped by them. There is no suggestion that he should do other than accept them in all areas where they do not conflict with his integrity as a Christian. The New Testament makes it clear that Jesus interpreted the Mosaic law - for example on keeping the Sabbath - according to the Spirit not the letter; but this implies no disrespect to the Mosaic law; the general assumption of both the gospels and the epistles is that it is as good as any law could be: "If a law had been given which could make alive, then righteousness would be by the law."¹

The stress, as we have seen, is not on the law being wrong but on the need to transcend it and exceed the righteousness of the scribes and Pharisees. If there is a direct conflict between the law and the Spirit’s dictates then the Spirit must be followed; but in general it is not envisaged that following Christ, whose commandment is that of service to others, will conflict with public morality as ordinarily understood; indeed in St. Paul’s epistles particularly the emphasis is strongly the other way.

When it comes to political constraints the emphasis is again on acceptance - "render unto Caesar the things that are Caesar's" - on the general basis that God's kingdom is not of this world. But none of this detracts from the overriding necessity to conform to the normative plan of a man's calling in Christ. The guidance of the Holy Spirit may be interpreted as an indication in given particular circumstances of the course of action which is most conformable to a person's vocation. It is always easy for a man to deceive himself, but the self-deception is always due to the corruption of motive. It is not for the individual to reject the laws and customs of his society, for that is to cast himself out of society and there is no humanity out of society; but in the last resort he has to judge by a higher criterion, doing so in freedom and accepting responsibility for what he does. In the case of a child the laws and customs of his family and his wider social group are accepted for him, but as he grows up he has to create himself as a free man by taking on his own roles and the obligations that go with them. It is important that he is not bound morally (as distinct from legally) by what he has not freely accepted; but conversely when he has accepted an obligation he cannot with integrity change his mind if it affects others, as by definition it must, unless the others freely release him from it. Apart from this he has not merely a freedom but a duty to try to change any laws and customs which he does not consider to be conformable to the will of God; but this is a strictly constitutional freedom, he is still not entitled in the process to throw overboard without agreement obligations which he has already accepted.

Two further things follow. First, the roles with their obligations need to be mutually consistent if disintegration is to be avoided (and the guidance of the Holy Spirit may be invoked to ensure this). Secondly, the breaking of an obligation is the repudiation of a role freely accepted and therefore the amputation of part of a man's personality. It inevitably means a kind of betrayal and hence a loss of integrity.

These principles may be clear, but there are complexities in their interpretation. Many roles involve reciprocal obligations and if even one of the pair breaks them the role may in some circumstances be destroyed. But this depends on the nature and formulation of the role
itself (the importance of words in this connection has already been noted). In adopting the role of a parent, in particular, a man or woman accepts a one-sided and absolute obligation to love and care for the child, to which a reciprocal obligation on the part of the child is only built up gradually as it becomes able to give its own love and accept its own responsibilities. To accept love from someone is to be entrusted with part of himself or herself which cannot be given back unless he or she freely takes it. The obligations involved by love are not specific, but take the form of a general obligation of self-giving to be expressed according to the situation. But in marriage, for example, which is under one aspect a contract, certain commitments are spelt out in the marriage service; and in the Christian case these are explicitly unconditional — "for better, for worse; for richer, for poorer" and so on. Outside the family, in society, commerce, industry and politics, life is a tissue of roles with their obligations and mutual expectations, some vague, some clear, some trivial, some vital, some conditional, some not. Adherence to these obligations makes up the actual fabric of society, and it is only through such adherence that conditions of tolerable reliability and security can be created for human living. Human laws and their enforcement are necessary in large societies, but coercion is incompatible with freedom and always the less we need to rely on formal law the better.

What happens, it may be asked, when a man, in the course of the process of individuation as Jung calls it, becomes aware of what has been repressed and buried within him and realises a possible new pattern of integration with, to him, wonderful new possibilities of development — it may be even through Christian conversion? Clearly if this can be realised without breaking old obligations then, in Christian terms, there should be nothing but good in it. Any radical change in life must involve a radical change in roles, but there are usually ways and means of achieving this over time without any breach of faith (again the words matter). But there can be situations in which the transformation of the individual must involve the breaking of obligations which are unconditional or in some other way inescapable — for example because the others concerned are not willing to give release. In such a case it may be necessary to look to the hierarchy of roles and accept a less
important breach of faith to avoid a more important one. This will
not often occur if the pattern of the new man is a rebirth in Christ,
since the new pattern is then by definition that of a servant to others,
and a servant "obedient unto death". But the situation can arise, and
it is perhaps situations of this kind that Jesus had in mind when he
said that he was come to bring not peace but a sword. Another example
is the situation in which he was told that his mother and brothers were
standing outside, and he said: "Who is my mother? and who are my br-
otheren?" As the next verse shows, he establishes a hierarchy of
obligations: "And he stretched forth his hand towards his disciples and
said, Behold my mother and my brotheren!". Obviously in the complex
web of human life inconsistency of obligations cannot be avoided alto-
gether. This may have been in St. Paul's mind when he made his strange
deep remark about Christ "who knew no sin" being made sin for our sake —
the ultimate humiliation which he accepted for mankind. 1.

Sometimes the inconsistency is relatively trivial and manageable.
But the principle is always the same; whether I merely fail to turn up
for an appointment or I run off with someone else's wife, the unfaith-
fulness is a wound to my true Self. Small wounds can be healed entirely,
but larger ones will leave a person scarred or crippled for life, and
there is no escaping this. In Christian terms a major breach of faith
which is unrepented will put at risk a man's soul; for "sin when it is
full grown brings forth death". 2. Faithfulness is one of the fruits
of the Spirit listed by St. Paul and its fundamental importance is
brought home by the gospels. Betrayal of allegiance, of a role accepted,
won the sin of Peter three times repeated, which he repented and was
forgiven him; it was the sin of Judas Iscariot; it was the sin which was
put before Christ himself by the tempter but to no avail. Breaking faith
is not freedom but slavery to what is a disintegrating compulsion, even
though it be one which in Jung's words "gets smuggled in under the
cloak of correct ideas". Once matters have reached the point at which
major incompatible obligations have been incurred — for example by the
giving and taking of adulterous love — then a tragic situation is
ineluctable. Either way integrity is broken and there is no good way
out that does not involve desperate amputations. If the conflict is
irreparable then one role or the other has to be abandoned. It may

1. Matthew 12, 48. 2. 2 Cor. 5, 21. 3. James 1, 15.
It may even be necessary in some circumstances to recognise, for example, that a marriage is dead beyond recall. But this is not to be justified, it is a disaster to be repented; and only after repentance can there be any hope of a new start and the building of some new, if maimed, integrity.

If the importance of faithfulness in the Christian scheme of things needs any further emphasis, it is to be found in the fact that it was because he would not break faith that Jesus himself was condemned to death. He did not seek conflict with the authorities, but when confronted with the direct challenge: "I adjure you by the living God tell us if you are the Christ, the Son of God" he would not deny it. Ultimately the bitter cup which was not taken away from him was that of maintaining his integrity by not denying his sonship; and over the centuries countless Christian martyrs — witnesses — followed him in drinking this cup. The final sin, the sin against the Holy Ghost, is that of apostasy; for those who have actually known Christ to turn away from him. "If you were blind you would have no guilt; but now that you say 'We see', the guilt remains".

This is the Christian view of man, one which lays stress on his freedom and responsibility; his capacity for sin; his guilt and danger if the sin is not repented; and his capacity for redemption, that is of dying to his old Self, being born anew in the image of Christ and so finding his own identity and ultimately participating in the divine life. Our argument has suggested that it is not impossible to express these ideas (except the last) in terms of the model of the human personality built up in this study. But the question remains whether the whole Christian scheme of man is not entirely unrealistic and illusory. What Christian ever lives up to the Sermon on the Mount? What ground is there for believing that it is possible to slough off the old Self and be reborn in an impossibly virtuous form? Does not this pretension to impossible virtue lead Christians into that distasteful pious hypocrisy of which they have often been accused throughout their history? Is their meek and mild sort of virtue, based on total humility, the true virtue anyway? Should a man not have a proper pride and a dash of aggression? Should he not be read to smite the evildoers hip and thigh? Should he

1. Matthew 26, 63.  
2. John 9, 40.
not show a bit less obedience and a bit more backbone and independence; make something of himself instead of denying himself; develop and fulfil the potentialities he has; destroy Caesar instead of paying taxes to him; create with his own human wisdom and capacities a better world for humans to live in?

A Christian has to admit that the strongest argument against his religion is that it is impossible. Even the greatest saint remains a sinner. And the demands of the cross are so radical that it is only too easy for the Christian to seek some easier accommodation with the world, and to deceive himself that he is following Christ when in fact he is making no more than gestures to the faith. Yet the answer to this argument of impossibility is that there is no alternative. In personal terms one who has had the eyes of Jesus fixed upon him cannot turn away without destroying his own true Self: "once you say 'We see' the guilt remains". In more objective terms any other course must be a compromise that retains and enshrines elements of pride and aggression, or surrenders control of the Self in some degree to incoherent desire, or does both. Arguably this is better and more honest than attempted adherence to an impossible ideal leading to the condition of a "whited sepulchre", to use the Lord's own description of such people. But men have been pursuing such compromise in many forms for many years and the general state of our alienated world hardly suggests that much wholeness is to be found in this fashion. Christians have not been particularly successful in achieving wholeness either; but they can perhaps argue that they are more ready to know their failure, to acknowledge their guilt and their need for a more radical salvation; and that in this humility is the beginning of wisdom; "For the very true beginning of her is the desire of discipline; and the care of discipline is love".¹

Cura disciplinae dilectio.

Saints and Heroes

In this section I develop the view that fundamentally there are two kinds of ideal roles, those of the hero and the saint. I analyze the characteristics of each and their implications both for the individuals who adopt them and for society.

¹ Wisdom 6, 17.
The function of the ideal role in psychological terms, according to the theory developed in Chapter III, is to provide an ultimate unifying contour for the idea of the Self, and so to define the wholeness of the man. It follows that those who fill such roles are always themselves exemplifications of some kind of wholeness. Their roles must be of a certain generality, or at least capable of generalization, since if a role is too limited and specific it cannot provide an ultimate contour for the idea of the Self. Beyond this, our theory suggests that what holds a man together, what makes him whole, is integrity — which is the strength with which he adheres to the plans that build up his own anticipatory Self. Moreover, since human beings live in society, one of these plans will always be some version of the plan of being a man of good faith who sticks to his obligations to others. Further, a man's integrity will inevitably be flawed — and therefore weaker than it would otherwise be — if he is lacking either in the sincerity which maintains the conscious coherence of his plans and roles or the authenticity which maintains coherence through the unconscious layers of his personality. Finally we have noted that integrity, when it is under challenge, shows itself as courage.

The proper marks of the ideal role, therefore, are generality and integrating power; and the integrating power is reflected in good faith, sincerity, authenticity, courage.

It is my contention that the bearers of such roles fall into two distinct types, those of the hero and the saint. The wholeness of the hero derives from the integrity and courage with which he asserts himself, that is, from his pride; whereas the wholeness of the saint derives from the integrity and courage with which he renounces any assertion of himself, that is from his humility. The two are not in fact so directly contrasted as might be thought, because the idea of himself which a man asserts can include such features as generosity and kindness — for example in the conception of "noblesse oblige". Thus in a certain sense the saint is a special case of the hero, he is

1. Here, as elsewhere in this study, I use "man" in the sense of the German "Mensch" to mean "human being male or female". I am not prepared to adopt the stylistic contortions required to make this explicit at every turn.
a man who does assert an idea of himself, but one which rests paradoxically on self-denial.

Yet this is an insufficient characterization. In Christian terms, anyway, the saint does not simply deny or put away his old Self and thus become a nothing; he also puts on a new Self - one conformed to Christ, the man for others. Thereby, as I have argued earlier, he does not put on any rigid pre-formed image, but neither does he become a shapeless nonentity. He becomes a man without pride, aggression or selfishness, but this does not mean that he is passive to all the pressures of the world. On the contrary he is able to be totally responsive to the situation in which he finds himself, just because his response is not made stiff by pride or distorted by fear or incoherent desire. His response has a positive flow and pressure of its own, which is that of love. To put it another way, his response is not governed by the multiplicity of wills that is generally characteristic of mankind, nor by the single-mindedness of the self-assertive hero, but rather by one will only which is that of love; for love fills his life and expresses in him the will of God. Therein his wholeness lies.

Of course this is the description of an ideal and as such is liable to evoke the hollow laugh. No doubt even the greatest saints fall far short of it for much of their lives (though for a Christian the same is by no means true of Jesus himself). The saints, however, know this and confess their failure when they do fall short; and a Christian would claim that their life in Christ is thereby constantly renewed through the Holy Spirit. It is entirely possible to be sceptical as to whether there has ever been a true saint, but this does not exempt us from taking note of the ideal of saintliness, which, as exemplified for instance in St. Francis of Assisi, has had great influence in the world. Moreover, though I can speak with any knowledge only of Christian saintliness, I see no reason to deny that a Buddhist or Hindu or Moslem or Stoic, or an agnostic idealist, can reach towards the same ideal role of being perfect in humility and filled with love; or that many in fact have done so.

The heroic role is more ancient and less problematic, but also more protean, and to that extent more difficult to pin down. The ideal of
saintliness is hardly conceivable before the advent of what Toynbee called universal religions, or philosophies of a similarly universal type, which can recognize the kinship of all mankind. In the small, separate “known worlds” of tribal society, particularly in less than paradisal conditions, when there is war and competition between different tribes or groups of related tribes, there is little inclination to sense human kinship with the enemy. The gods themselves are identified with tribes or nations and do battle with the gods of the other side. There are traces of such attitudes in some pages of the Old Testament itself. Perhaps at a still earlier stage, when men were organised as small groups of hunter-gatherers, something more like a primal innocence could be identified; but debate on such points is beyond the scope of this study. What matters here is that the hero emerges in battle. He is a man of strength, integrity, courage (even ferocity), often of suffering and sacrifice; but his sacrifice is on behalf of a group, reflecting what I have earlier called first-order unselfishness, which leaves a place for vicarious self-assertion. He is the protagonist of his group, formidable and courageous in the face of its enemies, a leader whom men can follow and with whom, as they follow him, they can identify themselves and their cause. Indeed in putting on the hero’s role they can have the sense of finding a true identity which they lacked before.

Of the Viking Age it has been said:

What was known for sure was, on the one hand, the fact of death — and, on the other hand, the witness of brave men who were famous in poems and stories. Their heroic creed was based on this simple correlation:

Wealth dies,
Kinsmen die,
a man dies likewise himself;
but fame
dies never,
for him who gets good fame.

Wealth dies,
kinsmen die,
a man dies likewise himself;
I know one thing
that never dies,
the verdict on each man dead.
These famous Havamal stanzas are from the ninth century, but they have found no essential modification in the Christian texts of the Norwegian court four hundred years later... The standard for honourable conduct was ultimately set by public opinion, and public opinion provided the reward. The quintessence of public opinion resided in history and legend and maintained the ideal. Poems like the lay of Atli not only gave models for heroic behaviour, they also proved the truth of the assertion that a man could win everlasting fame, a secular immortality, in keeping with the emphasis on individual human responsibility and self-reliance.  

Perhaps the best comment on this is that of a Christian poet, John Milton, who wrote, in a disillusioned parenthesis, words which show perhaps a truer sense of the worth of human reputation:

Fame is the spur that the clear spirit doth raise (That last infirmity of noble mind).

In the terms of our psychological model it is clear that the hero's integrity is rooted in a stage of development at which the parent figures have been internalised, a simple idea of the Self has been established and aggression has been legitimised, wherever it has the endorsement of the traditional-parental ideal. The saint’s integrity, by contrast, is rooted, much more elusively and perhaps precariously, in a recovery of the plan of the good child as it was developing before the stage of internalisation and heroic independence; it means giving up the easier unification which comes from first-order unselfishness on behalf of a group, and from placing reliance on human strength; it seeks the deeper unification which comes from unselfishness of a second order, that resounces even vicarious pride and aggression and relies on a totally fluid obedience to the guidance and power of the Holy Spirit as it is renewed from moment to moment. It requires the greater sacrifice and ultimately the greater courage; but it is more open to the criticism that fundamentally it is unattainable and that to pursue it leads to self-deception and hypocrisy.

These are theoretical schemata deriving from remote times or early childhood, and it may be argued that they have little relevance to the complexities of modern life. But the argument of this study suggests that they represent - still and always, and particularly in the case of the hero - the unifying schemata by which people's identities are formed.

today. We have a multiplicity of heroes, corresponding in part to the multiplicity of thought communities to which we belong. There is truth in Carlyle's view that "society everywhere is some representation, not insupportably inaccurate, of a graduated Worship of Heroes". Nearly all thought communities have their star personalities, whether they are scientists or footballers, teenage gang leaders or film stars, parents or politicians, headmasters, managing directors or union bosses. We do not always identify with them; indeed some may be to us demons rather than heroes; but it is in relation to them that our ideal roles are constructed, and often with a touch of heroic identification. Just as the thought communities are organised to some extent in loose hierarchy, so too we acknowledge the primacy of some heroes over others, particularly in certain contexts. Winston Churchill, for example, during the Second World War became a hero with whom the British nation tended to identify itself above all other. In times of crisis and danger the hierarchy of thought communities is sharpened, and with it the preeminence of national rather than local or sectional heroes.

This is not a simple age. Our multiple heroic roles are by no means always compatible with each other when circumstances bring them into contact; and most of us followers vacillate in some incoherency between the various models that we set ourselves. But this is what the real heroic leader does not do. His priorities are clear and he asserts them with courage and without too much squeamishness about the needs or scruples of others. And in practice this is how we like him. It is precisely because of such clarity and force of mind, whether or not she was right, that in the eyes of many British people in 1982 Mrs. Margaret Thatcher acquired a touch of the heroic at the time of the Falklands war. The leader in battle, the pugilist, the rake (as with Don Juan), the bold law enforcer (as with Wyatt Earp and his like), the bold criminal (as with Butch Cassidy or the "Great Train Robbers" and their like), even Satan himself in "Paradise Lost" all tend to acquire the heroic aura, because they have a singleness of mind and boldness in self-assertion which ordinary followers, caught in the multiplicity of wills, find lacking in themselves.

Correspondingly we are inclined to allow a licence to heroes which we do not accord to ordinary mortals. The hero lives to the full and for a moment liberates us from our inhibitions. He appeals to the sentiment that:

One crowded hour of glorious life
Is worth an age without a name.

Many a prim suburban dweller, who does not condone adultery, will look with indulgence on the sexual exploits of a Nelson or a Byron or a Marilyn Monroe or a Napoleon or even a Lloyd George. Sexual conquests indeed are often seen as a sort of perquisite or badge of heroism, while the humiliation or betrayal of others which may be involved counts little in the balance. All those who rebel against conventional rules, however arrogant or self-indulgent their motivation may be, will tend to collect a meed of hero-worship, as any school playground will show. And the playground can also show that the distance between the heroic leader and the bully with his gang, enforcing a new conformity, is sometimes very short—perhaps often a matter chiefly of your angle of view.

We cannot do without heroes. They help to weave the fabric of human society, which without them might be hopelessly disintegrated. But the disparity between different heroes, with the groups who follow or admire them, are such that they cannot all flourish. Heroism is associated with conflict, not with reconciliation. One man's hero is often another man's counter-hero or demon. If, as I have suggested, one of the main principles by which human personalities are structured is that of the adoption of heroic ideal roles, then it will never be easy, except perhaps in time of mortal danger for the nation, to secure even the minimum of coherence in the organisation of society, or to avoid mutually destructive violence. It is the attempt to find ways of doing so which leads to such patterns of humanistic ideology as those of the species-being, the free individual and the great man, to which I have referred on an earlier page.

Every theory of the humane society is an attempt to reach a compromise between the principle of equality and the principle of liberty, the two central but conflicting principles of justice as most people conceive it. Pressing equality too far leads all too easily to
to tyranny and pressing liberty too far leads all too easily to an unfair distribution of wealth and ultimately to anarchy. In recent years the philosopher John Rawls, to take one example, has worked out in his book "A Theory of Justice" a remarkably sophisticated and intellectually compelling prescription for achieving some approach to peace and justice. Yet it is clear that, however subtle and complex the institutional arrangements, they will not work so long as man is conceived humanistically as an individual motivated only by rational self-interest, trying to maximise his potentialities. Not even what I have called first order unselfishness, which is itself a form of rational self-interest, insofar as the individual identifies himself with the group, is sufficient. Rawls himself has to argue that moral principles ought to engage our affections, and speaks with approval of a supererogatory love of mankind — though he is hardly able to find a logically necessary place for it in his system. It would be better, I think, to recognise that the principles of liberty and equality cannot be realised without a third, and even more important, principle, that of fraternity or love. If there is not enough love among the people, no amount of regulation can establish a just society.¹

This is where the saint comes in, the hero who asserts himself in humility. Our world is one in which, time and again, what brings good for some brings deprivation for others; in which life is unfair; in which no human institutions can create more than a rough and ready approximation to justice. Ideal roles based in one way or another on developing the individual's human potential can never provide an adequate or realistic pattern for human lives, and are all too likely to generate conflict and destruction. The truest humanism, in the Christian view, is the paradoxical humanism of sacrificial love exemplified in a man stretched upon a cross. The only way to freedom and reconciliation is through sacrifice of the Self.

What Jesus told his disciples to say when they healed the sick was "The Kingdom of Heaven has come near to you"; and the saint is

¹. The views of Professor Rawls, for which I have great respect though I do not altogether agree with them, are discussed in detail in my study "An Approach to a Just Society". An appendix, "The Derivation of the Principles of Justice" is particularly relevant to the present argument.
one who by his life conveys this same message to those who come in contact with him (if they have eyes to see or ears to hear). In the process he also conveys the message that every individual's true idea of himself is not some patchwork of heroic or ignominious this-worldly roles, it is of the Self transformed through obedience and freedom as a citizen of the Kingdom of Heaven. The more hostile the conditions — as for example in the Soviet Union today — the more necessary and effective the message of a saintly life can be. This is why the saints are rightly described in the liturgy as "the lights of the world in their several generations".

True saintliness is excessively rare and, sad to say, it is often only with hindsight that we realise when we have encountered it. Ordinary human beings can only fleetingly catch sight of such an ideal role potentially capable of shaping the ultimate contours of their true selves. Only too often those who are formally religious are people cramped by fears, looking timidly for shelter or clinging to a rigid legal righteousness, quicker to denounce than to accept in love. But if there was not, here and there in our society, some proclamation of unconditional, irrational, paradoxical, sacrificial love, if such as Mother Teresa of Calcutta did not exist, then the ideal role of the saint, the reborn citizen of heaven, would cease to lurk at the back of people's minds, providing the remotest, shadowy contours of their own ideas of themselves. This-worldly heroic roles would have to be taken at their face value, for there would be no final perspective in which to see and order them; and the consequences would be chaotic. A lot of people would be a lot more nasty and more unhappy than they are now. And as for our society, there would literally be no health in it. Perhaps there is not very much health now, nor ever has been; but to lose the ultimate perspective altogether would be the ultimate disaster. The story which epitomises what happens when men trust in their own heroic strength is that of the tower of Babel. So at least the Christian view would run.
Innocence and Joy

In this section and the next I consider whether there is any evidence to confirm the theoretical conclusion reached in preceding sections that there is a true Self to be recovered who can be identified with the ideal role of the saint, a re-expression of the primary personal plan of being a good child. I find some evidence in the experience of moments of innocence and joy, drawing in particular on the work of Dr. Oliver W. Sacks with victims of post-encephalitic Parkinsonism.

My concern in this study has been to develop a theory of the Self within a theory of the mind. It will be evident that I am myself a Christian – or more precisely an attempted Christian. However the validation of religious truth is ultimately a matter of faith acquired through grace, not of belief acquired through argument. I have been concerned with religion in this study only in two limited contexts; first to establish whether the Christian view of man could be expressed in terms of the descriptive model worked out in its earlier sections (the answer is yes); and secondly to explore whether it could suggest a more promising solution to the problems of division and alienation in the mind than alternative views based in one way or another on the more conventional assumptions of a non-paradoxical humanism (the answer is perhaps). I do not propose to take this particular argument any further in the present framework. But in the last two sections of this chapter I propose, in the light of what has been said about ideal roles, to return once more to the perennial question: who is our true Self? Or, to put it in the specific terms of our analysis, what is the true ultimate profile of the idea of the Self as it emerges in the various contingencies of life, acting as a major determinant of our decisions.

It is one thing to suggest that the true ultimate Self is the paradoxical ideal role of the new Self, the man for others; but this will not be a man's own if it represents merely the adoption of an external image. He will not be able to make it his own unless there is an element within him that responds, and through which he can make
it part of his own unique identity. Our theory suggests that this element is the plan of being a good child, which is the core of the continuing personality, even if it is overlaid by later plans of every kind. But is there any evidence to support such an idea? In attempting to find a clearer answer to this question I shall draw on evidence from two somewhat diverse witnesses, Dr. Oliver W. Sacks and the late F. Mathias Alexander.

In his remarkable book "Awakenings" Dr. Sacks describes the case histories of a number of his patients, victims of post-encephalitic Parkinsonism, who were imprisoned, often over many years, by the tremors, rigidities and tics, the twisings and freezings, festinations and retardations, the speech handicaps, frenzies and catalepsies of their appalling disease, but who were nonetheless brought back — though often for a pitably short term — to health and a sense of wellbeing by the drug L-Dopa. Characteristically the awakening is the emergence of a true natural personality which, it becomes evident, had been there throughout the whole period of the illness, buried sometimes for as much as half a century but not destroyed. Unfortunately the balance restored briefly by the drug is still precarious and tends quickly to be lost again, so that the miraculous awakening is followed by a period of tribulation leading eventually, in the happier cases, to some form of accommodation with the world and the disease, but in others to serious relapse:

"Miss A has split into a dozen Miss A's — the drinker, the ticer, the Stamper, the yeller, the swinger, the gazer, the sleeper, the wisher, the fearer, the lover, the hater, etc. — all struggling with each other to 'possess' her behaviour. Her real interests and activities have practically vanished. The original Miss A — so engaging and bright — has been dispossessed by a host of crude degenerate sub-selves... But there are still a few things which bring her together or which recall her former unbroken self. Music calms her... But above all, she is recalled by a single relation... a favourite younger sister."

In another context Dr. Sacks remarks:

"This return-to-oneself, reappearance, 'rebirth', is an infinitely dramatic and moving event... it shows us with wonderful clarity the dynamic relation of sickness to health, of a 'false self' to the real self, of a disease-world to...

1. Revised edition 1976 (Pelican Books). All italics are those of Dr. Sacks."
the real world." Again "I believe that though one can be 'beside oneself' or 'lose oneself' for years on end, the Self itself is still present, intact, entire - however withdrawn or buried it may be."

At the time of a patient's awakening,

"reunited with the world and himself, the entire being and bearing of the patient now changes... He now feels at ease, and at-one with the world... There is a great sense of spaciousness, of freedom of being. The instabilities and knife edges of disease disappear and are replaced by poise, resilience and ease."

It is evident that health and the rediscovery of the Self are associated with balance; and initially this seems to be a matter of the correct balancing dose of the drug. But "after a time 'enoughness' is lost, and thereafter there is no longer any correct dose to give... it is no longer possible to 'balance' the patient". "Unease and discord - in the most general of senses - are the sign and source of returning disease. The forms and transforms are infinitely varied... individuality is inherent in disease as in everything." Dr. Sacks generalises his conclusions to apply to all disease:

"Common to all worlds of disease is the sense of pressure, coercion and force; the loss of real spaciousness and freedom; the loss of poise, of infinite readiness, and the contractions, contortions and postures of illness." "Exorbitance is already a first sign of breakdown; it indicates the pressure of an unmeetable need. Defect, dissatisfaction, underlie exorbitance, a not-enoughness somewhere leads to greed and 'too-muchness', to a voracity and avidity which cannot be met."

Perhaps unexpectedly he adds:

"We are compelled to recognise a precise formal analogy (and homology) between pathological propensity and sin, and must rank both together as ontological peccancy." "Needs and demands which cannot be met by reality turn towards substitute or compensatory activities, for which they display an ever-increasing avidity... The nature of this pathological propensity is essentially extortiionate and, if unchecked, must lead to the death of the real being ('The wages of sin is death')." "The opposite of each exorbitance is a counter-exorbitance and patients may be bounced between these... their extremities and excursions tend to increase in a frightening paradigm of positive feedback or 'anti-control'."
External circumstances and relationships may also be important contributing influences, for good or ill. In some of the worst cases

"the overall situation was pathological beyond remedy" for this reason: "the needs of these patients were incompossible with reality". Yet even in pathological states the patients' reactions are "imbued with a personal quality which is expressed in dramatic or histrionic terms; the person shows forth in all his reactions in a continual disclosure or epiphany of himself; he is always enacting himself in the theatre of his self..."

Maria G.'s real self only showed for a few days before being decomposed or replaced by swarming 'selflets' - miniature, pathological impersonations of herself." "The tendency to exorbitance and the tendency to schism are clearly quite separate (though they play on each other); they represent the two fundamental tendencies to be seen in disease. One observes such splits of behaviour... in all organisms pushed beyond a certain limit of stress and strain." However "One must allow the possibility of an almost limitless repertoire of functional reorganisations and accommodations leading sometimes to unexpected and 'inexplicable' resolutions at times when everything seems lost... health goes deeper than any disease." Often patients can work out careful behavioural devices and procedures which help them achieve control of themselves." These can be remarkably helpful; but "radically different - the true ideal - would be the restoration of a 'natural' rhythm and movement - the 'kinetic melody' (in Luria's term) natural and normal to each patient: something which would not be a mere scheme or diagram or algorithm of behaviour but a restoration of genuine spaciousness and freedom. We have seen, again and again, that patients' own kinetic melodies can be given back to them, albeit briefly, by the use of an appropriate flow of music."

Dr. Sackes emphasises that "the qualities of the first awakening are essentially those of innocence and joy - like an anomalous return to earliest childhood: the Awakened, in this sense, irrespective of their age, come to resemble the 'once-born' of whom William James speaks."

The ensuing period of tribulation "is an ordeal which challenges to the utmost those who must face it. A number are broken and fail to survive; others endure and are forged by their suffering. These survivors - the Accommodated - are... the 'twice-born' who after bitter division, physiological and social, finally achieve a real reunion, a reconciliation of the deepest and stablest kind."

Whether or not we are prepared to follow Dr. Sacks in all his interpretations, we cannot fail to recognise here an account, sharpened

1. Cf. Gerard Manley Hopkins:
   It is the forged feature finds me; it is the rehearsal
   Of own, of abrupt self...
through the extremity of the situations described, of the nature of human selves as we actually encounter them, and of the relationship between selfhood and health reflected in the experience of our own lives. Moreover it would not seem impossible to attempt some translation of this account into the terms in which this study has been carried out.

Let us begin with innocence and joy. These, Dr. Sacks suggests, are the characteristics of the true Self as it awakens. Innocence is not a matter of pristine inexperience and ignorance, the word literally means not-harming-ness — hence, we can say, an absence of aggressive and destructive feelings. We associate innocence very much with a happy child. A child is capable of aggressive feelings but, as was suggested on an earlier page, his horizons are always of the short term; if he is happy he is wholeheartedly so, without arrière pensée. The simplicity of his true Self is not "sicklied o'er with the pale cast of thought". We come back to the role of the good child, responsive to the approval of parent figures and indeed at the root formed by them. It has been argued earlier that this is the child's true Self; and by extension, it is implied, the adult can achieve his true selfhood only as he finds a new innocence in the freedom which is acceptance, obedience, service to the Father of Creation.

The joy that goes with innocence is the correlative of a personality fully at ease, without internal tensions or external frustrations, the true Self expressing itself. In the words of the prophet Micah, "He hath showed thee, O man, what is good; and what doth the Lord require of thee but to do justly, and love mercy and walk humbly with thy God?" However for an adult to become in any lasting way as a little child, in the way Jesus required of him, is a difficult matter; it involves self-knowledge and self-reconstruction, being forged through suffering and born again in the manner of those of Dr. Sacks' patients who achieved a stable accommodation with the world and their own disease. Always moreover it remains fleeting and uncertain.

This is a theoretical proposition; but does it correspond to any reality in our experience? It is suggested that I am my true Self when I am innocent and joyful; but how often does that happen, to me or to other adult human beings? The answer unfortunately is not very often.
But not nor. Joy does not have to be riotous, it can be serene, and most of us know "the moment in or out of time", rare though it may be, when we are aware of joy:

Hence in a season of calm weather
Though inland far we be,
Our souls have sight of that immortal sea
Which brought us hither,
Can in a moment travel thither,
And see the Children sport upon the shore,
And hear the mighty waters rolling evermore.

We know what Wordsworth was talking about in his great ode and elsewhere. We can understand what Blake meant by innocence, what Rilke meant by praise. The experience of beauty, whether in creation or in the works of man, is, as Keats implied, a kind of experience of truth, and it is a truth simultaneously about ourselves and about that in which "we live and move and have our being". It is not only for the victims of post-encephalitic Parkinsonism but for Shakespeare himself that the experience of music seems above all to be a means of ordering the Self in harmony and ease and truth. Such experience of the beauty of holiness - not an incidental beauty but that of the whole - seems to me what is meant by a moment of grace.

Conversely it is by grace, which is the operation of the Holy Spirit, that we know, if only momentarily, what it is to be joyful, to be truly obedient and so to be wholly free. By grace we get a glimpse or sense of our true selves. But there is a difference, a Christian might say, between grace and glory. Lasting joy is associated with heaven not earth. The pursuit of ineffable experience for its own sake is for a human not only self-defeating but dangerous, and the true mystics, who may start from an experience, end always with a Way:

Quick now, here, now always -
A condition of complete simplicity
(Costing not less than everything). 1.

For us as human beings the experience of innocence and joy may be our guide, but the life we can hope to lead will always have its share, and perhaps more than its share, of frustration, pain, injustice and sorrow, some due to our own failings but some due to the human condition

1. T.S. Eliot: "Four Quartets" (Faber, 1944).
itself and the earth which we inhabit. A saint may live a constantly 
recollected life, turning all things to good; but a saint does not make 
himself invulnerable, very much the opposite; and Jesus Christ himself 
is identified as the suffering figure in Isaiah, "a man of sorrows and 
accustomed with grief". According to St. Paul God "has shone in our 
hearts to give the light of the knowledge of the glory of God in the face 
of Christ. But we have this treasure in earthen vessels... For while 
we live we are always being given up death for Jesus' sake that the life 
of Jesus may be manifested in our mortal flesh... Though our outer 
nature is wasting away our inner nature is being renewed every day... 
For the love of Christ controls us." Or so we may hope.

Style

An account, drawing on the work of F.M. Alexander, 
of the idiosyncrasy of the Self as expressed in 
style, or manner of use.

As mortals we are bound to death and time. And, as we suggested on 
an earlier page, the bondage to time is a bondage to discontent, for no 
equilibrium can be held for more than a moment:

\[
\text{Whate'er I be,} \\
\text{Nor I, nor any man that but man is} \\
\text{With nothing shall be pleas'd, till he be eas'd} \\
\text{With being nothing.}
\]

The idea of the Self includes all that a man's mind records of himself; 
and part of this, the anticipatory Self, includes all the roles and 
predictabilities that affect him in the future. But whenever the man 
appears in any one context, as the determining element in any one purposive 
cycle, we are concerned with the face of the Self, that which emerges 
as relevant in this particular situation, a face which is renewed and 
renewed, like a physical human face, at every moment of our progress in 
time. Because it reflects the relevant aspect of a much greater whole 
which as a rule changes only gradually, through accretion, attrition 
and decay, there are similarities in every appearance, and particularly 
in those which are closely related in time — again as with the 
different glimpses we have of a physical face, perhaps over a whole

1. 2 Cor. 4; 6-7, 11; 5; 14.
life from childhood to old age. When we try to pin down what is unique and individual about it, we may find that the word which most closely corresponds to what we are describing is style.

A style involves certain constancies of elements and of relativities between elements. It will always permit some changes in their values and it can evolve over time, like the style of classical architecture for example, so that the cumulative effect of change can eventually be very substantial; but there must always be continuity in the steps of change and in some sense a balance between changes in different values; thus not only the individual values or component forms must change in a continuous fashion, but too must the form as a whole, maintaining its coherence as it evolves. It is interesting that Dr. Sacks comes back to this word style when he tries to identify what is unique about a person. He comments that even in mental patients with massive loss of brain structure and function

"...one may — very suddenly and movingly — see vivid momentary recalls of the original lost person. Again... I have seen the sudden 'sobbing' effect of illness, tragedy, bereavement etc. on profoundly deteriorated, 'burnt out'... schizophrenics; such patients... may come together in a moment faced with overwhelming reality... All of us have experienced sudden composure at times of profound distraction and disorganisation... All of these examples indicate that... it is not a question of this system or that, but of a total organisation... Style, in short, is the deepest thing in one's being. An extraordinary example of this is provided by a number of letters which I once saw written by Henry James when he was in a terminal, extremely febrile, pneumonia delirium; these letters show clear evidences of delirium, but their style is unmistakably and uniquely that of Henry James."

The word style as used here appears to have much the same reference as Luria's phrase 'kinetic melody' quoted by Dr. Sacks. The use of the word composure, moreover, is again revealing; for ultimately the sign manual of an individual personality is the way in which he or she is held together, the pattern or style of his or her coherence.

An interesting comparison can be made here with the findings of a man working in a very different field. The late F. Mathias Alexander developed a technique for identifying and influencing the physical

1. See the discussion of continuity on page 17-18 above.
co-ordination of the human body. The core of his method lies in two propositions, of which the first is that the individual physical reactions of the body are conditioned by a general pattern of use which is a function of the body as a whole. We all have characteristic and habitual ways of performing particular physical acts, from sitting down in a chair to brushing our teeth. Even the simplest act of this sort involves elaborate muscular coordination and we often perform a large number of such acts simultaneously or in varying combinations or sequences. It follows that these habitual ways of doing things must be related and coordinated; and further that the manner in which they are coordinated builds up to a characteristic and habitual "manner of use" for the bodily organism as a whole. This is not merely a function of the individual patterns from which it is built up, for it has an influence in return on the way in which the individual acts are performed. If twenty different people are taught a particular physical skill - how to serve a tennis ball for example - they will develop twenty idiosyncratic ways of doing it, for each has his own pattern of use to which the new skill has to be assimilated. From earliest childhood the acquisition of new particular skills or habits and the building up of the generalised central pattern of use proceed pari passu, through a process of action and reaction.

Now the differences between individuals in their pattern of use derive initially from minor physical differences between them and between the situations in which particular habits were acquired; and differences in situation or potentiality operating on already differentiated patterns of use have a cumulative effect in further differentiating the individuals. Nevertheless, just as for every heap of lumps of sugar in a bowl there is theoretically one arrangement which is more economical of space than any other, so for any individual there is theoretically one pattern of use which is simpler and more economical of effort than any other.¹ This pattern will change if the individual changes. Thus if I have a knee permanently stiffened as a result of an accident, a great many of my physical habits - and with them my central pattern of use - will have to be changed; but it remains true that for

¹ To be precise this is true not generally, but at any given level of hierarchical analysis; for if you break up the lumps of sugar into grains, the most economical pattern of grains in the bowl will be different from the most economical pattern when only the lumps are being arranged. This point becomes relevant to our argument on a later page.
me, stiff leg and all, there will still be one pattern of use which is better, because more free and more economical of energy, than any other.

In practice people often have patterns of use which are far from the ideal. This can be seen from the way in which they play games. The player with a good style is one who makes his strokes with the maximum of freedom and the minimum of unnecessary tension or jerkiness. For any given stroke in tennis, for example, there will be a "classical" method of performing it to which every good stroke player will conform; yet there will always be differences between good stroke players because they are physically different people. We say that a player has a bad style if his strokes involve more tension or effort than is necessary; and although a player with a bad style may yet be effective, we can say with confidence that he would be more effective still if his style were improved. What Alexander maintained was that we each have a characteristic style which applies not merely to the way in which we play games but to everything that we do with our bodies.

He went further, however. He found a way of telling subjectively what is the right pattern of use in a given situation. The second of the two propositions which lie at the root of his method is this: The most economical way to perform any physical act is that which ensures that throughout the process the head is balanced as freely as possible on the neck. Alexander's technique consists in learning by means of this touchstone a new physical manner of use. In the ordinary way we are not aware of exercising any control over the extremely complex coordination of our movements; but such a control must exist and must be intricately connected with balance. It is plausible therefore that it should be exerted through the mechanism by which the head is poised on the body and by which it moves delicately to lead or compensate the shifting of the body's centre of gravity whenever physical movements of any kind are undertaken. (My understanding is that Alexander's empirical findings in this field are conformable with what is known of the physiological mechanism of coordination.) Alexander's technique is a form of training by physical experience (it cannot be learnt from the printed page) which enables an individual to become consciously aware of the "primary control" in himself and to use it as a means of relearning all his physical habits. The pupil has a strong tendency to
revert to his old ways; and the first step in applying the technique is a negative one: to inhibit the automatic response, to detach oneself from one's old habits. Constant attention is required to keep the mind concentrated not on the end to be gained but on the means whereby it is gained. Grasping for the end always frustrates obedience to the new control and the need to inhibit the greedy response is fundamental to the technique, in a way which recalls the precept of the mediaeval author of "The Cloud of Unknowing": "Snatch not over hastily, as it were a greedy greyhound, hunger thee never so sore."

When a pupil has learnt the "feel" of the primary control, he will indeed never forget it altogether, any more than he will forget how to swim if he has once acquired the art. But this does not mean that he will always apply it consistently or well. In order to do this he has constantly to be recollected, to pay attention to the means whereby instead of grabbing for ends all the time, and to remember always to be obedient to the primary control. The pressures and distractions of everyday life tend to pull his mind away from this; moreover, unless the technique is regularly renewed, preferably with a teacher, it is easy to lose it in some degree so that the control itself becomes corrupted and the pupil deceives himself that he is using the method when in fact he is no longer doing so.¹

It will be evident that I have described this technique at some length, not so much for its own not inconsiderable interest as for the analogies it suggests with the way in which any individual uses his whole organism, mind and body together, in living his life, and thereby establishes the style which in Dr. Sacks' words is "the deepest thing

¹ F. Mathias Alexander died in 1955 at the age of 86. During his lifetime he obtained a good deal of recognition and some well known men, including Bernard Shaw, Sir Stafford Cripps, the Earl of Lytton, Professor John Dewey, Sir Charles Sherrington and Aldous Huxley were among his pupils and admirers. A number of doctors recognised the value of his technique and in 1937 nineteen eminent medical men signed a letter in the "British Medical Journal" drawing attention to the results he had achieved and urging the need for a full investigation of his work. The war intervened however and regrettable little of Alexander today, though some of his pupils are carrying on his work and the recent wave of interest in "holistic" techniques appears to be leading to a revival of interest in what he had to teach.
in one's being". "Le style c'est l'Homme" is an old saying and our enquiries suggest that it is a true one; but it is perhaps worth emphasising that the style is not so much the man entire as the face of the man, that by which we recognise him. The whole idea of the Self in the mind-manifold, like every great feature of a physical or mental landscape, embodies more than can be grasped in any one perception or conception; we can only see one aspect of it at a time. The style however is the generalised form of the aspects of the Self that emerge in the successive contingencies of life, and thus a conception that we can grasp at one time, the nearest we can get to forming an idea of the whole man. Fundamentally the face that the Self shows in any contingency is what the whole idea of the Self, with its particular composition of experience and its particular manner of integration in the mind, looks like from a given angle at a given time.

It may be interesting to note here that Erikson is another who turns to the word "style", or more precisely "style of integrity", when he comes to describe the final stage of maturity in his scheme of the development of man, the stage in which "gradually ripen the fruit of these preceding seven stages". But Erikson is led, without I think realising the full implications of what he is saying, to an ideal which is in effect that of the species being. He identifies style exclusively with culture. For him the man of "ego integrity"

"is ready to defend the dignity of his own style against all physical and economic threats. For he knows that an individual life is the accidental coincidence of but one life cycle with but one segment of history; and that for him all human integrity stands or falls with the style of integrity of which he partakes. The style of integrity developed by his culture or civilisation thus becomes 'the patrimony of his soul', the seal of his moral paternity, of himself. In such final consolidation, death loses its sting."1

This passage is, I believe, an object lesson in the dangers to which the attempt to work out any "non-paradoxical" humanism in its full logical consequences is liable to lead. When stripped of the verbiage, it is in effect (though I do not think Erikson intended it so) a justification of "my country (or culture) right or wrong"; and it could

just as easily be adapted to justify "The Communist Party, vanguard of the working class, right or wrong". The error lies in referring "style" to the pattern of culture alone. It is true that we have to speak the language of our time and place, which imposes a certain style on us; but the individual has a style within a style - and one moreover which can sometimes be revolutionary. Bach and Handel both had their individual styles, though both used the "baroque" style of their day and had little option about so doing. It was St. Paul who said "O death where is thy sting?"; but the consummation of which he was thinking was something very different from Erikson's "consolidation" with the pattern of a culture; and it was different essentially because the Christian salvation is an individual salvation. The full realisation of the individual is not to be identified as the perfect "adjustment" to society, which so easily becomes a temptation to the psychotherapist as the appropriate goal for his treatment.

To return from this slight digression, I have argued earlier that the dominating contours of the Self are the major long term plans and roles which link its choices together and maintain some consistency in the individual's life; and these will tend to show up, slightly changed in aspect but recognisably the same, from many different angles of approach, like the dominating forms of the shape of a great mountain. But the mind can integrate these aspects in a generalised conception of the form of the whole, just as it can create a generalised conception of the form of a great mountain, even though the senses can perceive only one aspect at a time. The difference in complexity is immense, not least because the contours of the Self are extended in time as well as space and so involve patterns of action and of change, but it can hardly be doubted that we do identify the characteristic style of an individual's personality, just as we identify the style of his handwriting or his face.

In principle we can also say whether his style is a good one or not, just as we can with an individual's style at playing tennis, though the judgement is a much more complex and difficult one to make. The fundamental criterion of judgement is also the same, that of freedom from tension. Every individual's style must be different from others
and idiosyncratic to himself because his experience and circumstances
are different from those of all other human beings; and his style in
the manner in which he integrates his potentialities in action. At
the same time every human being's experience and circumstances are in
some respects similar to those of others and it is possible to identify
a "classical" style to which every individual needs to be conformed in
his own individual way if his performance is to be perfected. It is a
style of obedience to the primary control, in Alexander's terminology,
and hence of maximum balance and freedom from tension in the parts.
The touchstone of the primary control of a person's physical manner of
use of any of his members is whether the lead is given from the head,
moving freely upon the body; and a Christian may extend this idea, with
the aid of St. Paul's great simile, to suggest that the touchstone of
the primary control of a person's moral manner of life is whether the
lead is given by the head of the body, who is Jesus himself: "we are
to grow up every way into him who is the head, into Christ, from whom
the whole body, joined and knit together by every joint with which it
is supplied when each part is working properly, makes bodily growth and
upbuilds itself in love."\(^1\).

It is not perhaps necessary however to be a Christian to recognise
that the test of the primary control is freedom - freedom on the one
hand from incoherent "end-gaining", the scratching of the greedy greyhound,
which breaks up the coordination of the whole person, and on the other
hand from the set ambition or pride which, as it were, stiffens the
neck and corrupts the primary control. For the price of freedom is
always sacrifice, the willingness to be remade at every instant, the
humility which makes obedience possible. "Nothing is vain or without
profit to the humble soul", wrote William Law, "like the bee it takes
its honey even from bitter herbs. It stands always in a state of
divine growth and everything that falls upon it is like the dew of
heaven to it." It is seemingly easy to be free, for no positive effort
is required of us. All we have to do is to be recollected, to bring
ourselves to a point of balance and to pay attention. But this is
also exceedingly difficult. Simone Weil said: "Attention is an effort,
the greatest of all efforts perhaps, but it is a negative effort.

1. Ephesians 4, 15-16.
There is something in our soul which has a far more violent repugnance to true attention than the flesh has for bodily fatigue. This is something far more closely connected with evil than is the flesh. Indeed it is, for (if I may revert to Christian language) it represents the collective pull of our sins, which tie us to all sorts of desires and above all to the existing pattern of the Self. All sin is distraction. Attention detaches us from immediate ties and makes possible the emergence of a new pattern of the Self and with it a new and better "style".

We may well ask with Nicodemus "How can a man be born when he is old?" And of course the birth of a new Self does not alter the past, or the materials of experience of which the man is made; but what it does alter is the way in which the parts are brought together in the whole. In terms of our model this means change in the threshold settings of the potential transitions of the mind. This reorganisation can take place in a relatively superficial way affecting the relationships of major elements in the mind-manifold only; or it may go down to deeper hierarchical levels, affecting every sort of relationship in a man's life and bringing with it liberation and blessing in all he does. "He that looketh into the perfect law, the law of liberty, and so continueth, being not a hearer that forgetteth but a doer that worketh, this man shall be blessed in his doing."2

This man will also find his true Self. Being human he will lose it and have to find it again and again; for we never succeed in maintaining permanently a perfect style; but if we have looked into the perfect law we shall be capable of knowing at every instant of attention what our true Self is, conformed to Christ and yet unique. Donne quotes and translates in one of his sermons a sentence, presumably from one of the early Christian fathers, which is here to the point: "Facies Dei est qua nobis innotescit, that's God's face to us by which God manifests himself to us." Each of us is different and for each of us his life and his Self are built of different experience, so that each of us sees the face of the Creator from a different angle. As we pay better attention and respond more completely and malleably, in free obedience to the will which that face expresses, so we become more completely conformed to him. We may not get far towards such perfection

1. Simone Weil "Waiting on God" (Fontana) p. 27.
2. James 1, 25.
in this life but a Christian will believe that some progress may be achieved even on earth. "When a man turns to the Lord the veil is removed. Now the Lord is that Spirit and where the Spirit of the Lord is there is liberty. And we all, with unveiled face, beholding the glory of the Lord, are being changed into his likeness from one degree of glory to another."  

We could perhaps end this chapter with St. Paul's resounding words. But there is a footnote still to add. The starting point of Chapter II of this study was the suggestion that the mind is a regulator; and the suggestion has been made that within the mind the idea of the Self, as it emerges in each contingency of life, plays a crucial part in the regulation of the organism. From the scientific point of view, accordingly, the most important question to be asked about any particular idea of the Self is whether it is effective in regulation, otherwise whether it conduces to the survival of the organism (or at least of its genes). A Self formed on the principle that he who loseth his life shall save it might not seem to offer promising results from this point of view. However there is a counter to this argument. The advent of civilisation, based on the accumulation of knowledge, has led to ever larger units of organisation and ever more alarming possibilities of destruction, and it has had the effect that survival, whether of genes, of individuals or of social groups, has become much less a matter of competition and much more a matter of cooperation. For reasons I suggested in discussing the ideal role of the saint, the development and perpetuation of civilisation depends very much on there being enough sacrificial love in the world to keep a humane society in being. Without it man will destroy himself. And this is why an idea of the Self formed on the principle of sacrificial love is essential even from the point of view of effective regulation.

I believe that this counter-argument is a sound one so far as it goes. But we should not allow it to disguise the fact that it is merely a convenient assumption of ours that survival is desirable, or that evolution moves somehow in a forward direction. Science is neutral. It may define, on certain assumptions, what constitutes effective regulation, but it will not certify the initial assumptions of value, nor (which is the same thing) tell us whether effective regulation is

1. 2 Cor. 3, 16-18.
good or bad in itself. At the end of the day we have to look beyond science to some metaphysical criterion; and it is to the philosophical issues which arise that I turn in the last chapter of this study.
Any study of the nature of man is likely to come up against some of the most difficult, and currently most disputed, of the perennial questions of philosophy. It would be far beyond my powers to deal with them comprehensively, and would in any case take the space of a further study on this scale. Nevertheless the analysis presented in this study can have little purchase on real life unless it is fitted, explicitly or implicitly, into some framework of philosophical judgement. Accordingly in this final chapter I turn my attention to a few of these perennial questions—What constitutes the identity of an individual? What is human knowledge? What is the relationship of brain and mind? How are we to understand freedom? What freedom, if any, do we have in our lives? Do we bear responsibility for the lives we live? My aim is not to treat them in any comprehensive way, reviewing, analysing and comparing different approaches to them, but rather to look at them partially and one-sidedly in the light of the analysis of human personality and the human mind which has been worked out in preceding chapters. In this way I hope to bring the issues discussed on earlier pages into a final perspective, and at the same time to make some points which are not entirely unconstructive about the philosophical questions themselves.

Identity

In this section I discuss the question of what gives the Self identity, with reference in particular to the ideas of the philosopher, Robert Nozick.

In the opening section of Chapter III, I described three different perspectives in which we could view the idea of the Self, those of biological man, behavioural man and psychological man. This study has been concerned in the main with psychological man, the creature of plans and purposes who emerges in the successive contingencies of life in the aspect of the "anticipatory Self" to act as a major determinant of the man's actions. Yet who, in the event, takes these actions? Who
is the true Self? Who am I? In the preceding chapter we have been considering what defines the true idea of the Self. But if the idea of the Self as it emerges in a given contingency can be true or false, this suggests that there is some reality to which it can be true. What is that reality? One suggestion which we considered was that the more closely we can approximate to the ideal role of the man for others, epitomised in Jesus Christ, the more closely we can approximate to our true selves. But even if this is accepted, we are still left with the question of what this true Self — who is surely not identical with the original bearer of any ideal role — can be. What is our own identity?

This, we remember, was a problem that obsessed Shakespeare's King Richard II. Here he is at the moment of his abdication and final humiliation:

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Give me that glass and therein will I read...

Was this the face
That like the sun did make beholders wink?...
A brittle glory shineth in this face;
As brittle as the glory is the face
/[Dashes the glass against the ground/]
For there it is, crack'd in a hundred shivers,
Mark, silent king, the moral of this sport —
How soon my sorrow hath destroy'd my face.

Bolingbroke:

The shadow of your sorrow hath destroy'd
The shadow of your face.

King Richard:

Say that again.
The shadow of my sorrow? Ha! Let's see.
'Tis very true: my grief lies all within;
And these external manners of lament
Are merely shadows to the unseen grief
That swells with silence in the tortur'd soul.
There lies the substance.

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King Richard is struggling with his impersonations, the faces he wears in particular situations. These faces may be incompatible with each other, and in any case they are but shadows of the suffering in the inarticulate, faceless "soul" within. There within lies the substance, the incarnation, the real man. Yet what identity does the real man have?

In trying to answer this question I will first deal briefly with
the suggestion that our true identity is that of behavioural man, the
sum of the roles we play and thus the pattern by which we fit into the
world. I will borrow an answer by quoting some words from Martin
Hollis' book "Models of Man":

"Structural role theory sees the individual as essentially the
incumbent of social positions which by definition can have more
than one incumbent. There cannot be a position which only I
can fill... Hence I am the sum of my roles only on further
assumptions about the relation of identity to roles... A
proposal (which would surely delight Leibniz) to define a
person in terms of reflections in the eyes of others will
merely raise unanswerable doubts about the identity of the
others. It may suit R.S. [sic] Laing not to know who anyone
is, but the philosopher protests that such monads cannot be
logically unique. The philosopher ... demands that there
cannot be two persons who satisfy whatever makes me the
particular person I am, and the sociologist supplies a notion
of who I am too lax to count as an identity at all... What
[a man] essentially is depends partly on what is essential
to his being any person and partly on what is essential to his
being that particular person... The problem is to make
personal identity personal and social identity identity. Our
final conjecture is that the strict identity is that of bodies,
which in turn secures that of persons who perform individuating
actions; their identity as persons is secured by their having
rationally become occupants of social positions... [This]
does at least explain what a crisis of identity is a crisis of.
The affliction strikes when what I am no longer accounts for
who I am, because what I do is no longer the rational acting
out of what I have chosen to become."

This seems to me a valuable piece of clear thinking. I will take
up two points, beginning with the argument about a crisis of identity.
We can link this to the theory of the idea of the Self built up in
preceding chapters. For a crisis of identity arises in two types of
contingency: first when the structure of a man's idea of himself is
such that in given circumstances it gives out an uncertain sound,
because in some way he lacks sincerity or authenticity; and secondly
when the structure of his environment is changed in such a way that the
scenarios necessary for the roles he would wish to play can no longer be
realised — in other words when he has suffered bereavement. 2 In both
cases, though in different ways, he needs in our terms to be reborn; his

2. See in this connection the chapter "Gaining a new Identity" in
idea of himself needs to be reconstituted from the foundations. In this context however we are still dealing with the problem of the true idea of the Self, not with the Self's ultimate identity. We come back to the second point, which is Hollis' "final conjecture that the strict identity is that of bodies, which in turn secures that of persons."

In our terms this is the argument already briefly developed in Chapter III that the ultimate Self is biological man, the man uniquely located through his body in space and time. It is to be stressed however that biological man is not merely the body as a measurable, ponderable bag of flesh and bones which we may recognise in a given contingency; but what is better called the creature, a trajectory across space and time, the world and history, a four-dimensional form extending from conception to dissolution and identified essentially, as anything is ultimately identified, by its continuity. It may be recalled that C.G. Jung described an experience which he underwent while in a coma and close to death after a heart attack in the following terms:

I had the feeling that everything was being sloughed away; everything I aimed at or wished for or thought, the whole phantasmagoria of earthly existence fell away or was stripped from me - an extremely painful process. Nevertheless something remained; it was as if I now carried along with me everything I had ever experienced or done, everything that had happened around me. I might also say: it was with me and I was it. I consisted of all that, so to speak. I consisted of my own history, and I felt with great certainty: this is what I am. "I am this bundle of what has been, and what has been accomplished."

This is no more than anecdotal evidence, but there have been many similar reports from others who have been very close to death and it is fair to take the anecdotes as at least supporting testimony.

The idea that the identity of a whole is determined by its continuity has been elaborated by Robert Nozick in his book "Philosophical Explanations". Without attempting to go into this issue in technical detail, it may be useful here to quote some passages which will indicate the thrust of Nozick's argument. Before doing so, however,

1. See the discussion of continuity in the sections on "Regulation and Self-Regulation" and "Trajectories" in Chapter I above.
it is necessary to go back a step to Nozick's theory of the synthesis of the Self, which grows out of his discussion of the problem of reflexive self-awareness. To quote him directly:

"With a pre-existing I there is always room for a mistake about whom one is talking about in a first-person statement; also there remains the question of what constitutes the knowledge, when that pre-existing thing is referred to, that what is referred to is oneself. However if the self is synthesised around the reflexive act there is no room for the act to refer to something other than it. The self is synthesised as the object referred to in the reflexive tokening of I... The reflexive act refers to the thing of greatest organic unity that includes it; and that thing is synthesised for the purpose of being referred to, by the very act of referring to it. Thus there cannot be any error due to misidentification." (p.90).

For Nozick the criterion of selfhood is the capacity for reflexive self-reference; thus "we can understand why this is so if the self is synthesised... by an act of self-referring and... around an act of reflexive self-referring." This, he argues (though perhaps with a touch of circularity), explains "how reflexive self-awareness is possible and why a self is essentially a self". (p. 91) He continues:

"The self synthesises itself not only transversely, among things existing only at that time, but also longitudinally so as to include past entities, including past selves, which were synthesised... Could some pre-existing entity be identical with the self that is synthesised? If so, wouldn't it turn out that this pre-existing thing was what was synthesised, that is, newly delineated though already existing independently...? Certainly I can think I existed before this moment and that it is a later stage of my earlier self who now refers to himself. Yet all this holds true in virtue of the current act of self-synthesis, not independently of it." (p.92).

It is not my intention to discuss the strength of this argument in philosophical terms; but the point which emerges strongly in the present context is that Nozick's philosophical argument seems to converge remarkably with our own account in psychological terms of the process of thought. The self which is, to use his words, "synthesised, that is, newly delineated though already existing independently" corresponds to what I have called the "evoked" idea of the Self as distinct from the "stored idea" which exists independently in the mind-manifold. We are not surprised to find also a correlative of the "anticipatory Self":
"The I's self-synthesis includes a self-conception which projects into the future." (p. 105 of Nozick's book). Concerned as he is with highly abstract philosophical issues, Nozick has nothing corresponding to the detailed model built up in Chapter III, but his very general model nonetheless corresponds at several crucial points with ours. And his line of thought leads him directly to the problem with which we are familiar of the relationship between psychological man and biological man, which can also present itself as that of the relationship between the successive "faces" evoked from the stored idea of the Self in the successive contingencies of life.

Nozick finds his solution to this problem in a theory of identity over time which he describes as the "closest continuer" theory and which in turn rests upon a theory of the nature of wholeness:

"We care about our closest continuer because we care about our identity, and that is what continued identity comes to." (p.67)

"The closest continuer theory of identity has three components: that the next day's person somehow arise from today's you; that it be close enough (according to a weighted sum of characteristics) to be you, if there existed no other continuer as close as you; and that there be no other as close." (p.360).

"The closest continuer view is that at t2 is the same person as x at t1 only if, first, y's properties at t2 stem from, grow out of, are causally dependent on x's properties at t1 and, second, there is no other z at t2 that stands in a closer (or as close) relationship to x at t1." (p.36-7).

"The closest continuer of a whole is not the sum of the closest continuers of its parts. Consider the sum of the cells of your body plus the other non-cellular material of the body. Cells are continually being sloughed off, while new ones are made; also there are sometimes more drastic happenings, for example, removal of an organ or dismemberment. The closest continuer of this sum of cells plus stuff is the sum of the closest continuers of the parts, including the closest continuers of your sloughed off cells and your removed appendix, but not including the newly made cells. The closest continuer of the whole body, on the other hand, does not include as parts the continuers of the sloughed off cells, removed appendix and lost eye, while it does include new cells, newly generated tissue, and perhaps an artificial heart valve. There is no division of the body into parts so that the body's identity over time is simply the sum of these parts' identities over time. Since the body and the sum of its parts differ in their properties — one is the same as some later entity but the other is not — they are not the same. Thus we have reached the result that some things are different from the sum of their parts; we may call those things wholes. (Note that we have given a sense to the difference between wholes and a sum of parts only
for things which continue over time.)" (pp.99-100).

"A whole need not involve any significant organic unity...
{But} an organic unity does something to maintaining the
integrity and continuance of the whole, unlike a heap...
The unity of X consists of X's integrity at its own level.
It has this integrity provided its identity is not reducible
to that of its parts." (p.100). "The I synthesises itself as
a unified whole - it does not specify its identity over future
times as "whatever is the sum of the continuers of my current
constituents". It construes itself as able to lose bodily
parts, perhaps even a body, to lose memories, perhaps even
memory. The I synthesises itself as having the identity
through time of a unified whole." (p.104).

Now the closest continuer theory of identity is applicable to anything
has an existence in time - a stone, a cloud, a building, an insect, as
well as a man. If we accept (as I do) that the identity of the Self is
that of a whole existing in space and time, and including the various
changing features of a whole body and its behaviour, we may have
settled to our satisfaction the question of identity; but we have not
settled the question of what is the distinguishing criterion of a Self.
Here again Nozick gives us a pointer: "What is special about people,
about selves", he says, "is that what constitutes their identity through
time is partially determined by their own conception of themselves."
(p. 69) It is not a matter of indifference to the individual's final
identity, the four-dimensional form that he carves out through the world
and history, that at frequent intervals he synthesises himself, that is,
he evokes a synchronic idea of himself; for, as we have argued, this
evoked idea (psychological man) affects the decisions that he takes,
and consequently what he does and what happens to him; thus it affects
the form and identity of biological man.

In earlier chapters we have discussed at some length the mechanisms
through which this happens. They involve consciousness and the knowledge
we gain in consciousness. But how, in an apparently deterministic world,
can we in fact ascribe any ultimate importance to this process? How
can we say that the individual determines anything at all if everything
he does is apparently the outcome of the interaction of his heredity
and his environment? I shall be taking up this issue in the later sections
of this chapter; but in the meantime we have to face certain prior
questions, which relate in particular to the nature and status of our
knowledge of anything.
Ways of Knowing

A classification of six ways of knowing, which grows out of the quasi-Kantian view of knowledge developed in earlier chapters.

I have already suggested that our knowledge is always only of facts about things, while the things in themselves are for ever beyond our grasp. Nozick expresses in effect a similar quasi-Kantian view of knowledge in his own terminology:

"Knowledge is a particular way of being connected to the world, having a specified factual connection to the world, tracking it... To know is to have a belief that tracks truth... A person's belief that p is knowledge which is subjunctively connected in a specified way to the fact that p; he knows that p when his belief that p tracks the fact that p... A belief's being causally determined does not undercut the desirability of the tracking connection and might well underlie that connection... Beliefs track facts as truths."

I do not think Nozick defines anywhere what he means by a fact, but the implication is that he means a true proposition, or what we understand when we understand a true proposition; and this is reconcilable, if not identical, with my view of a fact as a factum, a "made thing", a model of reality which is a semantic structure with its own form-as-a-whole, built of logical forms that convey meaning. His image of belief as "tracking" truth recalls a remark by Einstein, as reported by Martin Buber: "What we (the physicists) strive for is just to draw lines after him, to draw after - as one retraces a geometrical figure."

On this basis I would argue that we are concerned with two worlds, that of consciousness which we can know and that of nature or reality or things-in-themselves, which we cannot know, but which in our conscious perceiving and thinking we can attempt in a partial way to model or track. The test of successful modelling is causal prediction, getting things right. Sir Alfred Ayer brings against this type of argument the objection that "these imperceptible objects, having been moved into the territory which the perceptible objects have been forced to abandon, are

2. Quoted by Alan Ecclestone in "The Night Sky of the Lord" (DLT 1980).
located in perceptible space, and it is not easy to understand how spatial relations can be thought to persist when their terms have been taken away from them.\footnote{Construction of our Theory of the Physical World, 1973; reprinted in Honderich and Burnyeat ed. "Philosophy as It Is" (Penguin 1979).} This objection is in my view based on a misconception insofar as it assumes that the unreachable reality of things in themselves exists in perceptible space. On the contrary we have no reason to say that they exist in perceptible space; it is misleading (though in practice we have no alternative) even to apply the categories of singular and plural to reality as it is in itself. I have indeed argued that we recognise ideas in a quasi-topological, non-perceptual space. But ideas are still codings of a reality we cannot directly grasp. The comments of a notable physicist, Erwin Schrödinger, on this point seem to me to be apt: "If we spoke ... of the world's process being mirrored in the perceiving mind, this was a stereotype, a phrase, a metaphor. The world is given only once. Nothing is mirrored... The world extended in space and time is our idea..."\footnote{On the Peculiarity of the Scientific World View in "What is Life? and Other Scientific Essays" (Doubleday Anchor 1956).}

Thus in effect we can distinguish six ways of knowing, six types of experience of the known in the world of consciousness:

a. True Perceptual Thoughts (i.e. perceptions or observations) in which the interpreting schemata of consciousness are infused with sensory values which seem to us to certify their reality, that is, to certify that they "track" the truth. These sensory values are "primitives" in registers of possibility established in the ultimate categories of sensory quality and intensity – colour, loudness, cold and so on; while the schemata are forms built of equally "primitive" values emerging in ultimate ranges of possibility established by various kinds of spatial or spatio-temporal continuum.

b. Untrue Perceptual Thoughts. The assurance given by the sensory values that we experience in perception is not quite absolute, since we cannot perceive without interpreting schemata or forms.
and sometimes the interpretation proves wrong—as it may when we look at a trompe l’oeil balcony painted on a wall. Even then however a correct interpretation does not involve recognising new sensory values, only fitting the same sensory values into alternative schemata.

True Thoughts about the Natural World. Here the object of our experience is a mental model, a structure of logical forms, without sensory values, but one which has a high causal probability and consequently a high conductivity to purposive thought. Such a model has high causal probability if it is based on closely similar models which have been critically tested in similar conditions and not falsified by perceptual observations (our own or other trustworthy people’s). The logical forms are again values in an ultimate category of logical forms emerging in the logical space of consciousness, on which all other forms and spaces have to be mapped before we can become conscious of them.

The range of possibilities in the categories of sensory quality, intensity and form are relatively restricted, but I have argued elsewhere (in my studies of the grammar of perception, thought and language) that on a given occasion a limited register of possibility is established within the appropriate categories of experience and then resolved into actuality as information is passed. In the case of logical forms the ultimate range of possibility is very much greater, but a similar procedure is followed; the process of conscious thought involves the continual opening up and resolution of successive ranges of possibility within the category. (This process is analysed in detail in the discussion in “The Grammar of Language” of the process by which a sentence is understood, as well as in the appendix on the grammar of music).

So far as causal probability is concerned, the degree of similarity in the model (and the environmental conditions) with those of previous successful experience, together with the extent of previous testing, should theoretically determine the degree of credibility of ideas currently entertained, though in practice the
subjective preconceptions of the thinker, the patterns of his "anticipatory Self", may also have some effect upon it — usually by affecting his judgements of similarity and hence his classifications. Because it has a high conductivity to purposive thought the model can be used as a plan or built as an element into a wider model which is used as a plan.

d. **Untrue Thoughts about the Natural World.** These can be distinguished from the thoughts in c. only when they are put to the test of observation or of coherence with more securely established thoughts — and fail the test. When recognised to be untrue, they become equivalent to fictions.

e. **Fictions.** These are forms or models which appear to track the truth of the natural world but in fact do not. By definition they have no conductivity to purposive thought and so cannot be fitted as elements into models which are to be used as plans.

f. **Thoughts Not Even Apparently about the Natural World.** These are thoughts about (i) classifications of the natural world (that is, about phenomena in general); (ii) relationships between classifications; and (iii) the logical implications of given constructions of ideas (that is constructions of instances of classifications). Characteristically they are in no case anchored by values locating them in natural space and time.

Although, as we have noted, the assurance of the truth of perceptual observations which is given by their being infused with sensory values is not quite absolute, since the interpreting schemata may prove to be wrong, in the last resort the only guarantee we can have that we are in touch (significant word) with the world of nature is the experimental guarantee of perceptual observation. Correspondingly, just as observations seem to be certified as referring to reality by the sensory values which infuse them, so untrue thoughts or fictions or thoughts not about the natural world are certified as real in experience (if not in reference) by the "feeling tone" of mood or emotion which infuse our consciousness of them, and so locates them Here Now. Without this link to Me Here Now we could not be conscious of them, as there would be nothing to be conscious of: there might
be a magic lantern, but it would have no light source.

Our Idea of the Natural World

An account of our idea of the natural world as a model constructed in a unified space-time continuum.

Having made this classification of the different ways of knowing available to us, let us now consider more closely the way in which we build up a model of the world of nature, bearing in mind that in our world of consciousness we can only know the model, not the reality as it is in itself.

The physical world as we know it is in the first instance the immediate limited volume of three-dimensional space in which we perceive objects and events in the passing moment of time Now. The knowledge that we acquire through our senses is already coded in terms of values in the limited categories of sensation and form. Our perceptions are of a great variety of things, but they are all expressed through this limited range of sorts of value. We apprehend a large number of sensory point values simultaneously, but the mind makes coherent sense of them by construing them in a space—whether the three-dimensional space of visual and tactile impressions or the analogical spaces in which we recognise forms with a time dimension. In the process the mind organises them as cells enclosed by extended forms in two or more dimensions, and the cells may themselves be organised further in extended composite patterns or dispositive structures. The extended forms, patterns or structures represent values recognised in further limited registers of discriminable form which emerge as the ranges of possibility—the categories of perception—implied by synchronic extension in space. These forms are not defined by sensory values as such, but by difference in sensory values in extension.

In construing coherently the messages received simultaneously through so many different channels, the mind constructs a model of the real world Here Now. I call it a model because, as we have seen, it is not a direct intimation of reality, it is a construction made of elements drawn from a limited number of registers of possible value already inherent in the
mind. It is not self-generated because the messages which it unifies are not stimulated by itself; that is to say, it refers to a reality outside itself which is beyond direct comprehension. Yet it is a construction of the mind, depending on a process of selection and arrangement which the mind itself appears to undertake. Crucial to this process is the creation, as it were, of the space in which extended forms can be apprehended; and we may note that whereas our impressions of sensory quality and intensity appear in disparate categories which are linked to specific bodily organs, we recognize values of form in a space-time which is common to all the sensory categories and is not associated with any specific sensory organ, but seems rather to be an internal creation of the mind or brain. (It is true that we may hear sounds, for example, as extended in an analogical space with dimensions of pitch, loudness and synchronic time; but this space is an interpretative expansion, as it were, of a sound which has first of all a location Here (or There) in normal three-dimensional space and is happening Now in diachronic time; a particular stretch of diachronic time is extracted and laid out synchronically to make possible a quasi-spatial analysis of the sound giving it a form in time; but its location in the diachronic stream is not lost.)

Our impression of the world Here Now may be a constructed model of what is in itself beyond knowledge; but it is an extremely vivid model, and one that does seem to transmit reality to us. The trouble with it is, however, that it is limited and transient. The world Here of which we can become perceptually aware is of very restricted extent; and the moment Now of any one fixation of consciousness lasts for only a fraction of a second and is then gone for ever. These difficulties we are able nevertheless to transcend in some degree with the aid of memory, abstraction and imagination. First we are able to divert our attention away from what may for convenience be called real space and focus it on an imagined space in which, as we have already noted, images of past perception may be reproduced. These images are expressed in the same perceptual categories as those of real space, but they are of much weaker intensity; they occur in a notional space which is enclosed within a real space that is still
there and is only temporarily transparent to our attention; and we can always (except perhaps in pathological states) distinguish the remembered from the immediately real without difficulty. Through the use of images we are able to juxtapose the remembered with the immediate, or else one memory with another.

It is important however to note that in the process we are not juxtaposing one complete perception or the memory of it with the memory of another complete perception incorporating all the sensory values available at the time of perception. We are paying attention to a limited number of cells or patterns or individual values for comparison with others. Even when we compare wholes we concentrate on a few values for the whole, omitting a great deal of perceptual detail. With the aid of generalisation in a further logical space we can establish likenesses, identities, classifications, and we are then able to generate in our imagined space images of instances of these classifications which are created rather than explicitly remembered; and we can put them together in new imagined ways to form new complex images, which are imaginary models, not memories at all.

Memory enables us to recognise that there is continuity between our perceptions. There are switches of attention which break this continuity, but the vast majority of our perceptions form part of what I have called progressions, within each of which there is a continuity of both space and time between one perception and the next, and consequently over the progression as a whole. We note the continuity because we recognise the same forms in adjacent perceptions. The result is to establish a continuous volume of space and a continuous span of time for the whole progression - as for example when I watch a cavalcade moving down the street and across the square.

We can only actually see one part of the continuum in any one perception. Moreover we cannot bring the whole of this region of space-time within the frame of a single image even, strictly, in imagination. Yet we reconstruct an idea of the whole and we assign physical reality to it as if we could perceive or fully imagine it. I say an idea of the whole rather than an image of the whole because a visual image
would be in Euclidean space and it would often be impossible for us
to frame the whole in one such perspective. Our realisation may be
associated with located images of certain parts, as a tourist map of
Britain may include little pictures of castles or cathedrals here and
there; but the idea itself is much more generalised and flexible, a
logical form in logical space, on which the images are mapped. This
idea of the whole is a model of physical reality. Although it is
realised in a flexible and generalised way, we conceive the reality
as possessing the fixed distances and forms of a metric space; but we
conceive this abstractly by the superimposition of generalised
quantitative values, together with the use of images of parts of the
whole; the images being in an Euclidean rather than a metric space do
not need to be all strictly in scale with each other.

Such a model of physical reality is restricted to the region
covered by a single continuous progression of perceptions, and it is
based on memory rather than creative imagination. Two further steps
however - and they must originally have been significant steps in
the evolution of human consciousness - enable us to transcend these
limitations. The first is to make the assumption that the regions
covered by different remembered perceptual progressions, even though
apparently discrete, are in fact connected in a single continuous
physical reality extended in a unified infinite region of universal
space and absolute time. There are spatial gaps between different
progressions caused by our own switches of attention and there are
temporal gaps caused by intervals of sleep and unconsciousness. But we
fill the gaps with stretches of space and time realised in the most
vague, flexible and generalised way, yet specifically enough to enable
us to establish the necessary continuity. The consequence is that we
assume that there is one physical world\(^1\), not many; and in order to do
this we have to be able to distinguish between what we regard as

1. The theory of relativity has complicated the way in which a
physicist would conceive all this, but the fact that the physicist
can think in terms of a single "big bang" implies that he has
not altogether parted company with the common sense assumption
that we are dealing with one space-time in which locations can
be unique.
The second step is connected with the recognition of cause and effect. We identify, or think we identify, classes of sequences of classes of events, which are liable to recur. Such an identification is the establishment of a causal model, the recognition of a causal form. Thereafter if we identify what seems like the first part of an instance of the class of sequences of events of which our form or model is the paradigm, we may predict, and thereby imagine, the second part. Conversely if we identify the second part we may infer that it was preceded by the first and imagine that. Subsequent experience may appear to confirm that we were right and so strengthen our belief in the model that we have constructed, or it may do the reverse. The effect is that we can proceed by means of creative imagination to build models of parts of the physical universe which are altogether inaccessible to our own perceptions, out of elements which may go back ultimately to perceptual experience but which after a few stages of abstract construction and re-generalisation may already be far removed from sensory events. Moreover by means of communication through speech or other codes we can gain access to ideas and images of many actualities and models acquired by other people, which we can then add to our own store. In this way over the years, particularly after the invention (through such creative imagination) of writing and mathematical codes, it has become possible for an individual to build up a remarkably elaborate idea of physical reality, and moreover one held in common with other members of his civilisation.

Now such an idea of the world is far too complicated to be grasped in detail in any one predicative step of consciousness. But of its nature we regard the reality as having a continuous real existence outside the span of any one conscious predication: this is where the assumption of universal space and absolute time comes in. It is there even when we are not thinking of it. And there is something there even if we don't quite know what it is, or if some idea which we did form of it has had to be abandoned. In other words nature is there for our discovery; and discovery, when it occurs, takes the form of a model which, like the map made by an explorer, seems to prove itself valid.
For prediction and inference, at least within the conditions that we
can test, it must be stressed that what we can know through these
processes of thought and imagination is no more than a provisional
model, not the thing in itself; and the elements of the model are
derived, though perhaps through many stages, from past perceptions
which are still not direct perceptions of ultimate physical reality,
but messages conveyed through the codes provided by the given categories
of sensation and construed together by the mind in further given
categories of space and time.

The Status of our Idea of the Natural World

An account of our idea of the natural world as a kind
of public knowledge distinguishable from our transitory
private knowledge of the predications of consciousness
and existing independently of consciousness.

The question which now forces itself upon us is that of the status
of our idea or model of the natural world. We can perceive, or even
think, only a minute fraction of this immense whole at any time. Yet
it is constantly there, stored and available to us for reference. It
is represented in the model developed in this study as the complex terrain
of the mind-manifold, constituting a form which somehow "tracks" or
encodes the unreachable reality of things in themselves. We can evoke
a copy of a part of it at will, or more or less at will; but our actual
experience can never embrace more than a detailed copy or representation
of a small fragment of the whole, or else a more generalized copy or
representation of some larger excerpt. In addition the model itself can
direct us to things in the natural world — books, maps, pictures or
people, for example — from which through perception further encoded
information about the world can reach us. But the fact remains that
what we can recognize are evocations from the mind-manifold, not the
manifold itself. The process of evocation in all likelihood involves
some kind of recoding. Moreover the manifold, which we cannot reach
directly, is in turn only a coded representation of the eventual truth,
a message about the world. We cannot escape from codes.
It is no doubt because of this that the mind-manifold does not merely contain information about the natural world, it also contains information about signs and symbols. These are perceptual forms, or classes thereof, which under certain conditions stand not for themselves but for certain logical forms, otherwise ideas or classifications. These they recall in such a way that by means of grammatical rules (also stored in the manifold) they can be manipulated to build up and transmit complex logical forms created ad hoc for each occasion. The combination of a set of related signs and symbols with an appropriate set of grammatical rules constitutes a code or language. We can distinguish however between man-made codes and languages which individuals or particular cultural groups create or learn, and the codes of perception and thought which are the universal given languages of the mind, embodying rules which are the inescapable given constraints of logical necessity - the codes which constitute the category walls of human consciousness.

We noted earlier that our impressions of sensory quality and intensity appear in disparate categories linked to specific bodily organs, which are, as it were, transducers of external reality, while values of form, together with the space-time continuum in which they emerge, are common to all the sensory categories, and seem to be internally generated. They seem to represent the schemata and the relationships between schemata through which we construe the data of perception and create, as it were, the cone of consciousness that unites a variety of data in synchronic separation and relationship, grasped in successive steps of diachronic time. The arena of space and time thus created represents a sort of public area in which values from different sensory organs are brought together. The process of bringing them together involves construing them into forms, but it seems fair to say that it is the sensory qualities and intensities which are the primary data, the messengers of reality, while the forms, which are themselves defined by differences in sensory value, are secondary - the vehicles of the reality that shines through them to become accessible to consciousness.
All our consciousness of perceptions involves a feeling tone of mood or emotion in addition to strictly sensory values, and I have argued that it also involves the recognition of logical forms in a logical space which is the true arena of consciousness; perceptual forms and sensory values are apprehended not directly but only as mapped on to the forms and values of thought. Correspondingly we can think abstract thoughts, which are constructions of logical forms in relationship, without paying any attention to the physical world around us, though a feeling tone is required to give reality to these thoughts, locating them in Me Here Now.

Let us now consider what happens when you and I both look at the same scene. We each recognise a space with forms in it and in each case what we see is certified as tracking reality because of the sensory values infusing it. Experimentally, moreover, we find that we are looking at a common reality, a part of the world of nature to which we both belong, because suppositions based on that hypothesis are confirmed. If I brandish a club, you duck away. If we see a fallen tree trunk in the way, we can successfully cooperate together to move it when neither of us could do so alone. On the assumption that we are similar beings inhabiting a common world we can develop means of symbolic communication—words, diagrams and so on—which enable me to describe a part of the world to you, and vice versa.

What I can not do, however, is to transmit to you one of my own perceptions, either when I experience it or subsequently. All I can transmit is an image, comparable at best to a memory image, or else a construction of logical forms—a complex idea. This image or idea in turn may be registered in your mind-manifold and may be evoked by you on a subsequent occasion as part of a scenario and consequently as a basis for action. (If I do transmit an image, it will, according to the theory developed in this study, in any case also be mapped, projected, on to a corresponding idea.) In spite of its limitations this capacity takes us a long way. By means of processes identical or analogous to this I can acquire a great deal of valid information from you about the real world we share in common. We can only know the world through perceptions or ideas which refer to it. These are constructions out of
elements derived from the given categories of our own minds; but all
our perceptual experiences refer to physical reality or Nature, and so
do all those abstract ideas which contribute to the model of physical
reality that we have already discussed. Nature invades our minds as
it were through the senses; and the impressions of our own senses and
those of other people are interpreted through the abstract model of
the natural world which is built up cooperatively in each civilisation
and communicated in a more or less fragmented and imperfect form to
each of its members. The members add their own interpretations to what
they learn, and some, of course, learn very much more than others; but
fundamentally what we know about Nature, as distinct from what we
directly perceive of Nature, is a collective effort.

This is a fact of great practical importance. But we have to
remember the limitations of our consciousness of Nature. The knowledge
is available because it is stabilised in some fashion in more or less
accurate copies in each person's mind-manifold, as well as in books
and other artefacts located in space-time. These similar forms, according
to our theory of similarity, build up a class of forms, unified, like
any class, by the fact that on generalisation they coincide with the
same putative paradigm form. From our mental repositories representations
of small bits and pieces can be evoked by each individual for use on
particular occasions in the predications which build up the regulating
purposive cycles of his existence. But what is evoked in this manner,
and thus what is held in common, is the similarity of form between a
large number of different mind-manifolds independently tracking the
same reality along different paths; the information consists essentially
of forms, not of sensory or emotional values.

This assertion has to be qualified by the fact that in a very broad
way values like red or loud or melancholy can be encoded as logical
forms; but the idea of something red is an instance of a classification,
not a physical perception. I can (though I need not) infuse my
realisation of it with an image of redness, but such an image is a far
cry from an actual perception of red. I can also in certain circumstances
establish some measurement on a scale of degrees of redness or loudness;
but this formal quantification - a "pointer reading" - is equally far from
the original perception.

Now I have argued that we cannot recognise a perceptual form without sensory values, nor a logical form without feeling tone, i.e. emotional values. But I am pointing out now that the world of nature, as known to science and common to men, is a world without such values. When we recognise some fact or image we infuse it with values of quality and intensity - or, perhaps more correctly, create values of quality and intensity from which it can be realised - but these do not come from the same source as the logical form; and, more importantly, they vary from individual to individual and from occasion to occasion as the forms themselves do not.

This can be illustrated straightforwardly from our understanding of poetry. As I have suggested elsewhere, the poet is one who manipulates not only the direct meaning of his sentences - the logical forms which they build up - but also the quality and intensity of our realisation of this meaning. He does so by tuning the associations and images which the words call to mind, using devices of imagery, rhythm, rhyme and assonance (all forms of repetition and reinforcement) as well as other less tangible links within the language to evoke and particularise a mass of simultaneous associations which work, like the simultaneous, individually unheard overtones of a musical note, to determine the emotional quality and intensity of the realising experience. But even so, while the meaning is (or can be) clear and unchanging from one occasion to another, this evocation of emotion tends to work very differently from one reader to another and from one occasion to another. Skilled readers may be in agreement that certain lines constitute good poetry, but even when they agree on this, they will differ in detail in the way in which they make these lines their own - not in the way they understand them, but in the way they feel them. The fact that the lines have acknowledged poetic power means that in a normal reader they will evoke and order a great mass of associational overtones; but it does not exclude considerable variation in the quality and intensity of the evocation on different occasions, according to the individual concerned or to circumstances, which may alter the way in which the same individual reacts at different times.
The upshot of this long argument is that we have to distinguish the knowledge which is, or can be, a public knowledge held in common and the private knowledge which is associated with consciousness. This is because conscious knowledge contains some elements which can be made public and some which cannot. All our public knowledge of the world, including the whole of science, is derived ultimately from transitory private experiences. But it exists independently of consciousness and independently of the limitations on what can be integrated into a single predication at the focus of attention - though it is still only a model of reality, not the reality itself. Our conscious experience draws upon it, but can do so only under certain quantitative restrictions as to what the mind can take in at one time, and only when it infuses the forms of scientific knowledge with the feeling tone of life Here Now.

Popper's Theory of Worlds 1, 2 and 3

A discussion of Popper's categorisation of the worlds of experience, which suggests that his World 3 can be assimilated to his World 1.

The distinction just drawn between public, or potentially public, knowledge of this world and the private knowledge experienced in states of consciousness clearly has some correspondence to the distinction drawn by Sir Karl Popper between the world of "thoughts in the sense of contents or statements in themselves" (what he calls World 3) and that of "thoughts in the sense of thought processes" (what he calls World 2). Both of these are distinguished by Popper from World 1, that of things or physical objects, which corresponds to what I call the world of nature (which he seems to regard as more directly accessible than I do).

The lasting stabilisations of the transient experience of consciousness which exist outside consciousness but can be encoded in physical objects like books or diagrams are for Popper World 3 objects which can be embodied in World 1 objects; but he stresses that "it is solely

1. I should make it clear that I am not re-inventing Locke's discredited distinction between primary qualities, like shape, which are "copies" or "resemblances" of physical reality and secondary qualities, like colour, which exist only "in the mind". I am stating a significantly different distinction which is the one I think Locke should have drawn.
through World 2 as an intermediary between World 1 and World 3 that World 1 and World 3 can interact; books do not write themselves without human agency. In fact he regards the objects of World 3 not as timeless or pre-existent Platonic forms, but on the contrary as being essentially the products of the human mind. More precisely he regards the World 3 of problems, theories and critical arguments as one of the results of the evolution of human language. "This is perfectly compatible", he argues, "with the timelessness of truth and of logical relations"; the fact that World 3 objects "have their own inherent or autonomous laws which create unintended and unforeseeable consequences is only an instance (though a very interesting one) of a more general rule, the rule that all our actions have such consequences." 1

Popper admits that it is possible to describe the process by which World 3 objects demonstrate their reality by acting on World 2, and through World 2 on World 1, without in fact mentioning World 3. "Thus we may say that, incited by their knowledge of World 1, certain physicists... suspected the physical possibility of making a nuclear bomb, and that these World 2 thoughts brought about the realisation of their consequences." But such descriptions, he says, "hide the fact that by their 'knowledge of World 1' are meant theories which can be objectively investigated from a logical as well as an empirical point of view, and that these are World 3 objects rather than World 2 objects (though they can be grasped and therefore have World 2 correlates)." 2

Popper accepts that they are man-made, and therefore products of World 2; moreover he argues that the process of grasping a World 3 object is to be understood in terms of making or remaking it. His view "assumes no 'eye of the mind', no mental organ of perception. It assumes only our ability to produce certain World 3 objects, especially linguistic ones... There are many similarities between optical vision and the understanding of World 3 objects; we can conjecture that a baby learns to see by actively exploring things and by handling things by trial and error." 3

He goes on to imply a distinction between theories, or the logical

relations between theories, and "our World 2 grasp of them". I would agree that we grasp theories, as we understand sentences, by making or remaking them and that there are close analogies here with the way in which we perceive objects; but I think this should lead us, not to postulate a separate World 3, rather to assimilate World 3 to World 1.

According to Brian Magee, Popper "insists that all observation must be theory-soaked" and one reason for this is that "our sensory organs themselves, representing as they do sophisticated attempts to adapt to our environment incorporate theories." Nevertheless his writing seems to imply that we have direct knowledge of the objects of World 1 in a way which would conflict with the view I have been supporting. However that may be, it seems to me that the objects of Popper's World 3, lasting stabilisations derived from transient states of consciousness, are not themselves directly accessible to consciousness any more than an individual's own mind-manifold. When I read a book I do sentence by sentence; and with each sentence (or subordinate predication or wider predication) I recognise a construction of my own mind made on the spot, the translation of a model or message expressed in a perceptual code of marks on paper into a model expressed in a non-perceptual code of logical forms, an evoked idea as distinct from the stored idea. But the same applies when I recall from memory the proof of a theorem in geometry or the tune I heard last night. For the mind-manifold is not directly accessible. What we recognise are recoded copies of extracts from the inaccessible memory. The status of the appropriate part of the mind-manifold is thus the same as the status of the table before me, a real physical object. In the case of the memory I recognise a message expressed in a logical code and infused with a mood value, on to which a supporting model expressed in the quasi-perceptual code of an image may be mapped. In the case of the table I also recognise a model expressed in a logical code and infused with a mood value, but one which construes a model expressed in a sensory-perceptual code infused with sensory values.

1. "Popper" (Fontana 1973) p. 57.
The criterion by which we identify a physical object, according to the theory developed in this study, is that it has a location in space and time, whether it is a cerebral cortex or a thing made of wood; and I have suggested that we have no reason not to identify the mind-manifold with some part of the physical brain. But the attempt to apply this criterion is liable to bring us up against some difficult cases. Let us consider a few examples. We may distinguish Dr. Johnson's cat Hodge, who had a physical existence and thus an independent location in space time, from Lewis Carroll's Cheshire Cat who did not exist and so has no independent location on our world map. As a fiction the Cheshire Cat had, and has, an existence in certain transient experiences of Carroll and his readers and the memories of these experiences recorded in physical form in books and pictures. Is this his only existence? I think the answer is yes. He is an object in the world of Nature, but only as expressed in other physical objects; he is not an independent physical object. And that, I suggest, is how we distinguish fiction from fact.

What, then, of the lost plays of Sophocles? This question raises the interesting question of the existence of historical reality as part of the world of nature, distinct from possible physical records of such reality. It seems to me that the world of nature extends in time as well as space. Nothing is more inaccessible to direct perception than the reality of the table in front of me five minutes ago; but I do not doubt that reality. As Heraclitus (by implication) pointed out, if I look at it now it is a different table. To establish its identity over time I have to form an abstract idea of it and grasp that. But the idea can be either true or false; it can "track" reality or fail to do so. I do not see how we can deny the reality of the historical past even when we have no information about it; otherwise the possibility of historical truth, even approximate historical truth, goes out of the window. And so the lost plays of Sophocles, if our limited information about their past existence is correct, are there for discovery (even if we can't discover them) in all their original detail as part of the world of nature; correspondingly if our information about them is incorrect, then they are not there. Anyway there is an inconceivably
vast amount of historical truth which is there but which no man will ever know, going back through geological time to the origin of the universe. I do not see how we can escape this conclusion or deny that the world of nature, in its historical as well as its spatial extension, is continuous with the world which I perceive Here Now, and just as real. Any alternative thesis would seem to land us in extreme contradictions.

What, then, of mathematical concepts? Popper refers to the problem, which was solved by Euclid, of whether the sequence of prime numbers is finite or infinite. Was the solution there for discovery long before Euclid was born - before it had taken shape in any man's mind? This is more difficult. On reflection I believe the answer to such questions is that mathematical and logical truths are properties of the given categories (and consequent constraints) of thought and perception through which our consciousness is mediated and in terms of which our models and messages of reality are constructed. They are implications of putting elements drawn from these categories together in various kinds of perceptual or logical space which are themselves given categories of knowledge, ranges of possibility. The truths of geometry are ultimately aspects of the various kinds of space in which the subjects of our perceiving, imagining and thinking activities emerge. The relationships of logic and number (as explored in "The Grammar of Language") are fundamentally processes of classification and recategorisation, which in turn rest on the mind's capacity to generalise, compare and equate logical forms. We cannot conceive these relationships apart from the elements between which they hold. They are aspects, implications, of our own grammatically constructed models or messages.

I remain therefore with the conclusion that we need only to postulate two "worlds", a world of nature and a world of transitory consciousness, World 1 and World 2. If that is accepted however we have now to face more directly the problem of the relationship between the two.
The Interactionist Hypothesis

A discussion of the hypothesis that there is interaction between a separate brain and mind, a suggestion which leads to great conceptual difficulties.

The conscious processes of perceiving and thinking take the form, as I have suggested, of a succession of predicative constructions, continuous so long as the individual is awake. These predications build up the transient models and messages of World 2. They are accompanied by complex brain processes - World 1 processes - which we cannot perceive or recognise directly but of which, in World 2 awareness, we can construct partial scientific models.

It would seem natural to conceive of these two sets of processes as the inner and outer aspects of the same occurrence; but this image is difficult to sustain. The difficulty arises chiefly because it seems to be impossible to suggest how the brain can reconstitute out of the jangle of simultaneous discrete one-dimensional sequences of neurone firings any unified spatial or pseudo-spatial display. I use the word spatial because a space, as I would define it, is a continuum in which values in two or more dimensions can be unified to create a different "emergent" value in a new range of possibility - a shape as distinct from a coordinate, a three-dimensional shape as distinct from a two-dimensional one. The shapes thus created become container forms infused with specific sensory qualities and intensities and so make it possible for a whole variety of sensory values to be recognised simultaneously, yet in order. Space permits order and order permits integration. Integration is the key to conscious experience and grammar is the mechanism of integration, and hence of consciousness.

The grammatical subject of our consciousness is always a whole, which is linked to another whole, the predicate, in a transition in time forming a unified predication. If we receive a fragmentary or

1. Strictly two-dimensional in an anallogical space with time as one dimension and some measure of electrical intensity as the other; but to call it two-dimensional without explanation could be misleading; effectively we need a three-dimensional space, including a "distancing" dimension, in order to recognise in consciousness a two-dimensional shape.
grammatically imperfect communication we have to complete the predication somehow ourselves before we can guess at the meaning. We are never conscious of anything which is not integrated into a predication. Something may be there — indeed our sensory apparatus may be recording it - but we are oblivious of it. (We have admittedly a very limited power of belatedly retrieving something that was just beyond the periphery of attention when it actually happened - for instance the distant ringing of a door bell while we are absorbed in writing a letter - but unless it is so retrieved within a minimal period of time, it is lost to consciousness for ever.) The problem before us is accordingly to identify some neural equivalent of the grammatical process of integration.

There are certain clues. The sensory organs, to quote Sir John Eccles,

"signal to the central nervous system by the firing of impulses or messages that in the manner of a code transmit to the brain the place and intensity of the stimulus. The transmission is never direct but by synaptic relays which act to modify the message so that in fact the central nervous system is given a very distorted 'coded image' of the peripheral stimulus. It can be thought that these transmission lines are concerned in the conversion of the original stimulus into neuronal events which can be handled and interpreted in the cerebral cortex. Each sense has the primary receiving area laid out as a map in the cortex in the appropriate Brodmann areas. For example cutaneous sense is laid out with the surface of the body arranged as a strip map from toes to tongue."

Similarly the stimulation of particular areas of the retina leads to the stimulation of specific corresponding areas of the visual cortex, though the resulting cortical map shows considerable topographic distortion and in particular allocates a disproportionately large area to the central part of the visual field. Much of the brain's processing of incoming messages appears to be a matter of the selection and sharpening up of particular features of likely interest, especially outlines.

We may surmise that the results of such feature recognition processes are in some way superimposed on the map, leading to the relative accentuation of certain elements and the relative depression or even masking of others. All this involves the identification of elements on a larger scale than that of the single neurone and thus represents a contribution, though a limited one, towards the integration of a simplified and coherent whole from the multitudinous input. But the suggestion that there is anything like an integrated reconstruction within the brain of images such as we recognise in conscious perception appears to be emphatically rejected by neurophysiologists; and, as Sir John Eccles emphasises, even if there were some such model within the brain, the daunting problem of how the model could be read into consciousness would still remain.

A good deal of the brain's activity, with its combination of excitation and inhibition and with the partly competitive interaction of columnar "modules" of neurones, is compatible with a process of integration through grouping and mutual reinforcement or elimination which would help to simplify and concentrate the input. But this takes us only a little distance. What then? Eccles and Popper go forward to the interactionist hypothesis that the process of integration is not completed by the brain at all, but by a conscious mind which is not part of the physical world, yet interacts with it.

Eccles suggests that the conscious mind scans the modules of the brain spread out over the cortex, the "modular array" of the "liaison areas", some of which are open to scrutiny and some not, and that the mind derives from them in their spatio-temporal patterns the images and ideas of consciousness. Popper suggests at one point that the end product of the brain's process of integration may be a single one-dimensional series of electrical pulses in time, comparable to the input to a television receiver. This would however presumably have to be spread out later in some kind of synchronic display and made conscious in successive chunks in the arena of the mind; for we cannot observe a

1. "The Self and its Brain" pp. 365, 477. If there was such a reconstruction it would need to have a spatial extension within the brain at least topologically equivalent to that of the perceptual space observed.

flow if we are immersed in it and we cannot stand aside from it unless there is a synchronic dimension other than that of the flow.

Popper argues that there is "at the same time a kind of gulf and a kind of dependence between the self-conscious mind and the brain". "The main point here that shows the gulf is that we can be highly critical of an optical illusion. And it is a kind of lower level of the self which experiences it in conformity with what the brain delivers to it." This split between a critical apparatus and a non-critical part of the self "may have some basis in the brain, but I do not think it can be fully reduced to the sifting mechanisms of the brain."¹

The great difficulty with theories of this type is that of identifying what form any observing pilot Self or Mind outside the brain could take. I ascribe physical reality as part of Nature to anything which is located uniquely in universal space and time. Our idea of such an object cannot strictly be duplicated (though it can be copied or modelled) since it is itself anchored in the idea of a particular unique trajectory in space and time; the object cannot be in two places at once. Now if it proves necessary, in order to account for the activities of perception and thought, to postulate a conscious mind outside what we know as physical reality, operating with properties and forms not at present conceivable, this will in my terms still remain part of Nature so long as it still has a unique trajectory in space and time; the object cannot be in two places at once. If it proves necessary, in order to account for the activities of perception and thought, to postulate a conscious mind outside what we know as physical reality, operating with properties and forms not at present conceivable, this will in my terms still remain part of Nature so long as it still has a unique trajectory in space and time linked to that of a physical body and interacts with that body. (This recalls St. Augustine's dictum: "The miracle occurs not in contradiction to Nature but in contradiction to what we know of Nature.") It is exceedingly difficult to conceive how anything that has no trajectory can have any identity - that is, can be one thing at all. Even if,

in trying to model it, we have to say that it has location but no extension, or resort to some other descriptive paradox, this does not necessarily disqualify it from forming part of a scientific model of physical reality which has always had paradoxical features (such as infinite extensions) and has developed a great many more since the advent of Einstein.

If we go beyond this however and postulate a separate world, we must, I think, in some sense be imagining a separate space and time— or at least a separate space. Yet if there is interaction between our two worlds of Nature and Supernature they must presumably be unified by sharing the same time. Are they perhaps unified in some third space or superspace, in time? My mind begins to go blank. I cease to have any sense of knowing what I am talking about. We have to remember that, on the arguments of this study, the objects of our knowledge, including the scientific account of Nature, are models constructed out of values in the given categories of consciousness, and they have the limitations of models. The reality transcends them and so, ultimately, transcends and must transcend our powers of comprehension. In effect I do not reject the interactionist theory; rather I find great difficulty in grasping it in any form sufficiently precise to be useful.

The Identity Hypothesis

A discussion of the hypothesis of an identity between mind and brain, which suggests that it involves as many conceptual difficulties as that of interaction between brain and mind.

Popper says in his intellectual autobiography "Unended Quest":

I should think that I was always a Cartesian dualist (although I never thought that we should talk about "substances"); and if not a dualist, I was certainly more inclined to pluralism than to monism. I think it silly or at least high-handed to deny the existence of mental experiences or mental states or states of consciousness; or to deny that mental states are as a rule closely related to states of the body, especially physiological states. But it also seems clear that mental states are products of the evolution of life, and that little
can be gained by linking them to physics rather than to biology.\(^1\)

Such frank dualism is nowadays much less fashionable than one form or another of the theory that states of consciousness are nothing but states of the brain. If a computer is capable of logical processes comparable to those of the human brain, then the computer is capable of thought. Again here I find great difficulty in effectively grasping such a theory. The reason, no doubt, lies partly in my prior assumptions about the nature of reality and the nature of thought processes, to which expression has been given in the earlier chapters of this study. I would have to be converted to alternative assumptions before I could make much sense of this idea. In particular I should have to accept the view that our knowledge in scientific terms of physical objects is somehow a direct knowledge of reality itself. I have already given reasons why I believe the opposite. I do not indeed reject the possibility of some kind of unitive knowledge of reality, but that is by definition a knowledge that is beyond words and codes, beyond models that can be consciously grasped in predications. It is the experience with which mystical poets like Rilke or Blake or Valéry are on occasion concerned, moments when:

\begin{quote}
Le temps scintille et le songe est savoir.
\end{quote}

Having said this, I still find it hard to express where the difficulty specifically lies. I would begin by taking up again a point I have made before, namely that although the intellectual models which we make of the natural world, including our models of the brain, are forms which we can grasp in consciousness (piecemeal in small or very generalised packets), the conscious predications through which we grasp them are not identical with them and include essential elements of quality and intensity which are not present in the model. I argued a few pages back that, while we can encode such values as "red" or "loud" or "angry" as logical forms, those forms represent only crude classifications of the experiences to which they refer. They do not replicate the experiences, and in any case they have to be realised anew in consciousness on every occasion with some new quality and

\begin{enumerate}
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intensity of sense imagery or emotional feeling tone to give them life. Values like colour and timbre do not exist in the scientific amount of light waves or sound waves. There is no step transition in the gradient of wavelengths between red and yellow. The proportionate mix of overtone values which characterises the timbre of an oboe can be specified in mathematical terms but not in any way which catches the difference of kind rather than merely of degree or blend between one sound timbre and another.

In other words our conscious experiences include elements that are not present in our scientific models. The forms that we grasp are present, appropriately coded; but the sensations and emotions that sustain them are not. Only in poems and works of art is this limitation transcended; but even then, as we have seen, only in a partial and variable way, and essentially through complex simultaneous evocations which may be derived from the superposition of many forms, but are not recognised as forms at all. The implication is that the language of consciousness includes sub-codes which are lacking in the language of science, and so cannot adequately be translated into scientific terms. (The converse translation from science into consciousness offers no difficulty, since science is ultimately derived from consciousness.) The discrepancy means however that it is hardly possible to identify directly the processes of the brain, as these are scientifically understood, with those of the mind.

An identity theorist might make the rejoinder that the asymmetry between the two is only temporary and is bound to be remedied by the further advance of science; and in these terms I cannot prove him wrong, however sceptical I may be. But there are further and deeper difficulties which arise in connection with the concept of space.

It seems to me inescapable that we think in extension. We cannot think without identifying separate entities and recognising relationships between them; and both separation and relation are essentially spatial, or temporal, or spatio-temporal concepts. If we identify one thing in the natural world - say the Morning Star, to take a famous example - we locate it uniquely in relation to other things in
space over time. If we have separately located two such identified things—say the Morning Star and the Evening Star—and we then decide that they are in fact the same thing, we can only do so by envisaging a third space on which both the other spaces can be mapped or projected, so that their two locations coincide in a third. No map on any projection, however, is adequate to all cases. If we assert that it is the Evening Star we see but not the Morning Star, then we are implying that our identification of the Morning Star in the morning sky was false. But that is not what we mean. It was a correct location on the first map, but the map itself was limited; and so was the second map. The third map, though it has its own limitations, brings the other two into relation with each other.

This account may not seem far from that of Professor Herbert Feigl, for example, when he says: "Instead of conceiving two realms or two concomitant types of events, we have only one reality which is represented in two different conceptual systems—on the one hand that of physics and on the other hand, where applicable (in my opinion only to an extremely small part of the world), that of phenomenological psychology." But the point I would emphasize is that in order to unify the two conceptual systems we need to be able to bring them together in a third conceptual system; and this third system is not easy to construct. Merely to reduce the second system to the first—conscious experience, for example, to brain processes—in effect denies the validity of the eliminated system, which here would be ridiculous, since the second is ultimately derived from the first. Conversely to argue that the processes of a computer, analysable in physical terms only, are at least potentially equivalent to those of thought is to deny the validity of conscious thought. A third conceptual system is needed to unify the two, and I do not think anyone has yet been able to suggest what form such a system might take.

This dilemma is expressed by Schrödinger when he says: "One of the two thus seems irrevocably doomed to a ghostlike existence, either the objective external world of the scientist, or the self of consciousness which by thinking constructs the former, withdrawing from it in the

process." As he puts it again at another point in the same essay, "comprehensibility is bought at the price of letting the subject recede, which makes objectivation possible." However it seems possible that at some stage a new generation of physicists will be able to throw light on this problem, at least for those who have enough mathematics to understand them. According to Fritjof Capra, a theory has been developed by David Bohm to express the nature of "implicate order" at the sub-atomic level.

"To understand the implicate order Bohm has found it necessary to regard consciousness as an essential feature of the 'holomovement' and to take it into account explicitly in his theory. He sees mind and matter as being interdependent and correlated, but not causally connected. They are mutually enfolding projections of a higher reality which is neither matter nor consciousness."^2^

Whatever we make of this, we should perhaps note that Professor Feigl's low estimation of the world of phenomenological psychology (in effect the world of all direct human experience) is shared by Sir Alfred Ayer, who remarks that

"The percepts out of which the theory of the physical world grew are reinterpreted into it, and given a subordinate status... once the theory of the physical world has been developed, whether or not it has to allow room for objects or properties which are not classified as physical, we are entitled to let it take command in the sense that it determines what there is. The fact that in doing so it downgrades its own starting point, in much the same way as a self-made man may repudiate his humble origins, is not a logical objection to the procedure."^3^

To this I would reply that (i) you can't reinterpret "percepts" accurately back into the intellectual model of the physical world (for reasons which I have already indicated); and (ii) even if you could, success could be measured only by the extent to which the direct impression of reality conveyed by the "percept" could somehow be brought


to pervade the whole abstract structure of the theory of the physical world - not by any reverse takeover which would deprive even the "percepts" of their roots in life. (I am tempted to wonder what William Blake would have said about such arguments as Ayer's at this point.)

To look in another direction, Professor Joseph Margolis has argued ingeniously\(^1\) for a "non-reductive materialism", in which "persons" (who are identified in particular by their linguistic competence) are "culturally emergent entities" embodied in physical bodies or sentient organisms. The emergent entities are "physically or biologically embodied and distinguished only functionally." "Intentionality of the cultural sort may be said to be bifocal, exhibited both in the rule-following capacities of persons and in the rule-governed or rulelike properties of what persons produce or do." Within my scheme of things I would interpret Professor Margolis as saying that persons are identified by patterns of behaviour, like language, which are part of the creature as extended in time, but are held in common with other creatures. I would accept this as a description which corresponds to my own account of ideas held in common; but it does not take us any further in relation to the present difficulty. Nor for that matter does such a hollow conclusion as that of D.M. Armstrong when he says: "And so consciousness of our own mental states becomes simply the scanning of one part of our nervous system by another. Consciousness is a self-scanning mechanism in the central nervous system."\(^2\) That simply "explains" consciousness by ignoring what is different about it. Margolis, for his part, explicitly rejects the identity theory, but seeks to preserve monism through the concept of emergence: "The admission of persons as culturally emergent does not in the least entail the admission of a substance other than matter out of which, dualistically, persons are composed." His culturally emergent persons and their products, distinguishable by their functional, not their physical attributes, build up what is very like Popper's World 3.


With the concepts of embodiment and emergence he is asserting in effect that there is a third conceptual system which unifies the physical and the mental worlds, but he is hardly able to go beyond assertion to any clear description of what it is.

Margolis* emphasis on function is nevertheless important. What we are concerned with is a proposed identity, not between the brain and anything else, but between the throughput of the brain, that is, the messages, the patterns of difference over time, which pass through it and the predations, perceptual or intellectual, to which we pay attention in consciousness. To examine what is involved let us consider what happens when I think of myself thinking about my own current brain processes. To think of them I have to conceive them as happening in space over time. In doing so I am construing together logical forms in a non-perceptual logical space (though some vague image may be mapped on to it to support m; thinking). As with any space, this one has to be recognised from a point of view, an origin where the observing I (whatever that may be) is located. It is a notional space within a perceptual space on which I can look out Here Now, again from a particular point of view, a space filled with of walls and windows, tables, chairs and the apparatus of a room. This perceptual space is made transparent, as it were, when my attention is concentrated on the notional space of the brain processes, and there is no connection between

1. The views of Professor John Searle have some affinity with those of Professor Margolis. On his account - as given in a recent television discussion with Sir John Eccles - the conscious mind, with all its capacities for perception, thought and moral judgement, is an emergent property of the neurones of the brain, in the same "quite banal" way as liquidity is an emergent property of H2O molecules. But is this emergence, even at the level of water molecules, "quite banal"? It can perhaps be described in terms of behaviour or function, as Professor Margolis has suggested in a similar context. But this does not take you beyond saying that liquidity represents the behaviour of a quantity of water molecules within certain temperature limits, or that brain processes represent the characteristic processes of a living brain. Neither the behaviour of water molecules nor the behaviour of neurones can provide any real explanation of my perception of wetness when I put my hand into water. In particular the concept of emergence contributes in no way to any solution of the problem of the creation in consciousness of a synchronic "space" in which the thinking or perceiving I can be distanced from the bodily Me.
the two, apart from the supposition - the subjective certainty - that the two Is, the two points of origin, concerned are to be identified as the same, representing Me-Here-Now.

In order to see how these two points of origin could be the same, let me now try to think of myself thinking of the brain processes. To do this I have to distance my point of view in some way from my physical body, as I think of myself thinking. This feat is not difficult, I can easily think or imagine myself from some notional point outside my body. But I find difficulty over fitting this view of myself in perspective, as it were, on to the preceding experiences. If I try simultaneously to imagine myself from outside and to imagine myself imagining the brain processes, I end up with a sort of cartoon image of myself in my room with a bubble sprouting out of my head in which there is a screen on which brain processes are displayed. I cannot relate the space within the bubble, let alone the space depicted on the screen, to the space outside, or to the space in which the ultimate observing I is looking at Me.

Given the Euclidean space of imagination, the I which sees myself cannot be in the same place as the I thinking about brain processes, but the feat of unifying the two somehow does not seem so difficult in the more flexible, non-perceptual space of thought. Nevertheless this new experience does not strictly include the earlier, brainwatching experience, or any successor to it. I can only think of one thing at a time - that is, construe one predication with one subject (singular or plural) at a time. When I am thinking about myself, my own thoughts about the brain processes can figure only as a subsystem within the wider predication; it is no longer at the focus of attention, and it is grasped only in a vague and indeterminate way.

Where am I, then, when I do all this? It is possible for me to move on to a further "enclosing" conception of myself, in which I recognise Me-Here-Now (thinking of myself thinking of my own brain processes) as the momentary face of an incarnate Life, extending as a four-dimensional form in world space and historic time from conception
till the present moment and on till my future death and dissolution. But even this conception requires some kind of notional point of view to act as the origin of the projection of the space in which forms are recognised. The truth seems to be that no forms we can recognise in any space that we can project can be identified with reality in any absolute sense (i.e. presumably with "matter" as Margolis conceives it). I have stressed the importance of the concept of an underlying absolute space and time as making possible the notion of unique identity, and of the consequent rule that the same thing cannot be in two places at once. (I think it is probably also a condition of our being able to hold a world in common.) But even this absolute space-time has to be projected from a point of view in order to be realised and, like a map on Mercator's projection, it runs into nonsense and infinity at the edges. Even the scientific account of the natural world or a relevant part of it - knowledge which is public and held in common - can only be realised on a particular occasion in a particular context, which means a particular perspective deriving from a particular point of origin; and the perspectives are not all ultimately reconcilable. This is one aspect, I suppose, of the relativity of all knowledge.

A further complication which should perhaps be mentioned is the point discussed in Chapter III that to pass information it is necessary to establish first a limited range of possibility and then to resolve that particular range into actuality. The understanding of a sentence involves a progressive process of opening up ranges of possibility, resolving them and thereby opening up new ranges (a process analysed in detail in "The Grammar of Language"). A computer that thought would have to be able to do this and not merely to follow programs. Questions are immediately raised about the difference between transmitting or processing information and actually understanding it, questions which have deep ramifications that I shall not attempt to pursue here.

In the upshot I do not think we can at present offer any satisfactory explanation of the relationship between brain and mind, or - to put the issue more usefully - between the world of nature and the world of consciousness. After 300 years we are hardly in a position to improve much on the admirably precise statement of the problem by
Thomas Traherne in his poem "My Spirit",

    It acts not from a centre to
    Its object as remote,
    But present is when it doth view,
    Being with the Being it doth note
    Whatever it doth do.
    It doth not by another engine work
    But by itself; which in the act doth lurk.
    Its essence is transformed into a true
    And perfect act.
    And so exact
    Hath God appeared in this mysterious fact

    That 'tis all eye, all act, all sight,
    And what it please can be,
    Not only see
    Or do; for 'tis more voluble than light,
    Which can put on ten thousand forms,
    Being cloth'd with what itself adorns.

The most important conclusion to draw at this stage, in my view, is that we should preserve our humility and avoid delusions about what our human minds are capable of understanding. This in no way is to suggest that we should cease to work on these questions, only that we should not underestimate what we are up against.

The Knower of the Known

    An approach to the problem of how the Self combines
    being the point of origin of perceived space-time, the
    conscious knower, the Decider and the Actor.

    Popper remarks that for many years he felt that the body-mind problem was a hopeless one and he goes on to say (for all his professed adherence to interactionism) that he still doubts whether discussion of the relationship between states of consciousness and bodily states is worth while. He suggests that the mind is "an organ that produces objects of the human world... and interacts with them". We should look upon it "as the producer of human language, for which our basic aptitudes are inborn... and as the producer of theories, of critical arguments and many other things such as mistakes, myths, stories, witticisms, tools and works of art."1 Animals may be conscious, but full consciousness of

Self can emerge only through language, and only after we have developed a theory (a World 3 object) of the continuity of our bodies through sleep. The consciousness of the Self involves a distinction between living and non-living bodies, a distinction between conscious and unconscious bodies, the projection of the Self into the future, the more or less conscious expectation of the child growing up into the adult, and a consciousness of having existed for some time in the past – thus the possession of a theory of birth and perhaps even of death. All this becomes possible only through a highly developed language producing a World 3 and modified by feedback from this World 3. The achievements of the mind require an organ with peculiar powers of concentrating on a problem, with linguistic power, powers of anticipation, inventiveness and imagination, and with powers of tentative acceptance and rejection. "There does not seem to be a physical organ which can do all this."

Popper is here marking out a field for exploration rather than exploring it himself. I have already given reasons why I think his World 3 can be assimilated to his World 1, as part of Nature. Subject to changes of terminology which this involves, I would accept, so far as it goes, his broad account of the nature and functions of the mind; more than that, I would claim that the earlier chapters of this study go a long way towards realising the project which he implicitly proposes. But we still face teasing problems about the nature of the Self, even if we leave aside any further discussion of the body-mind relationship. Having considered what we know of the world, and up to a point the relationship of the mind as the organ of knowing with the brain as part of what is known, we have now to consider more closely what it is that knows – and decides, and acts.

Let us begin with Piaget's "subject", the Self which is identified by Isidor Chein as the origin of perceived space-time. This Self-as-subject, as Chein says in words I have quoted earlier, "is never an object of experience and therefore has no proper image", and "has no observable properties other than being the origin of space-time." It is always associated with the body, yet not precisely located within it. At the same time, although it has no observable properties, this Self seems to be a centre of functioning, as Piaget calls it; somehow it seems to be the source of decision, the origin of action.

This is an elusive concept. Can we find any way to develop our ideas about it? To begin with, we may be reminded of the analogy of the eye. The centre of my eye is the point of origin of the perspective which my eye offers upon the world. It has no properties of its own except location. We can imagine it however as the point at which rays of light from objects in my field of view meet together; and we may be led on to note that these rays are not brought to a halt at this point. They cross over and go on to form a reverse image on the retina, a sort of reflection of a bit of the world. This is a reflexive act and we may recall Nozick's argument that "the Self is synthesised as the object referred to in the reflexive tokening of I... The reflexive act refers to the thing of greatest organic unity that includes it; and that thing is synthesised for the purpose of being referred to by the very act of referring to it."

Let us develop the analogy. Consciousness is a perspective on the world, always an intellectual perspective, sometimes a perceptual one as well. Because it is a perspective, it starts from a point of view, but the view it reveals is of a flexible, non-perceptual space of logical forms on to which, from time to time, a metric perceptual space or a Euclidean space of memory or imagination may be mapped. The lens of consciousness is a point located in the world of Nature in somewhat approximate association with the location of a given body. It reflects the ideas which build up the world of consciousness on to a sort of inner retina, the arena of consciousness. The space of this arena is quasi-topological. Since the ideas include thoughts as well as observations, the eye of consciousness can range over the natural world in all imaginable space and time, as well as over fictions and classifications or logical reclassifications which have no location in the natural world. It can even direct attention at its own point of origin and when it does so it synthesises a relevant Self round this point of origin.

This Self is in effect what we have called the evoked idea of the Self, an aspect of the complex of the Self stored in the mind-manifold; but when the Self directs its attention at itself there is always a certain time discrepancy between the two representations. From one location in space-time it is looking at itself at another location,
whether past or future. The Self experienced is thus never identical with the experiencing Self. What, then, can unify this multitude of successive impersonations? Only the creature in its continuous trajectory through space-time, our bodily four-dimensional worm, our incarnation. Consciousness can thus be described as the eye of the creature. It makes possible the perspective through which, reflexively, the creature can locate itself in the world.

In these terms, who is the Self? It is the creature over its whole life. What is consciousness? It is the view of the world through the eye of the creature at a particular point in its trajectory; and it may include itself in the view. Nevertheless there is still something mysterious and intangible about this creature, which has a multitude of faces in successive contingencies but no one face. It is identified in a sense by a specific gene pattern which is created at its conception and disappears at its dissolution. But we cannot recognise the gene pattern, even if we know that it exists. The creature is also identified by its trajectory; but at any given time in life this form is still being worked out; the incarnation is still going on. But then who is being incarnated? More brutally, who am I?

I am what is behind my headlights. I am what decides in my think-space Here Now and operates in my world-space Here Now. What, then, is behind my headlights? A vehicle. Am I a vehicle operating automatically? Or am I a driver within the vehicle? If the latter, how can I avoid an endless regress? Do I not need a small driver sitting on my shoulder to drive the driver; and so on ad infinitum?

As already suggested, the answer I would give to this conundrum is that I am the vehicle — but not a vehicle operating automatically; consciousness represents not my headlights but my eyes; the real I, so far as we can know it, is the incarnate creature. The form which the idea of the Self yields in a given situation and which affects any decision taken in that situation is not the creature, but represents it. It may therefore be called a person (a word derived from persona, a mask). The stored idea-complex of the anticipatory Self in the mind-manifold from which this momentary idea is evoked we may call the personality. If and when a decision is taken, this means the adoption
of a new plan which is then drawn over the personality like a new mask modifying the existing stored idea-complex. Thus each new decision represents a new impersonation and a development in the personality. In the last resort, however, what is personified or represented is not the personality, but the creature itself to which the mind-manifold belongs, otherwise the incarnation. At the same time we have to bear in mind that we can never know the incarnate creature, which is part of nature as it is in itself; we can only grasp facts about it, that is models, which are ideas constructed out of other ideas.

Consider a situation in which I decide to go to Trafalgar Square to take part in a political rally, but as I step outside my front door my foot slips and I fall and break my leg. Which, then, after the event, is the real man, the political demonstrator or the hospital patient? Clearly the latter. The position is that when a man takes a self-regulative decision the idea of the Self puts on a new impersonation which is a relatively generalised plan or synchronic model. Thereafter, as his body acts out the new plan he re-expresses the generalised model in a different and vastly more particularised form as he incarnates it in bodily behaviour over space and time.

This brings out the distinction between the impersonation and the incarnation, between psychological man and biological man - though there is also a complex relationship between the two. Clearly the incarnation - the actual trajectory of the man's body in space and time in the continuity of its development between conception and death - derives in great part from the personal plans adopted in particular impersonations of the idea of the Self in particular situations. But the plan as acted out in the world is often not merely much more detailed than any prior imagination of it could be, but also significantly different; for we imagine not only the plans we adopt but also the scenarios within which they are enacted; and when the scenario works out differently from what had been foreseen: (as in the hypothetical case where I slipped and broke my leg) the plan may have to be altered too; moreover in imagining possible plans we often make assumptions about our own future desires and capabilities which may not be borne out in the event. On the other hand the idea of the Self (and hence the personality of which aspects are reflected by the person in different situations) is not simply a palimpsest of successive
imagined plans; it is constantly being adjusted in retrospect to take account of what actually happened, as distinct from what was hoped or foreseen. This is what the fifth phase of the purposive cycle is for. Every new plan contributes from the original moment of impersonation onwards to the aspect of the idea of the Self which emerges in situations relevant to it; but as time passes and the plan is acted out, what at first was imagined is steadily replaced by the record of actuality.

It may be argued that when one man encounters another in a situation it is often the proposer whom he encounters, not the doer, the impersonation not the eventual incarnation of what is proposed. This is true enough, but the implication is that he often has to be careful not to take the other at face value (a significant phrase). Without necessarily ascribing hypocrisy or deceit to the other, he will often wish to form his own assessment of how the real other will turn out in practice, rather than accept the man's intentions as sufficient earnest of what is to come.

The moral to be drawn would seem to be that the eventual truth about us in any ordinary human context consists essentially of what we do and hence of the trajectory that we perform, for better or worse, across space and history. As we concluded earlier, it is the incarnate biological man who is the substantive reality. But it can nonetheless be argued that an essential attribute of the Self is moral freedom and it is the chosen impersonation which reflects the exercise of free will, whether or not circumstances allow the man to carry out his intention in practice. Here we meet the problem of free will which we shall need to consider before we can make any further progress.

Existential Freedom

The existential account of freedom and its relation to the distinction drawn in the preceding section between the impersonation and the incarnation of the Self.

The distinction we have been drawing between the impersonation and the incarnation, psychological and biological man, is one which has also been drawn, in a somewhat different framework of ideas, by the
philosophers of existentialism. J-P. Sartre is quoted as saying in "Being and Nothingness": "I am the self I will be in the mode of not being it", although "the decisive conduct will emanate from a self which I am not yet". Explicated in our terms: "I am an impersonation which I will later incarnate in bodily behaviour; but while I am in the mode of impersonation, which is a synchronic coding, I am not in the mode of incarnation, which is a diachronic coding, that of the body's trajectory through life. It is not my present self in the impersonating mode which will perform decisive bodily actions, but my future self in the incarnate mode." I believe that Sartre's statement is correct, even in the simplest case where the decision is taken to execute a simple physical movement, such as picking a pencil up from the floor; for even in a case of this kind, by the time action is in train the decision is a thing of the past; our consciousness moves directly from the third phase of the purposive cycle ("I am choosing", "I am thinking about doing something") to the fourth ("I am acting", "my body is behaving and I am monitoring its behaviour"); there is no intervening phase of decision - or, if there is, it has no duration and we can have no awareness of it. Decision is when the body takes over. For Sartre this situation is the root both of our freedom and of the anguish which is inseparable from it. In Arthur C. Danto's exegesis "Nothing I now do can possibly foreclose what I will do a moment hence. So, in a curious, metaphysical way, and due to the fact that I cannot occupy two times at once, because instantaneity is my mode of temporal being, I am helpless before the future." In Sartre's own words "anguish in its essential structure is freedom".

In the existentialist sense I am free because, as I stand on the pinnacle of the present moment, I can step off in any direction. The transient predication of the present moment Here Now is real as nothing else is, past or future, near or far, because it is that of which we are directly conscious. "It is the emergence of the pour-soi", according to Sartre, "which brings it about that there is a world." And the reality of the present moment includes the reality of freedom in the present moment. I can choose what I do and thereby create myself.

1. "Sartre" by Arthur C. Danto (Fontana 1975) p. 76. 2. Ibid. p. 76.
3. Ibid. p. 70.
"The essence of the human being is in suspense in his liberty."

We have a duty to choose, freely and authentically, and Sartre insists on the arbitrary, absolute, unmotivated nature of the liberty which we exercise; "it is absurd insofar as it goes beyond all reasons"; "all reason comes into the world through liberty". We choose our own norms and values as well as our actions; but with our choice goes responsibility, and with responsibility anguish. "Man is constrained to decide about the meaning of being, in himself and everywhere outside himself."

"Every choice moreover is valid only for the moment in which it is made. I have to face "the necessity of choosing myself perpetually". "If man is not but makes himself and if in making himself he assumes the responsibility of the whole species, if there is no value or morality which is given a priori but if, in each case, we have to decide alone, without any point of support, without guides and yet for everyone, how could we do otherwise than feel anxious when we have to act? Each of our actions puts into play the meaning of the world and the place of man in the universe."

There is a true insight in all this, but it does not take us very far. In rational terms it amounts to little more than the assertion that freedom is real but absurd; we have to make use of it and this involves us in responsibility and anguish, but there is nothing exterior to ourselves by which we can make sense of what we are doing. So blank a theory is dissatisfying. I suggest that without losing sight of the reality of existential freedom, we may be able to find some firmer ground for judgement through an entirely different approach.

Four Stages of Freedom

An account of freedom as the self-determination of a unique body, distinguishing four stages of self-determination from that of the stone to that of the self-conscious and self-creating human.

Let us begin with the hypothesis that freedom is the self-determination or self-definition of a unique body in time and space and see where this

1. From "Being and Nothingness", quoted in "L'Existentialisme" (Presses Universitaires de France) by Paul Foulquié, p. 56.
2. Ibid. p. 63. 3. Ibid. p. 62. 4. Ibid. p. 66.
5. Ibid. p. 67.
6. Quoted from "Being and Nothingness" by Foulquié, op.cit. p.67.
takes us. A stone is a unique body but it does not determine itself in any way. Any changes that take place in it are the direct effect of external forces. The original zygote cell of a primitive plant or animal is a somewhat different case, for the information expressed synchronically in its gene pattern is re-expressed in a different form across time as well as space in the eventual plant or animal body — in effect by or through the cell body as it grows and divides. The gene pattern, however, is given from the outset, it is not in any way determined by the body itself; and the same applies in all but the most trivial detail to its re-expression in the eventual plant or animal body (excluding perhaps the brain of a highly developed animal). The form this takes and the behaviour, if any, which it exhibits are determined within most narrow limits by the gene pattern, although as each plant or animal lives in different circumstances each will have a unique life trajectory. Circumstances such as, for example, the absence of appropriate nutrients in the environment may lead to defects in the product; but they will not lead (except conceivably through the operation of certain healing processes like scarring on damaged parts) to a product which is different in self-determined ways.

When we consider the case of an animal capable of learning, however, we find a different situation again. I have referred earlier to Dr. Ross Ashby's argument\(^1\) that in mammals the gene pattern is used to develop indirectly in the cerebral cortex a vastly greater capacity for regulation than could have been produced by the gene pattern directly. The supplementation is derived from the environment itself; "the quantity of design supplied by the gene pattern is supplemented by design (as variety and information) coming from the environment." In such animals the form of the body in the narrow sense remains, as we have seen, very strictly determined by the gene pattern and this applies to all kinds of automatic behaviour performed by the body, from digesting to blinking; but it does not apply to a large part of the brain whose precise form is determined, though in ways not yet properly understood, by the life experience of the individual. Each individual has a unique trajectory through time and space and to this extent the form of his brain — and consequently of his mind if the two are distinguished — is determined in a way which is unique to

himself. It might still be stretching the sense of words to say that it is self-determined; but it is certainly a product of the unique interaction of his own gene pattern and his own unique circumstances; and this is an interaction producing not merely a uniquely new form of body (though arguably it does produce this insofar as the brain is part of the body), nor merely instances of unique behaviour in unique contingencies, but a new synchronic pattern which itself may be re-expressed diachronically in behaviour and thus itself determines behaviour.

To recapitulate, we have first the stone which is simply determined; secondly we have the living body which is a unique but close re-expression in contingent circumstances of the determined gene pattern; thirdly we have the intelligent creature which, in much at least of its behaviour, represents a re-expression over time in contingent circumstances not of the gene pattern itself, but of the body's own synchronic re-expression of the gene pattern, a re-expression which includes a vast amplification of the pattern through variety drawn from the unique environmental circumstances encountered in the body's life trajectory up to this point. These three stages can be regarded as stages of freedom. The third is much freer than the second or the first because in this case the body's behaviour is determined to so great an extent by what is unique to itself - its own life trajectory as a whole - in interaction with the gene pattern which is inherited as its own, though it may be shared with a clone or an identical twin. It is not determined to any great extent either directly by the gene pattern or directly by the force of immediate environmental circumstances.

Beyond this however there can be yet a fourth stage, applying to humans only, that of conscious self-creation. To profit from the freedom of the third stage I have suggested that a creature has to proceed by means of purposive cycles of thought, in which possible personal plans are matched against the appropriate contours of the anticipatory Self, a structure made up of personal plans of varying time span and generality which are organised (though imperfectly) in a hierarchical fashion, with the more general plans of longer span
overlapping and constraining the shorter and more particular. A man may not always or even often live up to his own anticipatory Self, but there is no other defining idea of himself in his mind; his idea of himself cannot be defined by a negative, by his defections from this ideal; though his defections may be many, they do not build up any counter-ideal and the more and the greater they are the less can the man be said to achieve any coherence in his actual life at all. Often these long term plans are culturally derived and they are sometimes far from clearly or consciously recognised; but insofar as a man consciously creates and chooses his own long term plans he is consciously creating himself and so reaching the fourth stage of freedom.

At any time the only reason for adopting a personal plan as part of the idea of the Self is that we hope to carry it out in actuality and so turn the impersonation into an incarnation; we cannot always tell what we shall be able to achieve in practice, but it is useless and destructive to adopt plans which we know cannot be achieved. In one sense, as Sartre stresses, a man is creating himself with every decision he takes; but the vast majority of such decisions are not in fact taken in relation to a man's life trajectory, the figure he is going to cut in eternity, but rather in relation to already existing major plans which do not themselves have to be called in question every time. (I cannot accept that it is a matter of "bad faith" for a man to take everyday decisions without digging up and putting "en jeu" the whole of his personality each time.) On the other hand it certainly is important for a man to choose consciously what his fundamental life plans are; and this is especially important for a modern man who no longer lives, like a remote tribesman or an ancient Sumerian, in a relatively unchanging social environment in which all major roles and values are determined, almost inescapably, by existing horizons of knowledge and patterns of custom.

Our freedom of choice, if we look at it in this light, is real enough. But the difficulty is to find out what are the right choices to take. The existentialists, or at least many of them, assert that there is no exterior criterion of what is right. "Every reason comes
into the world through liberty." In Merleau-Ponty's words "I am the absolute source. My existence does not come from my antecedents, my physical or social environment; it goes out towards them and supports them for it is I who cause to be for me (and so to be in the only sense that the word can have for me) this tradition that I choose to take up again or this horizon whose distance from me would melt away - since it does not belong to it as a property - if I was not there to scan it with my glance."¹ There are no landmarks. It is all up to me. Hence the absurdity and anguish of the human predicament. What is the good of freedom if we can have no idea what to do with it?

Steering by Grace

A discussion of freedom as an internal reconciliation or harmony, suggesting that we can steer our lives by reference to such a concord instead of pursuing "dominant ends".

I do not think we need to accept this pessimistic view. I wish to suggest an alternative which draws on an understanding of freedom in yet another sense. Men are capable of anguish but they are also capable of moments of grace and joy. We cannot set any course by anguish, which is a kind of chaos and has no direction in it; but it is not, I believe, beyond us to set our course by grace.

Let me begin by going back a step. In the third stage of freedom, as described in the preceding section, a man makes his choices by reference to an idea of himself in which the most basic long term plans are largely determined by his upbringing and social environment, including the knowledge which is current in his society about the physical world and the terms in which that knowledge is expressed. In a relatively unchanging society the ideas inculcated by his upbringing and through his relations with his parents will normally reinforce rather than conflict with those expressed in the custom, convention, science and religion of his society. He is likely to take his basic plans and roles for granted rather than challenge or question them, not least because there is no evident alternative to

¹ Quoted from "Phénoménologie de la Perception" in Foulquie op. cit. p. 70.
them. He will see himself as being, or at least as trying to be, brave, kind, honourable, truthful and correct in the terms approved by his society or sub-culture, looking up to the approved gods, heroes or leaders and looking down upon, fearing or hating the approved demons, enemies or scapegoats. Because they are taken for granted the man will not ordinarily look beyond these basic contours of his idea of himself as they present themselves in relevant situations of decision. But once the tribal cocoon is broken, men of various nations and gods are thrown together; consequently the values of society become pluralist and may evolve rapidly with shifts in economic and political power. This will be so especially if men's understanding of the world about them and their technical power to deal with the environment are also rapidly evolving. In such circumstances the individual is forced to recognise himself not in a settled framework of meaning which makes it clear who he is, but in a kind of wilderness of conflicting ideas. Instead of taking his basic plans and roles for granted he has to see himself as a whole, a person defined by these plans and roles, in the much wider perspective of the universe and of death - both of them no longer comfortably framed and understood but taking on the aspect of unfathomable mystery and darkness. He finds himself in the existential predicament, a free individual in a meaningless universe, able to create himself but not knowing in what image to do so.

This process involves a fuller self-consciousness than before, a distancing of the viewpoint of consciousness from the whole trajectory of the man's life in time and space. In that perspective, if the basic plans of his existing Self appear no longer to have any intrinsic validity or even coherence, the question arises whether there is any way in which he can identify a truer idea of himself to which he should try to approximate his actual behaviour, a truer impersonation to which he should try to give incarnate reality. It is a hard question for we can know one thing only in terms of other things, we are never able to reach the firm ground of absolute knowledge; and without such knowledge there is no intellectual criterion by which we can decide which are the true basic plans that a man should adopt. We are reduced to making assumptions, like the humanist assumption about the value
of the fullest possible development of human potentialities; but there is no assurance in such ideas. Where then can we find assurance? Our analysis has suggested that the answer is to be found not in any identification of desirable ends towards which personal plans should be directed, and in terms of which they can be defined; but rather in identifying the condition of grace or joy and choosing or adjusting our plans, whatever they may be, in such a way that we are enabled to maintain this condition, which is a kind of freedom, a moving equilibrium or harmony. This is an emotional not an intellectual criterion. It means that we do not make our decisions primarily in order to achieve particular ends of any kind, but rather that we subdivide our choice of ends at all times to the maintenance of a certain kind of harmony between them.

The possibility of this proposition depends on the prior assumption that we are able to recognise such a state of grace and orientate our whole lives towards it. I believe that we can. When we are in such a state we are more truly free and so more truly ourselves than at any other time, because the impersonation of the moment is informed and determined by the whole personality, vibrating as it were in full concord, not by isolated dominant plans to which others are subordinated. In an earlier section of this study I have referred to the fact that every physical action we take is referred to our sense of balance, which in turn depends on our sense of the direction and force of gravity. Our sense of balance does not determine what the action is, but it determines how we take it - and it may rule out some proposed actions altogether as well as adjusting others. What I have suggested is that there may be some analogous process in the moral life. If we are governed simply by our desires, fears and ambitions there is no way in which we can find a satisfactory method of coordination. We are the slaves of the carrot and the stick, not free men. Even if we develop ingeniously rationalised means of maximising the carrot intake and keeping the stick to a minimum, we are still operating as behavioural machines; and we still finish up in confusion. To achieve freedom we have first to detach ourselves from the domination of any human end whatever; we have to subordinate all that we do to the pull of some moral equivalent of the sense of balance through which we can order and adjust our different
natural purposes.

In Chapter IV of this study I developed at some length the theory that the core of the personality lies in the small child's moments of glad obedience, in innocence and joy, and that throughout our lives it is only when we recapture this obedience that we most truly recapture ourselves. These I suggest, are our moments of grace; sensitivity to such moments in which the whole personality is in balance, alert but reconciled and without tension, gives us a kind of touchstone of the moral life by which we can know when we are leading it right—or, more often, when we are leading it wrong. If this is accepted as an initial hypothesis, it brings with it the corollary that once we follow this method we are no longer steering positively by the ends to which various roles that we have adopted are directed, but rather we are steering by means of the negative feedback which tells us all too clearly when there is tension and frustration within ourselves. The trouble then is that while we do not find it difficult to recognise the symptoms of unease within ourselves, to know that we are unreconciled does not mean that we know what to do in order to make things better. Fear and aggression lurk deep within us and we cannot release them without creating havoc of one sort or another.

The guide we need at this point is, I believe, a true conscience, which however is the same as a true consciousness of ourselves. It has to be a purified conscience reflecting "authenticity", from which biased, inappropriate motivation, deriving from past traumas, whether of childhood or otherwise, have been removed. This is what is meant by purity of heart, and "blessed are the pure in heart, for they shall see God". The true conscience does not so much tell us what to do as warn us of the implications of the plans we consider, so that we can bear in mind the need for reconciliation and freedom in the way they are pursued. For it is the way in which we live that matters, not in themselves any particular ambitions that we may pursue (though some ambitions will be incompatible with the reconciliation of mind). As I have suggested in an earlier chapter, mystics often set out in pursuit of the ineffable experience, but what the true ones find is not an experience but a Way. Remarkable experiences there may be along the
Way, but these are to be interpreted as signs, or signposts, not as ends in themselves.

I believe such a prescription as this makes sense as a matter of psychology and as a theory, in some sense, of natural religion. It is probably fair to say that the moral teaching of all higher religions is to a greater or lesser extent compatible with the psychological prescription here set forth; and it is perhaps significant that most of them include traditions in which value is attached to physical and ascetic disciplines, especially disciplines of breathing and the relaxation of tension, which through promoting the harmony of the body encourage the harmony of the mind. It is interesting, too, that Professor Rawls has developed a theory of value which rejects the adoption of "dominant ends" of any kind. 2

The great difficulty however is that of bringing about so fundamental a reorientation in a creature whose nature is to live in the pursuit of purposes. The Christian doctrine is that this requires nothing less than a death and rebirth. The Christian in following Christ adopts a new ideal role that is to be the keelplate of all his plans, that of the man "who emptied himself, taking the form of a servant", into whose death he is baptised. In losing his life he gains it. In giving up the Old Self and its ends he regains his freedom from the domination of his desires and (still more) his fears. To the extent that he is conformed to Christ, humble, free and forgiven, he becomes sensitive to the grace and guidance of the Holy Spirit. He is shaped under the shadow of the Cross as iron filings are drawn into pattern by a magnetic field. He is enabled to love and trust the transcendent God in whom he lives and moves and has his being, because he can know God in Christ and obey him in the Holy Spirit. Loving God, he can love his neighbour in whom God dwells. In freedom he chooses the good, and in the process he begins to create his true Self, formed in the image and obedience of God.

1. Cf. Romans 2. 14-15: "When the Gentiles who have no law do by nature what the Law prescribes, these having no law are a law unto themselves; they show the work of the Law written in their hearts, their conscience bears witness to them."

2. "A Theory of Justice" pp. 548-554. These ideas are critically discussed in an appendix to my study "An Approach to a Just Society".
The point is made with precision by Gerard Manley Hopkins:

Each mortal thing does one thing and the same: 
Deals out that being indoors each one dwells; 
Selves - goes itself; myself it speaks and spells, 
Crying What I do is me: for that I came.

I say more: the just man justices; 
Keeps grace: that keeps all his goings graces; 
Acts in God's eye what in God's eye he is - 
Christ - for Christ plays in ten thousand places, 
Lovely in limbs and lovely in eyes not his 
To the Father through the features of men's faces.

Such, at least, is the aspiration. Every Christian falls very far short. Moreover, the question may still be asked whether this putative freedom is not a delusion. To act in a fully reconciled way, free from internal tensions, is not necessarily to act with free will. Assuming that the account given earlier of the mechanisms of decision is correct, is the individual not still clamped in the vice of determinism? Is what he does not still the result of the interaction of his genes and his environment, for neither of which he is responsible? To these questions we now turn.

Determinism and Free Will

An argument to suggest that steering our lives by reference to the concord of our state and time represents an obedience which is the only true freedom - an attunement to Creation and a sharing in it.

The key to an answer to these questions lies, I believe, in the distinction already drawn between the self-validating reality of the transient predications of consciousness Here Now and the derived reality of the model of the natural world that we construct with the aid of such processes as memory, generalisation, comparison and equation. The first is prior and inexplicable and it includes the reality of free will. The second provides explanations, but only in terms of models built out of elements from the categories of conscious perception and thought, which are themselves not ultimate truths but the given, arbitrary registers of our minds. It builds up a model which can include models of ourselves;
but such models, as models, can have no free will. Causality is one of the categories of our experience, like extension, and we can no more easily conceive of an event which is not ultimately a consequence of natural law (though it may be statistical rather than mechanical law) than we can conceive of a body without extension. As I have argued earlier, we cannot circumvent this conclusion by imagining a supernatural world surrounding this one, because this lets us in for an infinite regression of worlds. But we must not let ourselves be mesmerised by the limitations of our natural understanding. If the subject of our natural understanding is inevitably always a limited model of reality, not reality itself, then it is perhaps not surprising that it exhibits the determinism of the model, not the creativity of the modeller.

In consciousness the modeller is always present with the model. \(^{1}\) Consciousness always includes the knower as well as the known, the I as well as the not-I, the agent as well as the things he does. By definition we cannot directly know the knower. Nor, as Chein has pointed out, can we say much about him. But one attribute we know he does have, that of location Here-Now, at the growing point of time, where actuality emerges out of possibility, where creation takes place.

We may recall Nozick’s point that “the Self is synthesised as the object referred to in the reflexive tokening of I... The reflexive act refers to the thing of greatest organic unity that includes it.” This thing of greatest organic unity is, on the face of it, biological man, the creature with its life trajectory. But is this a sufficient conception? The emergence of the reflexive Self can be equated with what I called in the preceding section of this study the process of self-determination, a process in which the determining organic unity moves through stages of increasing comprehensiveness: first that of the gene pattern, then that of the body’s re-expression of the gene pattern in space across time, and finally the stage in which the individual chooses for himself the long term patterns of his own anticipatory Self. I argued that the final stage involved a fuller self-consciousness because it required a distancing of the viewpoint of consciousness from the whole trajectory of the individual’s life; and what this implies is that the reflexive Self is reflecting an organic unity wider even than

1. Cf. the passage from Traherne quoted on p.412 above.
Indeed it is evident that a human creature is meaningless in isolation. In great measure I am constituted by the wider wholes of family and society, language and civilisation, to which I belong. But can there be a limit to this process? If I am finally governed by the "dominant ends" of my nation or class, I am still a slave, just as I may be the slave of my own pride or passion so long as I make them my dominant ends. The logical conclusion is that I am not fully free until I identify myself with all creation — or rather with the Creator himself in whom the creation grows, and in whom all conflicts are ultimately to be reconciled. Identification is the litmus test for love. And the fruit of the love of the Creator is participation in his life, a sharing in the continual act of creation itself.

This may seem an odd, mystical line of argument to follow; but it is far from new; it is no more than Christian orthodoxy, as expressed, for example, in the famous last lines of Dante's "Paradiso":

High phantasy lost power and here broke off;
Yet, as a wheel moves smoothly, free from jars,
My will and my desire were turned by love,
The love that moves the sun and the other stars.\footnote{Translation by Dorothy L. Sayers and Barbara Reynolds (Penguin 1962). The original words are:

All' alta fantasia qui manco posse;
ma gia volgeva il mio disire e il velle,
si come rota ch'egalmente a messa,
l'amor che move il sole e l'altra stelle.}

However, the question imposes itself: how can we know such things? How can we identify ourselves with a Creator who is totally beyond conception? How can we sense the pull of the whole, as distinct from the attraction of partial ends?

My answer has been that there is a grace poured out on mankind which is the moral equivalent of the all-pervasive force of gravity. It is not measurable at present by any human instrument, nor perhaps will it ever be; but as some sort of shaping power or "morphic resonance" I believe it exists. It represents the spirit of wholeness and love to which we can somehow become attuned, even though with difficulty and with a constant tendency to lose our sensitivity and to have to go seeking it again and again. It is essentially a sensitivity
to the possibilities of harmony, a feeling for freedom as a state of internal reconciliation in which the roles of the continuing Self are so organised that their discords are tuned out and they find themselves in concord with the "proper vibrations" of the whole complex of the idea of the Self in the mind-manifold — and ultimately with the proper vibrations of the manifold as a whole, reflecting a lifetime and a world. This is no doubt an imaginative vision rather than a testable hypothesis; but the idea of harmony in obedience to the music of the spheres as the true end of man is one of the most ancient of human themes:

Music do I hear?
Ha, Ha! Keep time. How sour sweet music is
When time is broke and no proportion kept!
So is it in the music of men's lives.
And here have I the daintiness of ear
To check time broke in a disorder'd string;
But for the concord of my state and time
Had not an ear to hear my true time broke.

We need to have an ear for the concord of our state and time, to check our disordered strings and make of our lives sweet music. This task is essentially one of obedience. We have to heed the concord — which is given to us, not invented by ourselves — and bring our minds into reconciliation with it. Such reconciliation is still only the tuning of the strings; but once tuned, nevertheless, we are free. We ring with the music of creation. "Thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth; so is every one that is born of the Spirit." This music is not our own but through the tuning we become the music. Our new freedom is an adoptive freedom. In religious terms it is a putting on of what St. Paul called

1. Dr. Rupert Sheldrake's theory of "morphic resonance" suggests that possibly this may not always be the case. See "A New Science of Life" (Blond & Briggs 1981).

2. Shakespeare "Richard II" Act V Sc.V. See also in this connection the later pages of Sir Isaiah Berlin's well-known essay on Tolstoy "The Hedgehog and the Fox" (Reprinted in "Russian Thinkers" by Sir Isaiah Berlin, Penguin 1979).

3. This theme is one which constantly recurs with the poets; for example T.S. Eliot in "The Dry Salvages":

That it is not heard at all, but you are the music
While the music lasts

(footnote continued on next page)
"the glorious liberty of the sons of God".

Rhetoric, it may be said, not argument. But my starting point has been that freedom is not to be expressed in the logical categories of the natural world, because freedom is creation and therefore prior to nature. When we look at the world our grasp is only of models, not of things in themselves; and similarly when we try to look beyond the world our grasp is only of the category walls of our existence. Yet just as it is possible for us to find our frail models of the world penetrated with reality, with a life which I believe we should be bold enough to recognise as that of the immanent godhead; so when we turn outwards, though our gaze is blocked everywhere by the blank symbols of paradox - infinity, eternity, creation, freedom - nevertheless it is possible for us to recognise, like a fire glowing through these symbols, reality once more, which I believe we should recognise as the transcendent divine, the great I AM, God himself.

All the traditional theological attributes of God are mysteries, self-contradictory and thus meaningless as rational constructions, yet making sense, God-bearing, for those who approach them with humility, symbols through which we can become the free instruments of God's freedom. When we speak of the free will of God we are thinking of him as the author of the created world, the reason why things exist and why they are as they are, not otherwise; and admittedly in doing so we are using an anthropomorphic image, because purposeful thought, decision and action related to an identified final cause are pre-eminently characteristic of human nature. We have no alternative to using such an image, but we need constantly to remind ourselves that God's will is not like a human will, it is, as Job and Isaiah learnt, a mystery beyond conception. "For my thoughts are not your thoughts, neither are

Or George Herbert in "Church Musick":
Now I in you without a bodie move,
Rising and falling with your wings

Or George Herbert again in "The Thanksgiving":
My musick shall finde Thee, and ev'ry string
Shall have his attribute to sing;
That all together may accord in Thee,
And prove one God, one harmonie.

Or Donne in his "Hymne to God":
I shall be thy Musique...

Or Rilke in his "Sonnets to Orpheus" with their theme that "Gesang ist Dasein".
your ways my ways, saith the Lord. For as the heavens are higher than
the earth so are my ways higher than your ways, and my thoughts higher
than your thoughts." Yet inssofar as men is free he is like God, he
shares the very nature of God.

The important point here is that when a man exercises free will, he
is not exercising his own free will. For a man is not set free by
doing what he wants, he can be tyrannised by his own greed, infatuation,
ambition, pride. A Christian sees in Christ himself the type of
perfect obedience to God's will, expressed in everything he did, but
perhaps above all in the agony of the Garden of Gethsemane. The Life^s
of Christ reflects a constant attention to his Father's word, hence
total detachment from sin, hence total sacrifice of "own will", hence
total humility, hence total love and fearlessness, hence total obedience
even to death, hence total freedom. The obedience of Christ was not
to an external law but to the will of his Father made known to him
directly — and in the power of the Holy Spirit made known directly, as
a Christina will believe, to anyone who has the humility and commitment
to follow in his footsteps.

Yet if this is accepted, we find ourselves faced with a new problem.
If a man is only free and only creating his own true Self when he is
doing God's will, does it not follow that he has no identity of his own?
He may become part of the breath of God or he may remain a collection of
disordered strings as part of the natural world; but can he ever be a
distinguishable free Self in his own right? In particular can we ever
say that he exercises a choice of his own for which he ought to be held
responsible (and without responsibility what is freedom)?

Responsibility

Why should it matter what we do with our lives?
Calculations of prudence and of necessity.

Consciousness and decision, I have argued, belong to the creature.
But in what sense can we regard the creature as responsible for his
decisions and what are the implications of this responsibility?

1. Isaiah 55, 8-9.
The first part of this question we have answered after a fashion in our analysis of the four stages of freedom. This suggests that in the fourth stage of freedom self-conscious man, created largely by his own choices over the whole trajectory of his life up till the given moment of a new decision, is in a sense responsible for the decision which he now takes in a newly given contingency; this is true at least to the extent that he is the unique causal agent involved, that by his own choices he is in part responsible for the nature of this causal agent, and that he is conscious of what he is doing.

At this stage, as our earlier line of argument has suggested, his choice may be formed, not merely by the interplay of desires and fears, linked to particular purposes and to the plane that serve them, but alternatively by his ear for "the concord of his state and time", his sense of the reconciliation of his roles in the whole sounding body of his idea of himself within his idea of the world. Thus man is emancipated to a point at which he has a new kind of choice; he has not merely the alternative of obedience, in however sophisticated a manner, to the pleasure-pain principle as Freud envisaged it, but also that of obedience to the spirit of wholeness within him. This transforms fundamentally the nature of his decisions: he is choosing ultimately between coherence and disruption (or, more theologically, corruption) between steering by grace and steering by pleasure or pain, between freedom and slavery.

To put it still more theologically, as humans we do not have any independent creativity, but in becoming conscious of ourselves, we do acquire the possibility of choice between sharing, under the guidance of the Holy Spirit, in the creativity of God, and being governed by the mere interplay of natural drives such as greed, fear, ambition and pride. Through the first we can share by adoption in God's freedom, while the second is a form of slavery. The first is obedience to the one will of God. The second is obedience to the multiple wills which inhabit the old Self. There is no intermediate course representing the specific choice of the free individual because, as we have seen, an act in the natural world which is not under the compulsion of law (even the law of randomness) is inconceivable. We can give no meaning to any such idea of freedom. As William Law put it 200 years ago in idiosyncratic
but admirable terms: "The will of the creature is the only opener of all evil or good in the creature; the will stands between God and nature and must in all its workings unite either with God or nature. The will totally resigned and given up to God is one spirit with God and God dwelleth in it; the will turned from God is taken prisoner in the wrath, fire and darkness of nature... The four elements of this dark, fiery soul or fallen nature are: a restless selfishness, a restless envy, a restless pride, and a restless wrath or anger... A will given up to earthly goods is at grass with Nebuchadnezzar and has one life with the beasts of the field."¹

There is something alarming about this emancipation; for suddenly there is much more at stake than there ever was before. "If you were blind", said Jesus, "you would have no guilt; but now that you say 'We see', your guilt remains."² Once we become self-conscious, knowing good and evil, we have a vocation to the obedience in which true freedom can alone be found. But the price of this freedom is the sacrifice of our personal ends. Moreover - perhaps hardest of all - the sacrifice itself must be free; it is not a true one unless it is made for love rather than fear or prudent calculation. This in turn means that a virtuous determination, what Simone Weil called the "muscular will", is not enough; it is necessary first for a man to go back and be transformed into a state of humble trust in the providence and goodness of the Creator, however he may be conceived; for without this he will never be rid of fear, and so will never be able to commit himself completely to love. To put it in a more traditional way, he must love God and know God's love before he can love his neighbour. There is a worrying circularity here: if we do not love we cannot be free and if we are not free we cannot love. The circle can be broken but only by sacrifice and trust, the offering of our lives met by the grace of God.

What in the end does it matter? What difference does it make what lives we lead? "In the long run we are all dead." This is not a work of theology and I am trying to approach these questions from the standpoint of rationality not revelation. What then can I say about them, given that death is still "an undiscover'd country"? First of all I suggest that it matters what we do with our lives because we are

responsible for them not only as causal agents but also in the sense that we are answerable for them. We are answerable to our calling and our calling is to wholeness. The circumstances of our lives differ widely, but we have the opportunity to turn any life whatever into gold—even though, as Jesus said, it may be particularly difficult for those who are rich in worldly goods to do this. The simplest, most unsophisticated and most unselfconscious followers of religious precepts can be among those who most successfully and straightforwardly obey their true calling. Certainly, insofar as we are answerable, when we take decisions, to our own selves in future days, we ought to choose freedom and wholeness, for it is a prescription over the long term for happiness on earth, though not for escaping earthly disaster or oppression.

In making comparative judgements about this we have to remember to compare ourselves with ourselves in different circumstances, not with other people; for everyone begins from a different point and with a different freight of possibility. Conversely the man who hears the call and then stifles or disobeys it brings himself without fail into a kind of hell upon earth. Thus we need for our own sakes to be reborn. Such a rebirth does not alter the experience of our own past or free us from the limitations of the ideas of our own generation and our own society. But it helps to liberate us from the pressures and distortions of our own sin. It helps us to see straight and to think straight. It frees us for love and helps us thereby to choose the good, and, in St. John's words, to do truth.

Beyond the limited calculations of early prudence, however, which can indeed turn us towards the choice of freedom, I suggest that there is a deeper and more frightening sense in which we are answerable for what we do with our lives. The truth about us consists essentially of what we do with ourselves and hence of the trajectory that we perform, for better or worse, across space and history. Our actions are adaptations to the world as we encounter it, and since our trajectories are unique, each of us encounters a unique world. In adapting to it we help to change it, leaving it different from what it otherwise would have been; and in

1. Cf. George Herbert "The Elixir":
   For that which God doth touch and own
   Cannot for lesse be told.
and in helping to change it we help to create it, and also to change and to create ourselves. I have referred in a previous chapter to Donne's quotation: "Facies Dei est qua nobis innotescit," that's God's face to us by which God manifests himself to us." Each of us sees the face of the Creator in his Creation from a different angle and our living is a process of responding to it. As we respond more truly in perception and in action to that face and to the will it expresses, so the trajectory of our own lives becomes more effectively conformed to God as Truth, and we begin to share his life, to be the means of his creation, "to be changed into his likeness from one degree of glory to another."

To the extent that we fail to respond truly to him, we begin to lose our freedom and wholeness, we are disintegrated, given up to corruption and death. There is no distinction here of mind (or soul) and body, there is rather the distinction between man and God. If man acts truly he begins to share in the life and freedom of God; if he does not, he becomes separated from God and begins to share in death.

In the end we are all of us desperately imperfect as seers and doers of the truth; and we all come finally to corruption and death. Yet we leave our lives behind us; the trajectories of our bodies and their actions are part of creation and history and thus of eternal truth. If there is any resurrection, if our lives have any meaning, if we do have any eternal life, then these trajectories represent the real people to whom the resurrection happens; there is no homunculus inside who can be floated off from the rest; nor is the resurrection just of some bag of flesh and bones representing the person at some specific moment.

So far as the traditional distinction of body, mind and spirit is concerned, I would identify the body with the trajectory across space and time which I have here called the creature. I would identify the mind with the structuring consciousness, which extends and organises the world before us. This I have called the eye of the creature, which looks into the arena of consciousness; perhaps we can also identify it with what the Athanasian creed calls the "reasonable soul" which, with the flesh, makes one man. In regard to the spirit, I would argue that it is not my independent possession. What is resurrected, as St. Paul says, is a
"spiritual body", created by such of my trajectory through life as has been governed by obedience and grace; and grace is the operation of God's Holy Spirit. When I have been disobedient, when I have not had an ear for "the concord of my estate and time" expressing the spirit of the wholeness of creation, I have made but "bawr music", in which "time is broke and no proportion kept". And just as the Holy Spirit expresses the will of God, so when I ignore the Holy Spirit and dedicate myself to human pride or fear or greed, or, worse, when I sell my obedience to some other person or collectivity or myth, then I am being governed by evil spirits — for evil is the privatio boni. Such an interpretation would seem to relate the analysis of this study in a reasonable way to these traditional categories of Christian theology.

It may be worth making the point here that the account of identity given in this study is decidedly inhospitable to Oriental theories of reincarnation. The obvious logical difficulty with ideas of reincarnation has always been to define what it is that is reincarnated. People sometimes claim to have memories of past lives in remote countries. I am a sceptic about this; if such claims were true, one would expect that by this time so much evidence would have accumulated that there would be no doubt about the fact. But even if, for argument's sake, it is accepted that details of past events have sometimes been recalled in this fashion which have later been independently corroborated as accurate, it still does not follow that reincarnation is the most likely explanation. I have argued earlier for the continuing reality in some sense of the events of past history, even when we have no means of knowing what they were. But if that is accepted, it is easier and more economical to postulate some inexplicable form of transfer from the past experience of another mind than to postulate the reincarnation of some unspecifiable homunculus who continues from one life to another.

But is there a true resurrection? And if so what form does it take? What about salvation and damnation? These are questions which are strictly unanswerable within the framework of our understanding. If we try to imagine a resurrection life, we have to imagine it in some kind of space and in a continuation of time. Yet, whatever eternity is, it is not time without end. We may think of it perhaps best as divine life transcending all worlds. For a Christian the hope of resurrection
lies in the resurrection of Christ himself. What Jesus offered was eternal life; but he offered it through the offering of himself, the bread of life; in him was life and the life was the light of the world. The Christian believes that if we are sufficiently obedient to the Holy Spirit of truth and freedom, we may share ultimately in the risen life of Christ in God. This is glory. In moments of grace we have perhaps an intimation of glory, and we may dare to put on the hope of being eventually perfected in God's likeness. But if we turn from obedience we lose not only the present grace but also the future hope. We become irresponsible and thus irresponsible. We are given over to dust and death. What this means we cannot say, any more than we can say what glory is. But there is reality in this antithesis, even though it is beyond our understanding. "As was the man of dust so are those who are of the dust, and as is the man of heaven so are those who are of heaven. Just as we have borne the image of the man of dust, we shall also bear the image of the man of heaven."\(^1\) It might be possible to conceive of some further and final re-expression of men in a fifth stage, as it were, of freedom - one in which that part of his life which has been transmuted by obedience and freedom comes to a full re-expression in glory, and all the rest falls away:

Soul clap its hands and sing...

Perhaps the teachings of religion on the last judgement and the future life can best be seen as formulations, inevitably in human, spatial, temporal and thus symbolical terms of a general truth which we have to face, though it is beyond human understanding - not only that we are free, but that it matters metaphysically, fundamentally, what we do with our lives:

Mensch werde wesentlich; denn wenn die Welt vergeht, So fällt der Zufall weg, das Wesen, das besteht.\(^2\)

Our life is a continual dying from one day to another; yet, as George Herbert says (with an echo of St. Paul):

Yet, Lord, instruct us so to die That all these dyings may be LIFE IN DEATH.\(^3\)

1. 1 Corinthians 15, 48-49.
2. Man live essentially; for when the world decays The chance doth fall away, the essence stays. (Angelus Silesius)
3. From "Mortification".
APPENDIX 1: ISIDOR CHEIN'S ACCOUNT OF THE IMAGE OF MAN 1.

In Chapter II of this study I quoted Isidor Chein's definition of the self as "that which is at the origin of perceived space-time". This self, he makes clear, "is never an object of experience and therefore has no proper image". But if the self-as-subject, he says, "has no observable properties other than being the origin of space-time, the situation is quite different for the self-as-object". (p.201.)

The subject lives only in the immediate present, but when in the present I turn round and look at myself as an object, it is in effect always a past or future object self that I see - and one that is always embodied as every object is. What links and identifies observed past and future object selves is precisely that "they involve (or are expected to involve) actions emanating from or received at a primal origin of space-time); and in ordinary thought and parlance we assimilate subject and object. "The object self which temporally surrounds and phenomenally is continuous through the subject self is apprehended as embodied in its own body. What more natural than to make the same attribution to the subject self? So the self, object and subject, which clearly is not the body, is nevertheless garbed in the body image." (p.206.) The self is "a something that in various perspectives appears as a particular body, as resident in that body..., as utilizer of that body, and as receiving pleasure and pain from that body. These various aspects of the self are not mutually contradictory... The 'substantiality' of any object requires that it have different projections in different perspectives." (p.208.)

Although in Chein's view the body image is not a constitutive part of the self, it is a component of the self-concept. A multitude of observations in great variety all referable to a continuing self-identity become ingredients in a complex self-concept, which is largely unconscious, "comprising an implicative structure the various facets of which do not become explicit or the objects of scrutiny save under appropriate special conditions". This concept "is not different in any essential respects (save those that have to do with direct access to one's experience) from one's concept of other persons". "The self concept construes a person who is the subject of our actions."

This implies that the self-concept is in some sense a representation of the person, the actor, but is not identical with him or her.

The main component of the person (and one which is presumably represented in or through the self-concept though not identical with it or any part of it) is the ego-structure, which is built up from "imbricated, perpetuated" motives or concerns. The self, Chein says, "is the object of many enduring, interrelated and interdependent concerns. Now, I submit, enduring interdependencies constitute the necessary and sufficient conditions for the definition of a structure—to be sure, not a physical structure, but nevertheless a structure... So with the ego structure. The perpetuation of concerns provides the enduring components of the structure and their imbrication provides the systematic interactive basis for preserving the structure that justifies the application to it of the term 'ego'." (p.221.)

"Engineered structures", Chein notes, "are built to withstand considerable sway, differential expansion... and so on; and of course the introduction of feedback mechanisms increases the range and effectiveness of counteractive forces." (p.224.) "The dynamics of the ego", he says, "that is, the interplay of motivational forces in the ego structure, is... one of counterbalancing relevant considerations and finding paths of action that maximize the potential gain for the entire system of interlocking concerns. This... is... the controlling function of the ego... We develop a motive to scan our contingency maps and predicate our actions (and inhibition of action possibilities) accordingly... The implementation of this motivation may be referred to as ego strength... The diversity of the derived-perpetuated motives that make up the ego structure and the articulation, elaboration and comprehensiveness of the associated contingency map constitute... the maturity of the ego." (p.228.)

The ego so defined, however, is not to be identified with the actor. "For not only are there impersonal factors outside the dominion of the ego, but there are also motives that are not contained within its
dominion." (p.229.) By these Chein means superego motives and id motives. The ego-structure, in coping with the world, develops an "empirical-practical" system of morality, or priorities. But the mind includes also a more or less separate superego structure, built up from the introjection of authority figures in the child's early years, and "the ego has to respond to the demands of the image of the authority, just as it does to other features of the environment... Inevitably perpetuated motives develop with respect to the requirements of the superego and these motives are incorporated into the ego system. The requirements of superego morality thus enter as relevant considerations in the balancing of ego motivation." (p.243.)

The id, by contrast, is the aggregate of three kinds of motivation, (i) motives related to unfinished business, the unresolved tensions of childhood, (ii) appetitive drives, which are essentially the impulses of the immediate present, and (iii) impulsive acts dominated by ego motives which escape from ego balance and control. But it is emphasized that the id is an aggregate, not in any sense an ordered structure. (p.258.)

"Affects are the qualities of what one observes when one regards one's own motivational state: feelings when the focus is on the condition of the doer or the course of the action; emotions when the focus is on the relation of the doer to the object of the action. When the focus is on the mission per se the motivation is affectless. Because of what they connote, some affects come to be positively valued, so that their achievement becomes a motive; others negatively valued so that their avoidance becomes a motive." (p.272.)

In the upshot the self, "which as object is at the core of the system, is as subject the common apprehended responsible agent of ego, superego and id behaviours. It is inescapable therefore that ego, superego and id, along with the self and the body, constitute one system that is the person, the actor, whose nature and character we have been seeking." (p.280.)

Beyond this, "if we choose to ignore the dependent relationship
of the other components of the person on the body, then we are dealing with the personality in the sense that psychologists use the term, "that is, an aggregate of traits. "Traits however are patterns of behaviour across time. By this usage therefore personality does not exist at any given moment..." Trait theorists however "try to save themselves by assuming that the trait is not the pattern as such but rather a continuing disposition; but they have nothing to say about the nature of the disposition save that it manifests itself in the pattern... The disposition is defined by the pattern and is therefore a synonym for it." (p.281.) Chein accepts that "we shall... doubtless go on talking about traits and measuring them because in the conduct of our daily affairs stereotyping can be quite functional"; but he argues that the consistency of traits is grossly exaggerated. "The point is that trait consistencies appear in very narrow bands and the narrowness of the bands entails narrowness of the range of observational situations as well as of relevant motivations." (p.284.)

The final emphasis of the book is on motivation. "The crucial discrimination is not the shape of the living body but the commitment to enduring, ongoing and, to us, comprehensible projects." And in the end "the operation of motives and motivational structures is what people experience when they experience their own freedom and ascribe freedom to others." (p.291.)

Chein's is a complicated and ambitious model which attempts, as relatively few do, to bring all aspects of the individual coherently within its scope. He takes full cognizance of the difficult problems of self-as-subject and self-as-object, and although I do not think he provides an entirely satisfactory solution, I doubt whether anyone else has yet done so either. He recognizes the central importance of motivation and his concept of the ego structure with its "imbricated" motives is related to my concept of the anticipatory Self built up from overlapping plans. What he calls the self-concept corresponds in many ways to what I call the idea of the Self. Nevertheless, although I can agree with a great deal of his argument on particular topics, I cannot say that I find the total structure convincing. In particular the nature of the elements and the relationships between them are not
always clearly established, nor are the dynamics of the model by any means made clear.

As evidence for the first criticism I would refer to the relationship between the self-concept, the ego structure and the person. The self-concept is said to "construe" the person, and it is also said to play a central role in shaping the ego. But it is never clearly explained how this latter process in particular takes place. The self (presumably the self-as-object) is described as a something that appears differently in different perspectives, but there is nothing that corresponds to my distinction between the idea-complex in the mind-manifold and the "evoked idea".

As evidence for the second criticism I would refer to the absence of any reference to plans or purposive cycles or the like. There is frequent mention of motives and concerns as somehow reified objects which can be "imbricated" and can form structures. But what are they? In what space are these structures established and how are they built up? How do the elements and structures compare with the elements and structures of the self concept? There is nothing here that corresponds to the theory of logical forms in logical space and of the mechanism of mind worked out in the first two chapters of this study as a basis for the elaboration of a theory of the self.

Early in his book Chein scornfully rejects Miller, Galanter and Pribram's account of plans and purposes; but his argument on this point I find extremely hard to follow - unexpectedly so, as I am in sympathy with him over his principal assertion, namely that "the behaver is an active agent in the universe... not merely a passive medium for the interplay of constitution and environment". (p.29.) The crux of his account of motivation is that "a behaviour is a motive of the behaviour it includes. My writing behaviour is a motive for my holding a pen... The including behaviour is not per se a motive; it becomes a motive only if some subsidiary behaviour is necessary to it." (p.23.) Thus "a motive is any directed act that requires a subordinate expediting act to be included in it." (p.79.) "The purpose of a behaviour is the completion of the action of the superordinate behaviour in which it is included. The difference between motive and purpose is one of focus. Purpose emphasizes the service or function of the
subordinate act with respect to the superordinate act." (p.81.)
Furthermore "I do not regard a deficit state as a motive... It (or
more precisely its elimination or replacement) is an object of
activity... The elimination of the distress associated with the
deficit state is a motive. We do things in order to eliminate the
distress... Though the elimination... may itself be a motive it is
unmotivated because it is not a subordinate phase of some superordinate
event." (p.80.) In contrast to the view that a wish or desire is
a motivational antecedent to behaviour Chein takes "such terms as
referring to behaviour at an early stage of execution." (p.24.)

I shall not attempt here a close examination and critique of these
views on motivation. I will only say that I think Chein rejects the
natural language of plans and purposes because he identifies it -
unnecessarily as I believe - with a mechanistic view of human beings;
and that he adopts instead a language of his own, defining motives as
including behaviours, which seems to me highly artificial and difficult
to use. Even in these terms it is far from clear how the imbricated
motives actually work. What is lacking in particular is any elaborated
description of the mechanisms and processes of what happens from moment
to moment during consciousness. I do not think it would necessarily
be impossible to elaborate Chein's system in such a way as to meet
these criticisms. But I suspect one would then end up with something
much more akin to the model which I have developed in this study -
a model which would establish a distinction corresponding to the one
which I draw between the evoked idea and the idea-complex, and which
would also find a place in some form for the purposive cycle.
APPENDIX II: GEORGE HERBERT MEAD ON THE SELF

The purpose of this note is to discuss the relationship of the views of George Herbert Mead on the Self to the enquiry pursued in this study. I will begin by summarising, as far as possible in Mead's own words, the essay on "Self" from Mead's "Mind, Self and Society" (1934) as reprinted in "George Herbert Mead on Social Psychology," edited by Anselm Strauss (University of Chicago Press, revised edition 1964).

Mead's central thesis is that "in giving a behaviouristic statement of consciousness we have to look for some sort of experience in which the physical organism can become an object to itself." An individual "would not be self-conscious or have a self at all" unless he had first "become an object to himself"; and this he could do "only by taking in the attitudes of others towards himself within a social environment."

This process, Mead continues, is only made possible by means of communication. The individual's communication is directed not only to others but also to himself. "We find out what we are going to say, what we are going to do, by saying and doing it." "He says something and that calls out a certain reply in himself which makes him change what he was going to say."

Significant speech affects the speaker and this effect on himself is part of the conversation with others. Communication relies upon the use of symbols and what is essential to it "is that the symbols should arouse in one's self what it arouses in the other individual." This enables one to "get what we term a mental content, a self."

When a child learns to play a game, "he must know what everyone else is going to do in order to carry out his own play." "The attitudes of the other players which the participant assumes organise into a sort of unit, and it is that organisation which controls the response of the individual." Correspondingly on a wider stage "The organised community or social group which gives to the individual his unity of self can be called the generalised other... by taking the attitudes of which towards himself he becomes conscious of himself as an object or individual, and thus develops a self or personality." "Only by taking the attitude of the generalised other towards himself... can he think at all."

According to Mead "the self reaches its full development by organising the individual attitudes of others into the organised social or group attitudes and by thus becoming an individual reflection of the general system, the patterns of social or group behaviour, in which it and the others are all involved." "A person is a personality because he belongs to a
community, because he takes over the institutions of that community into his own conduct." "What we mean by self-consciousness is an awakening in ourselves of the group of attitudes which we are arousing in others." It is therefore a cognitive rather than an emotional phenomenon. "The essence of the self... lies in the internalised conversation of gestures which constitutes thinking... And hence the origins and foundations of the self, like those of thinking, are social."

Need discusses the nature of the "I" which is aware of the social "me". "The "I" of this moment is present in the "me" of the next moment. I cannot turn around quick enough to catch myself... I become a "me" insofar as I remember what I said." "The "I" is the response of the organism to the attitudes of others, the "me" is the organised set of attitudes of others which the individual assumes." The "I" gets into a man's experience only after he has carried out the act. "He had in him all the attitudes of the others calling for a certain response; that was the "me" of the situation and the response is the "I"... This response of the "I" is something that is more or less uncertain... These individuals in a social situation give him a certain self. Well what is he going to do? He does not know and nobody else knows... when a man says he knows what he is going to do even there he can be mistaken... The movement into the future is the step, so to speak, of the ego of the "I". It is something that is not given in the "me". The "I" both calls out to the "me" and responds to it. Taken together they constitute a person as it appears in social experience."

"The fact that all selves are constituted by or in terms of the social process... is not in the least incompatible with the fact that every individual self has its own peculiar individuality." For each "reflects the behaviour pattern of that process from its own particular and unique standpoint." The individual is continually reacting back against society and the cumulative effect of such changes "which are not simply those of a "me" but of an "I"" can be profound. "We can state what is going to happen and take responsibility for the thing we are going to do, and yet the real self that appears in that act awaits the completion of the act itself. Now it is this living act which never gets directly into reflective experience... It is there in the possibilities of the "I" that novelty arises and it is there that our most important values are located."

"Social control is the expression of the "me" against the expression of the "I". But the latter "is a response with which the self is identified... Values definitely attach to this expression of the self which is peculiar to the self" - provided however it is one which "unselfishly" relates to the whole social group of which it is part, and is not a "narrow self", "taking advantage of the whole group in satisfying itself." What is ideal is a social situation "such that it opens the door to impulsive expression and so provides a peculiar satisfaction... the source of which is the value that attaches to the expression of the "I" in the social process."
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Mead argues in conclusion that social process is a prerequisite of mind and not vice versa. "The social process... does not depend for its origin or initial existence upon the existence and interactions of selves, though it does depend upon the latter for the higher stages of complexity and organisation which it reaches after selves have arisen within it."

I have tried to use Mead's own words in order to be fair to a writer with whose thinking and style of expression I do not find myself naturally in sympathy. Mead has got his teeth here into two or three interesting ideas; but the exercise of summarising makes one acutely aware that he proceeds by a sort of dogged, involved reiteration of assertions, rather than by the development of a coherent, consecutive argument or the presentation of evidence. Correspondingly he does not build up any kind of systematic model of the mind and its working, nor any detailed account of the nature or function of the self. He says in a footnote that in defending a social theory of mind he is "defending a functional as opposed to any form of substantive or entire view as to its nature." But what does this purported distinction mean? How can a thing have a function if it is not a thing? How can you describe a function without identifying what it is that functions?

Mead says again and again that it is only by "taking in the attitudes of others towards himself" that an individual can become a self. But what kind of entities are these attitudes of which he speaks? By what process are they taken into the self? What is the structure they are taken into? How can they be taken into the self if the self cannot exist until they are taken in? These may seem tiresome questions; but they imply, I believe, a justified criticism of the vagueness of his ideas, of the lack of any working out in detail of what they mean. He simply asserts (again and again) that thinking is an inner conversation, but he provides no real argument for this, nor does he offer any detailed analysis of what speech or language or dialogue or conversation actually consist of. He says that self-consciousness is an awakening in ourselves of the group of attitudes which we are arousing in others. But this totally begs the question. How does a group of attitudes awake? What do we mean by being awake? Who or what is awake?
According to Mead "the unity and structure of the complete self reflects the unity and structure of the social process as a whole; and each of the elementary selves of which it is composed reflects the unity and structure of one of the various aspects of the process in which the individual is implicated." This of course makes the individual a total robot and denies him any independent purposes or plans. As a result one might expect the whole social process to be locked solid; but Mead avoids this by introducing the "I" as another "phase" of the self (though without discussing what the word phase means here or how one phase is related to another). The "me" represents the controlling, censoring reality of the social process; but in "impulsive conduct" "the structure of the "me" does not determine the expression of the "I"." Although this "I" does not have plans or purposes, it represents what we actually do - which is often unforeseen, taking the "me" by surprise.

The discussion of the "I" is perhaps the most interesting part of the essay, a parallel in some respects to the existentialists' distinction between the "pour-soi" and the "en-soi" (see in this connection the section of Existentialist Freedom on p. 417 of this study). But it is striking how sharp the contrast is here between Mead's matter-of-fact acceptance of rule by the "generalised other" and Sartre's reaction: "hell is other people". As Foulquié expounds Sartre:¹ "For the other I reduce myself to a "me" who is only what he was, since in the idea which the other has of me, what I want to be - which constitutes for me my veritable being - does not come into consideration at all."

Mead refers in passing to the possibility for the individual of making plans and accepting responsibilities, but he does not talk about wants or desires. Moreover he only mentions "subjective contents" (unspecified except that they include kinaesthetic experience) in order to assert that their existence does not alter the fact that self-consciousness involves the individual in becoming an object to himself.

The contribution of the "I" in Mead's concept seems to be by definition unforeseeable and gratuitous. Although he refers to the

1. L'Existentialisme" (P.U.F., 1947) p. 73.
"more or less fantastic psychology of the Freudian group", he does not consider whether the "I" could have an unconscious motivation which might be open to study. He gives no account of mechanisms of purpose, planning and choice, and virtually no explanation of what must be for him the crucial process of confrontation between "I" motivations and "me" motivations. The "me" represents "a definite organisation of the community there in our own attitudes", it stands for social control and censorship, while the "I" stands for unpredictable, impulsive conduct. In an actual situation, the novelty, he says, "comes in the action of the "I", but the structure, the form of the self [a concept which he leaves unexplained] is one which is conventional." "The "me" sets the limits that enable the "I", so to speak, to use the "me" as the means of carrying out what is the undertaking that all [i.e. presumably an idealised coherent social community] are interested in."

This suggestion might lead to some thoughts on possibility and actuality, on schemata and equilibration (to use Piaget's term); but with Mead it does not seem to lead anywhere. Mead is positively wistful about social situations in which "the structure of the "me" for the time being is one in which the individual gets an opportunity for that sort of expression of the self", (i.e. expression of the self which is "peculiarly its own"), otherwise situations in which "the very structure of the "me" opens the door to the "I"." But he cannot relinquish his social determinism and such situations seem to be regarded as rare uncovenanted mercies, almost superfluous to the serious business of the socially determined self. He does not seem to notice that if the "me" is built up, at least in part, by successive unpredictable responses of the "I", it can arguably no longer be said to be entirely shaped by the generalised other.

I have to conclude, as the outcome of this brief review, that while Mead's ideas often strike a chord of interest, they are not sufficiently clear-cut or coherently enough developed to be of much practical relevance to my own concerns. Moreover I think it should be said that his central concept of the self as essentially a reflection of the patterns established by the "generalised other" is not merely wrong, it represents the advocacy as normality of what can only exist as a highly pathological
state. In the schizophrenic, according to R.D. Laing,

the individual's being is cleft in two, producing a dis-
embodied self and a body that is a thing the self looks at,
regarding it at times as though it were just another thing in
the world. The total body and many 'mental' processes are
severed from the self, which may continue to operate in a
very restricted enclave (phantasying and observing) or it
may appear to cease to function altogether (i.e. be dead,
murdered or stolen).1

- like, one might suggest, Mead's unfortunate "I" trying to express what
is "peculiarly its own".

Jung too has recognised the problem. We have, he says, to take the
expectations of society into account. But

obviously no one could completely submerge his individuality
in these expectations; hence the construction of an artificial
personality becomes an unavoidable necessity... This... is
bound to have repercussions in the unconscious... The con-
struction of a collectively suitable persona means a
formidable concession to the external world, a genuine self-
sacrifice which drives the ego straight into identification
with the persona, so that people really do exist who believe
they are what they pretend to be... When we examine such
cases critically, we find that the excellence of the mask is
compensated by the "private life" going on behind it...
These identifications with a social role are a very fruitful
source of neuroses. A man cannot get rid of himself in
favour of an artificial personality without punishment.2

One does not have to be a wholehearted Jungian to recognise where the
balance of realism and common sense lies on this issue.


2. From "The Relations between the Ego and the Unconscious": "Jung:
Selected Writings" ed. Anthony Storr (Fontana 1983) pp. 94-5.