CONFORMATION AND INDIVIDUALIZATION IN SOCIAL REPRESENTATION:
THE CASE OF THE UK NATIONAL LOTTERY

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ABSTRACT

The primary objective of this thesis was to elaborate upon the theory of social representations (TSR). A systematic, multi-methodological empirical approach facilitated an investigation of the relationship between conformation, individuation and social representation. Conformation referred to the form adopted by a social representation, at a given point in time; individuation concerned the relationship between acceptance of a social representation and individual factors; social representation was operationally defined as an active system of transformation of social knowledge, constrained by socio-cultural affordances, that originated in and facilitated communication between people about unfamiliar phenomena. The resulting social representation was seen to provide a network of shared meaning that linked symbolic and unconscious realms with the experience of particular objects, events or people.

A series of three, field-based qualitative studies informed the development of a fourth quantitative study. In the first study, salient aspects and common terminology associated with the UK National Lottery were explored using focus groups. Societal level communication was investigated in the second study using media content analysis of three national newspapers. The third study used semi-structured interviews about day dreaming to explore the content and function of relatively ignored, unconscious processes in social representation. Issues of conformation and individuation were addressed in detail within the final study using a questionnaire and a variety of analytic procedures.

The substantive target for this research was the UK National Lottery (NL). Launched in November 1994, the clearly defined starting point permitted an investigation of the genesis and development of opinions about a novel social entity.

A systematic combination of qualitative and quantitative methods and appropriate forms of analysis established conformation and individuation in the NL social representation. Position relative to dimensions underlying the social representation was related to action, in the form of degree of participation in lottery-related activities (including unconscious elaboration during day dreaming), and levels of global and lottery-specific self-esteem. The findings were discussed in relation to conceptualising TSR, using multi-levels of analysis and the influence of individual factors on social representation.
ACKNOWLEDGEMENTS

The following excerpt from a poem entitled ‘I Sing the Body Electric’ by Walt Whitman (1819-1892) does not distinguish between family, colleagues, friends or even strangers, all of whom I would like to thank for sustaining the soul.

I have perceiv’d that to be with those I like is enough,
To stop in company with the rest at evening is enough,
To be surrounded by beautiful, curious, breathing, laughing flesh is enough,
To pass among them or touch any one, or rest my arm ever so lightly round his or her neck for a moment, what is this then?
I do not ask any more delight, I swim in it as in a sea.

There is something in staying close to men and women and looking on them, and in the contact and odor of them, that please the soul well,
All things please the soul, but these please the soul well.

I would like to express my gratitude and love for my parents, Ann and Bev Wright, who furnished unconditional love, support and encouragement throughout. I profess appreciation and admiration for Prof. Glynis Breakwell for her mentorship, stimulating discussion and strategic planning. Thanks are due to all respondents and to members of the department of psychology, particularly Carol Harris-Lees, Catherine Mills and Nigel Woodger for their assistance. The banter of fellow PhD students about work-related issues was very welcome and their frivolous company was even more valued especially that of Lada Timotijevic, Gerda Speller and Julie Barnett.

Friends encouraged ‘baigneur dans le bonheur’ and laughter when it was most needed. Amongst these people, Cathy Godfrey and Kathy Mason in particular, sustained my creative well-being whilst Mary Ryan and Ann Cook equilibrated my whole self. Finally, eternal thanks to Patrick with whom to ‘plonger dans l’amour’ makes both my heart and soul sing.
| CONTENT |
|------------------|------------------|
| **Chapter one:** | **Literature review and outline of theoretical objectives** |
| 1:1 | An exposition of Moscovici (1961) |
| 1:2 | The range of disciplines that informed Moscovici (1961) |
| 1:3 | Figurative, iconic and imagery components |
| 1:4 | The relationship of social psychology with other forms of psychology, particularly developmental psychology |
| 1:5 | Criticism and response |
| 1:5:1 | Social construction and transformation |
| 1:5:2 | Issues of definition |
| 1:5:3 | Individualism and cognitive aspects |
| 1:5:4 | The issue of power |
| 1:6 | Processes of social representation: anchoring and objectification |
| 1:7 | Individuation |
| 1:8 | Empirical issues |
| **Chapter two:** | **Conformation and Social Representation** |
| 2:1 | Two approaches: structural and dimensional |
| 2:2 | Structural approach to the study of social representations |
| 2:3 | Dimensional approach to the study of social representations |
| 2:4 | Means of analysing conformation |
| 2:5 | Summary and rationale for conformation |
| **Chapter three:** | **Context of the research: the case of the UK National Lottery** |
| 3:1 | History of national lotteries in the USA and the UK |
| 3:2 | The establishment of the UK National Lottery in 1994 |
| 3:3 | Information about Camelot, the company operating the National Lottery |
| 3:4 | Operational aspects of the national lottery |
| 3:5 | ‘Instants’ or national lottery scratchcards |
| 3:6 | Summary |
| **Chapter four:** | **Study One: An exploratory study of opinions about the UK National Lottery (NL) using focus groups** |
| 4:1 | Abstract |
| 4:2 | Introduction |
| 4:3 | Aim |
| 4:4 | Method |
| 4:5 | Results |
| 4:6 | Discussion and conclusions |
Establishing 'conformation' in the representation of the national lottery using multi-dimensional scaling (MDS) and factor analysis (FA)

Exploratory factor analysis to confirm dimensions within lottery social representation conformation

Identification of sub-groups within the sample on the basis of position relative to the conformation of the lottery representation using MDS and cluster analysis

Facets of the representation accessed by cluster A and cluster B using Discriminant Function Analysis (DFA)

Discriminating factors between membership of cluster A and cluster B

Identity issues

Global identity principles

Lottery-specific identity principles

Relationship between identity principles and conformation

Discussion

Chapter eight: Overall discussion

Description of terms and summary of empirical studies

Context of the research

Discussion of results from the empirical studies

Socio-cultural values and the political context

Methodological issues

Multi-levels of analysis

Conformation: multi-dimensional or uni-dimensional?

Role of the unconscious

Relationship between action, individual position and use of the social representation

Issues of identity

Conclusion
<table>
<thead>
<tr>
<th>TABLES</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1: Qualities of three forms of communication: diffusion,</td>
<td>4</td>
</tr>
<tr>
<td>propagation and propaganda</td>
<td></td>
</tr>
<tr>
<td>Table 2: Attributes of collective and social representations</td>
<td>7</td>
</tr>
<tr>
<td>Table 3: Summary of issues, details of critic and criticism,</td>
<td>15</td>
</tr>
<tr>
<td>counter-response by Moscovici and empirical implications</td>
<td></td>
</tr>
<tr>
<td>Table 4: Summary of attributes associated with two different</td>
<td>35</td>
</tr>
<tr>
<td>approaches to structure within literature on social representations</td>
<td></td>
</tr>
<tr>
<td>Table 5: Attributes of the central system and peripheral system</td>
<td>36</td>
</tr>
<tr>
<td>according to Abric (1994)</td>
<td></td>
</tr>
<tr>
<td>Table 6: Percentage contribution from sales including prizes,</td>
<td>58</td>
</tr>
<tr>
<td>contribution to good causes, retailers, the government and Camelot</td>
<td></td>
</tr>
<tr>
<td>Table 7: Source and number of participants in each of four focus</td>
<td>64</td>
</tr>
<tr>
<td>groups</td>
<td></td>
</tr>
<tr>
<td>Table 8: Frequency and examples of sub-category within each of</td>
<td>66</td>
</tr>
<tr>
<td>fourteen major themes</td>
<td></td>
</tr>
<tr>
<td>Table 9: Period of data collection for articles from each of the</td>
<td>79</td>
</tr>
<tr>
<td>three papers and the event and time rationale</td>
<td></td>
</tr>
<tr>
<td>Table 10: Distribution of negative and positive items across four</td>
<td>122</td>
</tr>
<tr>
<td>categories of lottery participation for each of four identity</td>
<td></td>
</tr>
<tr>
<td>principles</td>
<td></td>
</tr>
<tr>
<td>Table 11: Details of distribution centres including numbers of</td>
<td>126</td>
</tr>
<tr>
<td>questionnaires and response rates</td>
<td></td>
</tr>
<tr>
<td>Table 12: Frequency, percentage and ranked reasons for day dreaming</td>
<td>130</td>
</tr>
<tr>
<td>Table 13: Factor loading, communality and percentage of variance for</td>
<td>135</td>
</tr>
<tr>
<td>principal components factors extraction and direct oblimin rotation</td>
<td></td>
</tr>
<tr>
<td>for 249 cases; four factors extracted</td>
<td></td>
</tr>
<tr>
<td>Table 14: Reliability of four factor scales derived from factor</td>
<td>136</td>
</tr>
<tr>
<td>analysis (FA) of lottery representation items (excluding P4ST1) for</td>
<td></td>
</tr>
<tr>
<td>all cases</td>
<td></td>
</tr>
<tr>
<td>Table 15: Results of Discriminant Function Analysis (DFA) between</td>
<td>139</td>
</tr>
<tr>
<td>lottery representation dimensions on the basis of cluster group</td>
<td></td>
</tr>
<tr>
<td>membership</td>
<td></td>
</tr>
<tr>
<td>Table 16: Factor loading, communality and percentage of variance for</td>
<td>142</td>
</tr>
<tr>
<td>principal components factor extraction and direct oblimin rotation:</td>
<td></td>
</tr>
<tr>
<td>global identity</td>
<td></td>
</tr>
</tbody>
</table>
TABLES (continued)

Table 17: Reliability of four factor scales derived from FA of global identity statements (excluding G04F and G10S) 142

Table 18: Factor loading, communality and percentage of variance for principal components factor extraction and direct oblimin rotation: lottery-specific identity 143

Table 19: Reliability of four factor scales derived from FA of lottery-specific identity statements (excluding L06DL and L03FL) 144

Table 20: Summary of the four empirical studies 156

FIGURES

Figure 1: Visual similarity between Albert Einstein (1879-1955) and Serge Moscovici 10

Figure 2: Key for the elements derived from the analysis of three sources of media: size of element was indicative of amount of coverage in the media 82

Figure 3: Exploration of relationship between elements within the social representation of the UK national lottery derived from analysis of media articles: Active phase I 83

Figure 4: Exploration of relationship between elements within the social representation of the UK national lottery derived from analysis of media articles: Active phase II 84

Figure 5: Exploration of relationship between elements within the social representation of the UK national lottery derived from analysis of media articles: Active phase III 85

Figure 7: The location of the West Oxfordshire region 124

Figure 8: The location of the seven adult education centres within the West Oxfordshire region used in this study 125

Figure 9: Three-dimensional multi-dimensional scaling (MDS) solution for all cases across lottery representation items (excluding P4ST1) 132

Figure 10: Rotated three-dimensional multi-dimensional scaling (MDS) solution for all cases across lottery representation items (excluding P4ST1) 133

Figure 11: Significant correlation scores between social value conformation dimension, general self-esteem and lottery-specific self-esteem by cluster group 146
APPENDICES

Appendix A: Protocol for study one: exploration of opinions about the UK National Lottery

Appendix B: Appointment protocol for study three: arranging interviews

Appendix C: Interview schedule used in study three

Appendix D: Questionnaire used in study three

Appendix E: Instructions for establishing inter-rater reliability in study three

Appendix F: Description of amendments for development of questionnaire used in study four

Appendix G: Covering letter for questionnaire used in study four

Appendix H: Copy of questionnaire used in study four

Appendix I: Categorisation for open ended questions (Q10 and Q12)
CHAPTER ONE

Literature review and outline of theoretical objectives

This chapter provides a critical review of the theory of social representations (TSR) through an exposition of the theory of social representations according to its originator, Serge Moscovici. An overview of TSR was developed based upon a review of theoretical antecedents, attributes and processes of social representation, with consideration of criticism (e.g., Potter and Litton, 1985a; Jahoda, 1988) of the theory of social representations. The substantive content of this criticism was considered in light of its effect upon developing an understanding of the processes of social representation, individuation and conformation. The processes of social representation and individuation were addressed in this chapter whilst conformation was discussed in chapter two. Empirical issues were raised within each section with both theoretical and empirical implications for the present study summarised at the end of this chapter.

In order to develop a position relative to existing literature about the theory of social representations (TSR) it was necessary to describe in some detail what constituted TSR. It should be noted that empirical research on social representations has been conducted principally by advocates or critics of TSR, rather than by the acknowledged originator of TSR, Serge Moscovici. In order to address this issue, emphasis has been placed upon Moscovici's (1961) "seminal" (Jahoda, 1988) work on psychoanalysis published in French. Despite a paucity of research on TSR by Moscovici since 1961, there has been substantial and widely-available, theoretical development and counter-criticism (e.g., Moscovici, 1984a, 1984b, 1985, 1988, 1990a, 1990b, 1993, 1996), published in English.

It is necessary to consider in some detail the original Moscovici (1961) study since to rely upon subsequent publications by Moscovici in English may be to constrain both theoretical criticism (e.g., Potter and Litton, 1985a) and empirical research (e.g., Mavridi, 1996). However, consideration may be given to factors other than language that have also influenced the development of TSR. Four factors were proposed: the range of disciplines that informed the original study (Moscovici), the relationship of social psychology with other forms of psychology, particularly developmental psychology; the way in which different approaches within social psychology influenced criticism and response to this
criticism and finally, the constituent elements of TSR itself. In addition to covering these four aspects, a description of Moscovici’s 1961 study was included in order to contextualise the forthcoming review.

1:1 An exposition of Moscovici (1961)

Moscovici (1961) emphasised the process of transformation of scientific ideas, in particular the way in which opinions about psychoanalysis developed in France in the 1950’s. In order to increase understanding of the theoretical and methodological development of TSR, further details of this research are provided with the inclusion of subsequent amendments, elaborations or contradictions in the theory where appropriate.

The original research upon which the theory of social representations was based consisted of two distinct parts. The first part aimed to establish how and what, people understood about psychoanalysis. Two thousand, two hundred and sixty five subjects were sampled during the first study. The second study was an investigation of sources of information and influence about psychoanalysis, that involved content analysis of three sources of media articles, published between January 1952 and March 1953, a period of fifteen months.

In the first study, six categories of people were identified on the basis of their existing occupational status that at the time of the research was equated with membership of a particular social class. For example, ‘l’artisan’ group consisted of skilled makers, e.g., potters or weavers, industrialists or their wives. The categorisation of women on the basis of their husbands rather than their own occupation can be seen as a function of the time at which this research was conducted, i.e., the 1950’s and would be less likely to occur in contemporary research. The other groups consisted of a ‘liberal’ population that included academics and medics; a student group; schoolchildren and more problematical, an ill-defined ‘population représentative’. This fifth sample group was simply described as ‘typical of a population that you would find anywhere in Paris’ (Moscovici, 1961). A sixth category was similarly vague in that it consisted of ‘others’ with professional or technical qualifications, who did not fit into any of the previous five categories. As such category membership in the Moscovici (1961) study was based upon what would be described as nominal rather than reflexive (Wagner, 1994b) group membership.
The first study had three objectives. Firstly, to establish a universe of opinions and the dimensions of this universe in relation to the topic of psychoanalysis. For this, each participant was asked a series of questions about psychoanalysis. For example, 'what does psychoanalysis mean to you?'; 'what does a psychoanalyst do?' or, 'what analytic techniques are used in therapy?'. Subsequently, thematic content analysis of responses was conducted. The second objective was to find out about new global areas of knowledge arising from psychoanalysis and thirdly, signification and structuration of opinions on psychoanalysis was assessed. However, in order to address the third objective, Moscovici estimated as opposed to measured, the degree of knowledge each of the six groups had about psychoanalysis. This estimation it could be argued was influenced by pre-conceived ideas held by Moscovici about the interests and expectations of members of different social classes.

Moscovici (1961) was interested in the connection between people's ideas about psychoanalysis at the time of data collection in the 1950's and stages in the development of the theory of psychoanalysis since the beginning of the twentieth century. Without empirical evidence, he identified three stages in the development of psychoanalysis that corresponded to three historical periods: the first, prior to the first world war, the second, between the first and second world wars and finally, the period between world war two until the present, at that time, the early 1950's. He discussed the findings of the first study in relation to the development of the theory of psychoanalysis during these three periods. For example, he traced the way in which the Freudian concept of 'libido' had changed and what it meant to participants.

In the second (and major) part of his work, Moscovici (1961) conducted an analysis of three sources of written information: general newspapers (national and regional, i.e., Parisian) and literature published by the Catholic church and the Communist party respectively. According to Moscovici (1961), these three sources corresponded to different forms of communication, namely, diffusion, propagation and propaganda. Table 1. attempts to illustrate how the three forms of communication differed. Qualities were derived principally from Moscovici (1961) and subsequent publications where applicable (e.g., Moscovici, 1984b, 1988, 1996).
### Table 1: Qualities of three forms of communication: diffusion, propagation and propaganda

<table>
<thead>
<tr>
<th>QUALITY</th>
<th>DIFFUSION</th>
<th>PROPAGATION</th>
<th>PROPAGANDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means of influence</td>
<td>Pervasive</td>
<td>Persuasive</td>
<td>Imperative</td>
</tr>
<tr>
<td>Type of social knowledge</td>
<td>Opinions</td>
<td>Attitudes</td>
<td>Stereotypes</td>
</tr>
<tr>
<td>Degree of coherence</td>
<td>Less coherent, not 'random'</td>
<td>Ordered arrangement</td>
<td>Coherent</td>
</tr>
<tr>
<td></td>
<td>(Moscovici, 1996)</td>
<td>(Moscovici, 1988)</td>
<td></td>
</tr>
<tr>
<td>Type and example of source</td>
<td>Newspapers, i.e., national or regional</td>
<td>Interest group publications, e.g., Catholic Church</td>
<td>Ideological publications, e.g., Communist press</td>
</tr>
<tr>
<td>Degree of variety of source and response</td>
<td>Different source and response permitted</td>
<td>Ordered source and response expected</td>
<td></td>
</tr>
<tr>
<td>Degree of volition</td>
<td>Individual volition Negotiable (Moscovici, 1984b)</td>
<td>Some volition</td>
<td>Authoritative</td>
</tr>
<tr>
<td>Quality of recipient Modification</td>
<td>Active recipients Dynamic ‘Versions’ of truths</td>
<td>Passive recipients Modifiable ‘Modified’ truths</td>
<td>Passive recipients Intransigent Absolute truths (even if obviously different from “truth”)</td>
</tr>
<tr>
<td>Relationship to “truth”</td>
<td>Evaluative</td>
<td>Regulatory</td>
<td>Prescriptive</td>
</tr>
<tr>
<td>Function</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Diffusion was characterised by multiple sources of reference, e.g., professional, religious, political or cultural, that provided qualitatively different information. This form of communication resulted in social representations with an idiosyncratic construction that constantly evolved (Moscovici, 1961). Because of the multiple sources of reference and the idiosyncratic nature of social representations resulting from the process of diffusion, this process was envisaged to be dynamic, to facilitate mediation within existing social institutions and be responsive to an audience with diverse social and cultural interests. Imperative action was never incited through diffuse forms of communication (Moscovici, 1961). In this sense, diffusion could be seen to be a pervasive rather than persuasive form of communication.
Development of propagation and propaganda was more directed, information being supplied by particular groups of people through established publications. As table 1 illustrated, the difference between all three forms of communication, but between propaganda and propagation in particular, was one of degree. Propaganda invoked a continuous reiteration of an authoritative position, whilst propagation relied on persuasion and the building up of an elaborated, coherent position on a topic, for example, psychoanalysis. The result being that although particular perspectives were adopted within propagated forms of literature, these perspectives were not always equally salient within one publication (Moscovici, 1961).

The three forms of communication: diffusion, propagation and propaganda corresponded to opinions, attitudes and stereotypes respectively (Moscovici, 1961). Opinions were an evaluative assertion on a controversial issue or question. Rather like social representations, they were unstable, plastic and contradictory. Attitudes were not a heterogeneous collection of opinions but an ordered arrangement of opinions and responses. As such, attitudes had a regulatory function (Moscovici, 1961). Stereotypes were more rigid or inflexible than either opinions or attitudes and prescriptive of actions. In conclusion, Moscovici (1961) stated:

“Ainsi, on pourrait suivre, dans le temps, dès l’apparition d’un nouvel objet de représentation, son extension dans une communauté dont les contours seraient étroitement délimités. En utilisant des techniques adéquates, la structuration des opinions et sa mise en rapport avec la conduite pourrait faciliter un examen des rôles respectifs des champs de représentation et des attitudes dans la genèse des comportements” (italics in original, Moscovici, 1961, p.638).

In other words, Moscovici (1961) suggested that: “one could follow, across time, the appearance of a novel object of representation and its extension in a community whose boundaries were tightly delimited. With the use of appropriate techniques, the structure of opinions and their relationship with behaviour can be used to facilitate an examination of the respective roles of both fields of representation and of attitudes in the genesis of behaviours” (present author’s translation, italics in original, Moscovici, 1961, p.638).
Even though it has been more than thirty-five years since the publication of Moscovici’s study on psychoanalysis, research on the genesis of social representations has been notably absent (Semin, 1985; Fraser, 1994). Accordingly, this research aimed to monitor, using a variety of ‘appropriate’ techniques, the genesis and development of opinion structures associated with a novel social entity over time and establish the relationship of these representations with actual behaviour. Theoretical issues concerning the process of social representation and individuation were reviewed in order to inform empirical approaches to the study of social representations. In the next section, a critical review was provided of the range of disciplines and modifications that have informed the development of TSR.

The range of disciplines that informed Moscovici (1961)

The original Moscovici (1961) study was informed by a wide range of academic disciplines including anthropology, ethnography, sociology, politics, philosophy and psychology. However, subsequent literature (e.g., Moscovici, 1984a, 1988) tended toward comparison with disciplines within psychology rather than other social sciences although historical analyses of the development of TSR (e.g., Farr, 1990, 1994, 1996a; Markova, 1996) have been notable exceptions. Within psychology, a variety of different approaches have informed the development of TSR. These have included evolutionary psychology (e.g., Lahlou, 1996), psychodynamic approaches (e.g., Joffe, 1996b) and developmental psychology (e.g., Duveen and Lloyd, 1986, 1993; Emle, Ohana and Dickinson, 1990; Moscovici, 1990a; Duveen and De Rosa, 1992). However, further theoretical particularisation has been encouraged by comment upon TSR from different approaches within social psychology, i.e., discourse analysis (e.g., Potter and Litton, 1985a, 1985b; McKinlay and Potter, 1987; Potter and Wetherell, 1987; Billig, 1993; McKinlay, Potter and Wetherell, 1993), social constructivism (e.g., Harré, 1984; Flick, 1992, 1994) and social cognition (Hewstone, Jaspars and Lalljee, 1982; Hewstone, 1985; Ibáñez, 1992, 1994). Consequently, despite an initial multi-disciplinary emphasis (Moscovici, 1961), TSR has developed largely in relation to competing approaches within social psychology, with limited attention to other disciplines within psychology or the social sciences more generally.

Durkheim’s sociological notion of collective representations constituted an important antecedent of TSR. Social representations were differentiated from collective
representations that had in turn been defined in opposition to individual representations (Moscovici, 1988). The concept of social representation owed a great deal to collective representation and table 2. attempts to highlight the complementarity and differences between these two types of representations.

Table 2: Attributes of collective and social representations

<table>
<thead>
<tr>
<th>Type</th>
<th>Collective representations</th>
<th>Social representations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disciplines</td>
<td>Sociological and anthropological</td>
<td>Sociological and psychological</td>
</tr>
<tr>
<td>Role of tradition</td>
<td>Collective memory-communal over generations therefore coercive weight of tradition</td>
<td>Collective memory-transformed by participation so emphasis upon innovation (change) not tradition</td>
</tr>
<tr>
<td>Type of society</td>
<td>Primitive</td>
<td>Modern</td>
</tr>
<tr>
<td>concept applicable to</td>
<td>Static</td>
<td>Changing</td>
</tr>
<tr>
<td>Degree of homogeneity</td>
<td>Aggregate: cohesive society</td>
<td>Open</td>
</tr>
<tr>
<td></td>
<td>Shared homogeneously by members of community</td>
<td>Differentiated: plurality of representations possible hence diversity within a group (Moscovici, 1988 p.219)</td>
</tr>
<tr>
<td>Relationship with</td>
<td>Irrational</td>
<td>Neither rational or irrational</td>
</tr>
<tr>
<td>'rational'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>Invariant (Moscovici, 1961) Unstable (Moscovici, 1988)</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Degree of modification</td>
<td>Only under exceptional circumstances</td>
<td>Continual modification</td>
</tr>
<tr>
<td>Model of influence</td>
<td>Deterministic</td>
<td>Prescriptive (Moscovici, 1994)</td>
</tr>
<tr>
<td></td>
<td>Naive participant</td>
<td>Active participant</td>
</tr>
<tr>
<td>Direction of influence</td>
<td>Top-down</td>
<td>Bottom-up</td>
</tr>
<tr>
<td>Role of cognition</td>
<td>Non-cognitive intellectual form e.g., an idea</td>
<td>More cognitive</td>
</tr>
<tr>
<td>Means of production</td>
<td>Embedded in language, institutions and customs</td>
<td>Inter-individual and societal communication</td>
</tr>
<tr>
<td>Form</td>
<td>Social thought (Moscovici, 1984a)</td>
<td>Figurative and iconic elements</td>
</tr>
<tr>
<td>Function</td>
<td>Means of grouping and identifying relationship between ways of thinking and feeling in order to explain certain social phenomena (Moscovici, 1984a)</td>
<td>Making the unfamiliar familiar Facilitating communication and action Secondary functions: group cohesion and coercion (Moscovici, 1984a)</td>
</tr>
</tbody>
</table>

It has been argued that substituting the term social for collective representation was “more than a mere verbal shuffle” (Moscovici, 1984a, p.949). Both types of representations were
related to notions of collective memory in that they acknowledged a role of tradition in the form of, for example, beliefs and shared knowledge. However, social representations modernised collective representations, since the later were developed for use predominantly within ‘traditional’ societies (Moscovici, 1984a). The stronger role for cognition envisaged with social representations indicated a greater emphasis upon psychological rather than sociological or anthropological concepts despite the acknowledged debt to these disciplines made by Moscovici (1961). Furthermore, with social representations; “there is no implication of any clear-cut division between the outside world and the inner world of the individual (or group), subject and object are not regarded as functionally separate” (Moscovici, 1968, p.xi).

Importantly, social representations were characterised by their dynamism and the active role of individuals in their genesis and transformation. Representation was therefore a dynamic, cognitive process that resulted in a “network of interacting concepts and images whose content evolve continuously over time and space” (Moscovici, 1988, p.220). Social representations were considered prescriptive in that they defined ‘expectations’ rather than acted as determinants (Moscovici, 1994). By contrast, collective representations described “an aggregating and constraining force on the individual swept in it. It left the implication that representations conveyed by language and nourished by tradition had a coercive power on the members of a given society” (Moscovici, 1984a, p.949). In addition, whereas collective representations were defined in opposition to ‘individual’ representations, with the former being less rational, social representations were neither irrational nor rational.

Some of these differences stemmed from the way in which Moscovici conceptualised social knowledge in a modern society as something other than myths or ‘common sense’. Whereas collective representations were informed by traditional beliefs and practices, Moscovici suggested that scientific (or political) theories also provided “modes of personal and social belief” (Moscovici, 1984a, p.953) for modern society. Thus, the content of everyday thoughts, conversations, popular books, the mass media and political discourse was informed by scientific theories and this influenced how people related to each other and to the world in general (Moscovici, 1984a). Essentially, social representations equated to a modus operandi for the acquisition and transformation of social knowledge, an important source of which were scientific theories and ideas.
Figurative, iconic and imagery components

An association has been made between publications by Moscovici and eminent theories and theoreticians, notably the theory of relativity and the physicist Einstein. For example, when faced with criticism about an apparent lack of clarity, definition or uniqueness about TSR, Moscovici stated:

"I invoked Einstein's contention that everything in research, is a matter of tenacity, if not genius itself" (Moscovici, 1996, p.6).

Moscovici can be credited with tenacity, if not genius and this author suggests that by 'invoking Einstein', Moscovici attempted to give legitimacy and credibility to the theory of social representations and by association, to the originator of such a theory, i.e., himself. In fact, the theory of social representations has been inextricably linked to a particular social scientist, i.e., Serge Moscovici, since the publication of his "seminal" (Jahoda, 1988) work on social representations in 1961. Given the quantity and diversity of theoretical and empirical research published on TSR in the last thirty-five years that consistently (and rightly) acknowledged Moscovici as the originator of TSR and the observation that invoking the formulae E=mc^2 leads one to imagine Einstein's face (Moscovici, 1994), one would suspect that Moscovici and social representations have become similarly linked. To this end, figure 1. demonstrates how in addition to literary reference, the two theorists share a remarkable visual similarity.
Beyond illustrating visual similarity, figure 1 raises an important theoretical component of TSR, that of the role of imagery in social representation. Imagery was important for both the figurative content (Moscovici, 1985) and the process dimensions of social representation. As content, image referred to the encapsulation of meaning in a particular visual form, e.g., "on parchment or stone" (Moscovici, 1988, p.214), or, "objectified in institutions, rituals and works of art" (Moscovici, 1990a, p.166). An empirical implication being that social representations could be investigated using analysis of pictorial as well as verbal sources (e.g., Beloff, 1994; Finn, 1996).

In terms of process, imagery was related to the process of objectification whereby social representation was accompanied by visualisation. However, research on such "image-based thinking, that is, imagination, seemed above all to be one of the dominant modes of social thinking, something that had been relatively neglected so far" (Moscovici, 1984a, p.943).
Those who have advocated study of the process of social representation at an intra-individual level (in addition to an inter-individual and societal level, e.g., Doise, 1984) have tended to consider the intra-individual level as essentially cognitive rather than unconscious and concentrated upon the discursive rather than imagery components of this process. Nevertheless, more recently, there has been acknowledgement of an unconscious level in the process of social representation and the need to include methods that access this level of awareness (Markova, 1996). For example, according to Jovchelovitch (1995), “The interplay between the unconscious dimensions of representations and the structuring of social representations as such, allows us to understand the range of phenomena at work in the symbolic construction of reality” (ibid., p.92).

Day dreams could be considered as intra-psychic or unconscious processes and as such could be integral to the content or process dimension of social representations (Markova, 1996). Given that “when [the] content [of day dream] reports are obtained, they include a good deal of visual imagery, scenes from the past or anticipated future events or fanciful possibilities as well as some auditory imagery, remembered conversations, etc.” (Singer and Antrobus, 1972, p.176) it seemed that the iconic or abstract content of day dreams might provide a means of investigating the image, metaphoric and symbolic components of representations (Wagner, Elejabarrieta and Lahnsteiner, 1995). Explicitly, day dreams may provide a means of investigating the role of image-based thinking in the process of objectification.

To this point, a brief exposition of TSR has been provided based upon Moscovici’s 1961 study of psychoanalysis. Three forms of communication were identified: diffusion, propagation and propaganda, that were associated with different types of social knowledge: opinions, attitudes and stereotypes. It has been suggested that TSR was especially suitable for a study of opinions and hence, sources of diffusion, i.e., an analysis of media articles would seem particularly appropriate. Despite extensive acknowledgement (Moscovici, 1961) to the influence of other disciplines on the development of TSR, it was noted that of these sources, sociology, in the form of Durkheim’s notion of collective representations, developmental psychology based upon Piaget and theories of the unconscious, namely psychoanalysis, had been particularly influential. However, despite collaboration between developmental psychologists and advocates of TSR (e.g., Duveen and De Rosa, 1992), there have been few studies that
have considered the influence of aspects of psychoanalysis, e.g., the unconscious, on processes associated with social representation.

When social representations were compared with collective representations it was evident, amongst other attributes, that the former were more dynamic and did not require a distinction to be made between the individual and society, nor the rational and irrational. Social representation was characterised by resulting from inter-individual and societal communication (e.g., between media sources and the individual). It was noted that primary functions of social representations included making the unfamiliar familiar and facilitating communication and action. On the basis of the importance of an image or figurative component to social representations, it was suggested that this study should consider investigating day dreaming. Explicitly, a study of day dreaming could achieve two theoretical objectives: investigate the existence and importance of a figurative component to social representation and consider the role played by a non-conscious form of intra-individual communication.

1:4 The relationship of social psychology with other forms of psychology, particularly developmental psychology

Aspects of developmental psychology informed the evolution of the theory of social representations, especially in terms of the process of social representation, an emphasis upon change and the adoption of observation as a method of enquiry. Moscovici (1990a) has called for “extending the conversation” (ibid., p.164) between social psychology and developmental psychology, a relationship that was inaugurated in early research (Moscovici, 1961) when TSR was informed by Piagetian theories about the way in which children acquired knowledge (e.g., Piaget, 1962; Piaget and Inhelder, 1966).

Cognitive development for Piaget involved the complementary processes of accommodation and assimilation in addition to evaluation. During accommodation, new information was integrated without modification of existing ways of thinking whilst assimilation involved modification of existing cognitive structures. In brief, these processes have been incorporated by Moscovici (1961) in the process of anchoring whereby something novel became integrated into existing ways of thinking. Further details of these processes will be provided later in this review. Whereas accommodation and
assimilation were originally proposed as a means of accounting for the acquisition of knowledge by children about physical objects, Moscovici (1961) and subsequent advocates of both TSR and developmental psychology (e.g., Duveen and De Rosa, 1992; Duveen and Lloyd, 1993) have been concerned with the acquisition of social knowledge by adults and children respectively. This has raised other issues including the role of change and the relationship between recipient and participant in the development of social knowledge.

As noted earlier (table 2.), TSR has been characterised by an emphasis upon dynamism in the acquisition, modification and transformation of social knowledge. Likewise, from a Piagetian perspective, the process of acquisition and transformation of social knowledge was dynamic. Whereas for Piaget the child was a relatively passive recipient of information who gradually developed the cognitive capacity to comprehend more complex information, largely as a function of age and for whom ‘error’ in cognition represented an inability to comprehend accurately new information; for Moscovici (1961), knowledge acquisition was neither passive nor a function of age and ‘error’ was therefore, re-conceptualised as a social process that served a social function.

Whilst the Piagetian concept of ‘intellectual structure’ was integrated within TSR, Freudian research furnished TSR with the concept of interiorization (Moscovici, 1984a). Essentially, Moscovici (1961) elaborated upon an explicit social dimension to Freud’s notion of representation, whereby children explained unfamiliar activities and experiences in terms of existing notions that were shared by members of their family. The resultant ‘collective ideation’, could for example act as a source of knowledge about sex for children. Thus, aspects of both a physical and social ‘reality’ were incorporated into a child’s or adult’s interior psychic reality (Moscovici, 1990a). The resulting ‘representations’ were both internal and external: internal to the extent that they were “enmeshed in the unfolding of human drives” (Moscovici, 1984a, p.945) and external in that they were “part of a common culture” (ibid., p.945).

Therefore, TSR combined individual, cognitive, conscious processing of predominantly sensori-motor information from Piaget, with unconscious processing of largely socially-derived information from Freud. Of course, this simplifies the antecedents of TSR and it would not have been possible to complete a review of TSR without considering the
relationship of social representations with the sociological concept of ‘collective representations’ developed by Durkheim (1898).

1:5 Criticism and response

Given the characteristics of social representations outlined in table 2, of the three forms of communication described it was diffusion and consequently opinions, rather than attitudes or stereotypes, that constituted the form of social knowledge most proximal to Moscovici’s conceptualisation of social representations. In this sense, one wonders whether TSR was an attempt to understand the processes by which a particular form of social knowledge, namely, opinions, developed in relation to scientific sources of knowledge. This would seem to suggest that one should seek to recognise patterns within a dynamic system of opinions, characterised by apparent diversity. Therefore, TSR seems to be an attempt to identify and understand the relationship between continually modified and transformed elements of social knowledge. However, the emphasis upon transformation rather than construction has been regarded by social constructionists, e.g., Ibáñez (1994) as inappropriate. But, understanding the transformation of social knowledge was exactly what Moscovici (1984a) intended, therefore the present research was concerned with transformation in addition to genesis of social representation.

Dynamism has been an important characteristic of TSR, for example, in the differentiation between collective and social representations or the flexibility of opinions. At a meta-level, dynamism characterised the development of the theory itself in that Moscovici resisted providing ‘adequate’ or explicit definitions of either the process or phenomenon of a social representation, preferring to let the theory evolve in relation to empirical studies. The resultant lack of definition has been one of several aspects of TSR that criticism has been levelled at. These aspects of TSR were illustrated in table 3, in which details were provided of the source of criticism (proponent and their disciplinary perspective), a brief description of the response to these criticisms (where available) by Moscovici and an illustration of empirical implications of these criticisms.
Table 3: Summary of issues, details of critic and criticism, counter-response by Moscovici and empirical implications

<table>
<thead>
<tr>
<th>Details of issue</th>
<th>Source of criticism</th>
<th>Form of criticism</th>
<th>Response by Moscovici unless stated otherwise</th>
<th>Empirical implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR a theory or approach</td>
<td>(Wagner, 1996); Social cognition (Flick, 1992)</td>
<td>‘Approach’ more appropriate than ‘theory’</td>
<td>Theory still under development-positivist criteria inappropriate</td>
<td>TSR as means of conceptualising and conducting research</td>
</tr>
<tr>
<td>Construction versus transformation</td>
<td>Social constructivist (Ibáñez, 1994)</td>
<td>Not enough emphasis upon social construction of knowledge</td>
<td>Transformation not purely social construction (1984a)</td>
<td>Questionnaire inappropriate (Ibáñez, 1994)</td>
</tr>
<tr>
<td>Issues of consensus and definition of social</td>
<td>Discourse analysts (Potter and Litton, 1985a)</td>
<td>Lack of criteria for establishment of consensus; related to definition of ‘social’</td>
<td>Flexible definition of consensus (1985) ‘Social’ as conceptual rather than empirical Principal function (1984b) is unique characteristic (Jodelet, 1996) “Every representation is rooted in a science or another representation” (1984a, p.962).</td>
<td>Research and analysis at various levels (Doise, Clemence and Lorenzi-Cioldi, 1993) Target entity-genesis of novel social entity</td>
</tr>
<tr>
<td>Novelty, i.e., making unfamiliar-familiar</td>
<td>Social constructivist (Ibáñez, 1992)</td>
<td>Non-restrictive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflexivity of TSR</td>
<td>Social constructivist (Ibáñez 1994)</td>
<td>How to identify a social representation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualistic</td>
<td>Social constructivist (Harre, 1984)</td>
<td>Excessive emphasis upon individual</td>
<td>TSR both individual and cultural (1961)</td>
<td></td>
</tr>
<tr>
<td>TSR as cognitivist despite emphasis upon communication</td>
<td>Discourse or rhetorical approach (e.g., Potter and Litton, 1985a; McKinlay and Potter, 1987; Potter and Wetherell, 1987; Billig, 1993)</td>
<td>TSR not very anti-cognitivist Alternative concepts e.g., ‘discursive productions’ (Ibáñez, 1994); ‘linguistic repertoires’ (Potter and Litton, 1985a)</td>
<td>Representation a dynamic, cognitive process (1968, 1988)</td>
<td>Include analysis of ‘societal’ level e.g., media analysis Emphasis upon processes of communication at different levels, i.e., inter-individual, societal and intra-individual (Doise, 1984)</td>
</tr>
<tr>
<td>Power</td>
<td>Political social psychology (Michael, 1989; Dittmar, 1992)</td>
<td>Concerned with class and noted that power was absent from TSR</td>
<td>Investigation of power not a primary aim of TSR (1990b)</td>
<td>Tendency toward use of middle-class populations (Michael, 1989) refuted (1990b)</td>
</tr>
</tbody>
</table>
Table 3. described nine issues raised by critics of TSR. One reason for summarising these issues was to show how critics have responded to TSR, in a manner consistent with their own rather than Moscovici’s, theoretical or research perspectives. Four issues were elaborated upon in the following section: the relationship between construction and transformation; issues of vagueness and definition; individualism and cognitive aspects of TSR and the issue of power. The aim was to illustrate how argument and counter-argument has developed with regard to TSR in recent years.

1:5:1 Social construction and transformation

When an object, person, event or more appropriately a ‘scientific’ idea or concept, e.g., psychoanalysis (Moscovici, 1961) was socially represented, a process of transformation occurred that resulted in modification of the original content such that it:

“Takes on moral or religious overtones, its concepts are complemented by images, its arguments become concrete in their orientation, its explanations are governed by the analogy principle, and so on. We are faced, in short, by a construct whose intellectual makeup is of an altogether different nature than the theory itself” (Moscovici, 1984a, p.952).

In order to operationalise TSR, McKinlay and Potter (1987) argued that the “fundamental distinction” (ibid., p.476) between a reified universe and a consensual universe (Moscovici, 1984b) needed to be addressed. Social constructivists have however argued that this differentiation into two types of universe was in itself objectionable (e.g., Harré, 1984) given that scientific knowledge was ‘constructed’ and not veridical in the sense that scientists would also use social representations (McKinlay and Potter, 1987). Nevertheless, Moscovici has persistently used a distinction between a reified universe that consisted of ‘facts’ that had existence independent of an individual’s interpretation and a consensual universe in which there were no subjective ‘truths’. Consequently, science and theories that originated in a scientific realm (e.g., psychoanalysis) were situated within a reified universe. And, given that TSR described the process by which information (knowledge) was transformed in the consensual universe, Moscovici (1984a) argued that using models of thought from science would be inappropriate to understand this process.
In this manner, TSR could be more appropriately described as a theory of common sense rather than science.

1:5:2 Issues of definition

Critics (e.g., Potter and Litton, 1985a; McKinlay and Potter, 1987; Jahoda, 1988) have suggested that a lack of definition exists in TSR that has resulted in: vagueness; 'objectionable' ambiguity; "speculative cognitive psychology" (McKinlay and Potter, 1987, p.484) and encouraged the use of opportunistic methods (Ibáñez, 1992). It would seem as though ambiguity in TSR has been acknowledged even amongst the theories strongest proponent.

"The concept of social representation is not perfectly clear. It suffers from an all embracing and ill-defined character. It is most easily grasped in an intuitive way and takes on meaning only through actual usage" (Moscovici, 1984a, p.957).

A lack of restrictiveness of TSR, e.g., in terms of the principal function of social representations, i.e., to make the unfamiliar familiar (Moscovici, 1984b), has had an effect on the choice of topic for empirical studies (Ibáñez, 1992). Some advocates of TSR have argued that attention to novelty has been a unique contribution of TSR (e.g., Jodelet, 1996). It would seem that the importance of novelty cannot be underestimated especially since reaction to novelty has been characterised by the experience of "shock" or threat (e.g., Käes, 1984; Markova and Wilkie, 1987; Joffe, 1996a, 1996b). However, emphasising novelty to the exclusion of other criteria, e.g., the social implications of familiarisation or the effects of this process on social identity (Ibáñez, 1992) would seem unwise. Nevertheless, consistent with the type of social knowledge studied using TSR, Moscovici has remained unambiguous in his defence of the virtue of ambiguity (Moscovici, 1985, 1990a, 1990b) and even applauded the "epistemological strangeness" associated with TSR (Moscovici, 1996, p.11) even though other proponents (e.g., Doise, 1993) have disputed a lack of clarity in the theory.

"The theory of social representations is not vague. It basically is a general theory about a metasystem of social regulations intervening in the system of cognitive functioning" (Doise, 1993, p.157).
Potter and Litton (1985a) were concerned about the nature of the relationship between groups and social representations; establishing consensus, i.e., defining the level at which social representations were shared; how social representations operated in particular contexts of use and the role of language in social representation. Their criticisms were based upon a review of three studies: Di Giacomo (1980); Herzlich (1973) and Hewstone et al., (1982). They identified problems with all three studies but they had comparatively less contention with Herzlich (1973). This may have been because this study, of representations of health and illness according to a French population, was closest to Moscovici’s (1961) original work by virtue of being French and a study of social representations rather than other social psychological theories, e.g., attribution theory (Hewstone et al., 1982). It was noted that criticism by Potter and Litton (1985a) was restricted to a review of articles on social representations published in English. Of course, this may have been due to a limited familiarity on their part with literature on TSR published in French.

Potter and Litton (1985a) suggested that different contexts of use for social representations implied alternative levels of consensus. Given their agenda, of promoting ‘linguistic repertoires’ that were “recurrently used systems of terms for characterizing actions, events and other phenomena... constructed through a limited range of lexical items and particular stylistic and grammatical constructions, combined with specific metaphors and tropes” (Potter and Litton, 1985a, p.89), it was not surprising that they advocated that consensus should be established according to linguistic criteria, i.e., according to whether representations were ‘mentioned’, ‘used in theory’ or ‘used in practice’ (ibid., p.85).

“As far we are concerned, a linguistic repertoire is used when it is drawn upon to explain events. It is mentioned when it is recognized as an available explanation, but not used” (Potter and Litton, 1985b, p.100).

In reply, Moscovici (1985) opted for a flexible definition of consensus that was neither uniform nor diverse, being both ‘dynamic’ and ‘holistic’ (ibid., p.91/92) and independent of the way in which representations were talked about. Accordingly, he pointed out that although every representation may be translated into a discourse, every discourse was not a representation (Moscovici, 1985).
Nevertheless, linguistic repertoires remain an alternative (lexical) means of accounting for social processes (Potter and Litton, 1985a; McKinlay and Potter, 1987). However, it can be argued that the term linguistic representations could be used instead of linguistic repertoires in the sense that they were context and time dependent, i.e., a particular linguistic repertoire related to the “interpretative exigencies of the situation in hand” (Potter and Litton, 1985a, p.89). As ‘linguistic constructions’, they were descriptive, able to specify but not account for change in representations (Semin, 1985). Basically, opting for linguistic repertoires meant that Potter and Litton (1985a) did not have to decide whether social representations were linguistic or cognitive (images or perceptions), a distinction that others have also found problematic and which has also produced alternative concepts, e.g., discursive productions (Ibáñez, 1994). Despite an emphasis upon their recurrent use (and utility) there has been little explicit account of the function linguistic repertoires serve. Social representations that were not just linguistic phenomena (Hewstone, 1985, p.97) may be ill-defined but that seemed less important than the functional significance they were attributed with, i.e., accounting for how social knowledge about something unfamiliar developed and how this might influence other factors including the action of individuals.

1:5:3 Individualism and cognitive aspects

The cognitive aspect of social representation has been historically well-established. Social representations were distinctive, cognitive, classificatory systems that were “held by someone as well as a representation of something” (Moscovici, 1968, p.xiii). Pre-existing categories such as legal or medical models informed the pattern of social representations but they themselves were distinctive ways of thinking about an entity. The individual in social representation, e.g., as a participant in communication, could be considered an interface for the process of social representation. In this manner, ambiguity with respect to the level at which the processes of anchoring and objectification become operationalised, has led to the suggestion that these processes be “subsumed under a cognitive social psychology which employs the information processing metaphor” (Semin, 1985, p.93), would seem to be less relevant. Social representation was not simply a matter of processing information, it was a dynamic process of transformation that involved various levels of operation, including the societal, inter-individual and intra-individual (Doise, 1984).
The issue of power

It has also been suggested that TSR did not take sufficient account of the concept of power in the process of social representation (Michael, 1989). However, Moscovici (1990b) pointed out that power was not a determinant of sociability and identifying factors related to the reproduction of power was not the primary goal of TSR. On the basis of the research interest of Michael (1989), he suggested that TSR was a middle-class theory because of the sociodemographic profile of sample populations used in TSR research. In order to address this concern, the current research undertook to monitor the sociodemographic profile of respondents sampled.

A pre-occupation with issues of class has not only informed the type of criticism levelled at TSR (e.g., Michael, 1989) but has influenced the form of alternative representational concepts that have been proposed, e.g., dominant representations (Dittmar, 1992). However, it can be argued that these ‘dominant representations’ were informed by an over-emphasis upon group processes that were inappropriately attributed to TSR on the basis of a limited review of articles published by Moscovici in English (i.e., Moscovici, 1984b, 1988). Recently, the issue of power has been considered in relation to the concept of androgyny, an understanding of which required analysis of gender inequalities at a conceptual and political, in addition to the individual level (Lorenzi-Cioldi, 1996). Therefore, it would seem possible to include issues of power within studies of social representation without developing alternative terms.

To this point, a background to TSR has been presented based around the only empirical study on TSR by Moscovici (1961), with elaboration on the basis of his subsequent response to criticism and comment (e.g., Moscovici, 1984a, 1985, 1988, 1990b). It was noted that despite an acknowledged debt to different disciplines paid by Moscovici (1961), the development of TSR was informed mainly by comment from within social psychology. Notable exceptions included the integration of sociological notions, e.g., Durkheim and collective representations and Piagetian concepts from developmental psychology and Freudian psychoanalysis. Collaboration with developmental psychologists has continued (e.g., Duveen and Lloyd, 1986; Emler et al., 1990; Duveen and De Rosa, 1992) although collaboration between psychoanalysts and social psychologists working with TSR has been less evident. Joffe (1996a) has suggested that the integration of a psycho-dynamic
perspective with TSR would enable the process of social representation to be understood when the target of study was novel, e.g., AIDS.

The theory of social representations was formulated in the context of how and what French people thought about psychoanalysis and how this topic was presented in three forms of media communication available in the 1950's. Some detail was provided of Moscovici's (1961) study (table 1.) that illustrated the qualities associated with three different forms of communication: diffusion, propagation and propaganda. It was suggested that TSR permitted the study of social knowledge and opinions in particular since similar qualities were associated with the process of diffusion and attributes of social representations (table 2.).

The dynamic, almost incoherent nature of opinions and social representations that served to make that which was unfamiliar familiar (Moscovici, 1984b) was also evident at a meta-level, i.e., in terms of the development of the theory of social representations per se. Specifically, Moscovici's reluctance to categorically define TSR should be considered in light of the limited amount of empirical research he has conducted using TSR and the variety of disciplines within social psychology that have informed the subsequent development of TSR, for example, social constructivism, discourse analysis and social cognition. Hence, a view of TSR as ever-changing, vague and somewhat incoherent may exist, but as a function of external criticism rather than contradiction from within the theory itself. Furthermore, an ill-defined TSR could be regarded as a virtue since a degree of ambiguity was congruent with the characteristics of the process it described, i.e., it was dynamic, centred around communication at various levels including the unconscious and involved the acquisition and transformation of social knowledge by a non-expert population.

Of the three different types of communication described earlier, it was suggested that diffusion was the mode of communication associated with the development of opinions rather than attitudes or stereotypes. When social representations were compared with collective representations, particular qualities of social representations were evident that were subsequently associated with the process of diffusion, notable regarding representation as structured opinions (Moscovici, 1961). Therefore, it seemed reasonable
to consider opinions and particular sources of communication, i.e., the mass media as important for the present research.

Social representation involved the creation and transformation across time of a network of both images and concepts (Moscovici, 1988). It could be argued that the figurative aspect of social representations has sometimes been emphasised (e.g., Moscovici, 1984a) to such an extent that the phenomenon of social representations rather than the process of social representation has been the focus of study (Wagner, 1994a). In light of this issue, processes associated with social representation rather than attributes of social representations as phenomenon per se, were reviewed in more detail. The aim was to 'extend the conversation’ (Moscovici, 1990a) within social psychology with regard to the theory of social representations with especial consideration of the theory according to Moscovici.

1:6 Processes of social representation: anchoring and objectification

It has been suggested that the theory of social representations may provide a means of reconciling large scale social processes with fundamental psychological mechanisms (Fraser, 1994, p.4). In this sense, the Piagetian processes of accommodation and assimilation that were reviewed earlier, can be considered as exemplary fundamental psychological mechanisms. These processes have been explicit not only in TSR, in the form of anchoring, but also in theories of identity, e.g., identity process theory (Breakwell, 1986). As such the processes of social representation and individuation can be seen to have common ancestry in these psychological mechanisms. It should be noted that individuation described a micro-level process by which an individual modified or adapted their identity in accordance with the process of social representation. This relationship will be elaborated upon when individuation is considered in more detail later in this chapter.

The processes of anchoring and objectification were complementary. Anchoring (Moscovici, 1984b) was essentially the same as assimilation (Markova and Wilkie, 1987) in the sense that anchoring was an active process concerned with the modification of existing cognitive structures. It was a universal phenomenon, i.e., it was not culturally specific, that involved classification and naming of entities (Billig, 1993). To maintain an emphasis upon the social nature of the process, some have explicitly referred to 'social
anchoring' (Spini and Doise, 1997) that has been described as the process by which norms derived from the social structure guide everyday thinking. Irrespective of the term used, uncertainty was inherent in the anchoring process in the sense that it resulted from a form of 'misunderstanding'. Anchoring was responsible for generating sense from communication. When anchoring 'failed', a representation was described as "falsely social" (Moscovici, 1994, p.169) and under these circumstances contradiction or 'misunderstanding' arose. During such 'conflict' situations, social representations were 'floating' (Moscovici, 1994) rather than anchored.

Anchoring would seem, by definition, to be retrospective. This raised the question of whether there could be a future, or parallel, i.e., 'virtual' world, dimension to anchoring. Could 'prospecting' be used to describe future-oriented anchoring that might involve projection of the self into the future, a manifestation of which might be 'possible selves' (Markus and Nurius, 1986)? Possible selves could be part of a prospective anchoring process, in that virtual scenarios could become integrated in an 'as if' fashion to the here and now and may even be used to 'anchor' (or justify) actions in the present (or past).

"Practically speaking, 'creating reality' has three meanings. First of all, it means that the group's self-representation or its representation of the social setting to which it belongs is an integral part of the group's identity, of its concrete existence... Secondly, social representations always have a 'mental' and a 'material' side to them... And third... there is the fact that we mostly live in 'virtual' worlds... One might say that the transformation of these virtual worlds is another way of creating reality (Moscovici, 1987, p.517 quoted in Flick, 1994, p.183).

There was however, still the issue of what kind of entities social representations were anchored into and two possibilities have been proposed: prior representations and social prototypes (Moscovici, 1990a). Firstly, "every representation is rooted in a science or another representation" (Moscovici, 1984a, p.962). However, the reiterative nature of this proposition whereby a representation was effectively anchored into prior representations (or science) had particular empirical implications. Specifically, how was it possible to categorically define where one representation stopped and another representation started? This may not be an insurmountable problem. Rather than seek to identify specific, singular (or multiple) social representations, regressivity could be addressed by concentrating upon
the process of social representation and investigating qualitative differences within rather than between respondents with regard to a particular target representation (Wagner, 1996). Secondly, it has been suggested that social prototypes, e.g., competence and expertise could become "points of anchoring shared representations" (Moscovici, 1990a, p.172) such that social representations were "even defined by them" (ibid., p.172). Two forms of social prototype were identified: a 'prototype by default' that was singular and descriptive of common or exemplary characteristics and a 'prototype by excess' that involved an hierarchical redistribution of association such that a particular entity or phenomenon became interchangeable with another phenomenon, e.g., an atom for physics or the big bang for cosmology (Moscovici, 1990a). However, without disputing the usefulness of this distinction, it would seem to exist in a linguistic format already. Specifically, a metaphor may be seen to correspond to a prototype by default whilst metonymy would seem to describe what Moscovici (1990a) has called a prototype by excess. Irrespective of terminological variation, although not precluding a diversity of prototypes acting as points of anchoring, it would seem reasonable to assume that singularity rather than dimensionality characterised the process of anchoring and this may influence the type of structure that a representation may adopt. Issues of structure and conformation will be discussed in more detail in chapter two.

Communication was the means by which objectification occurred and hence something became familiarised and could inform action.

"Intensity of communication, frequency of exchanges and usages of vocabulary reflect the familiarization process" (Moscovici, 1990b, p.384).

The degree to which objectification was particular, i.e., culturally-specific, rather than universal has been contested. For example, Billig (1993) suggested that the process of objectification was limited to the modern Western scientific world in which (common) sense was made of science. By contrast, Markova (1996) contested that objectification was necessarily a global process. The extent to which objectification may be considered a universal or particular process may depend upon the context of the specific research and the type of entity investigated using TSR. If research was based upon a national phenomenon it was unlikely that one would be able to disprove cultural specificity and therefore one would assume universality.
When an initial everyday representation was combined with an ‘extraordinary representation’, new meanings and images resulted. And it may be implied that the visual imagination was implicit in this process by which the transformed representation became objectified. Hence, an everyday representation was transformed and re-evaluated, in order to ‘routinize’ another representation (Moscovici, 1990b). This process was essentially one of (social) accommodation rather than (cognitive) assimilation.

Essentially, social representation and specifically some would argue, objectification (e.g., Lorenzi-Cioldi, 1996) involved making something unfamiliar, e.g., “specialised or expert knowledge” (Moscovici, 1990a, p.176), familiar (Moscovici, 1984b), i.e., part of ordinary knowledge or common sense (Moscovici, 1990a). Social representation could be seen as modern day myth-making that assisted the contextualisation of beliefs (cognitive content), ways of thinking (cognitive processes) and practices (actions or behaviours) in our (Western) society. In this sense, social representation concerned the transformation of something abstract into something concrete, illustrated for example by the development of the concept of androgyny (Lorenzi-Cioldi, 1996).

It may be argued that a combination of descriptive, functional and referential criteria were used to indicate when social representation had occurred, with different degrees of emphasis and that distinguishing these criteria could be a useful means of understanding TSR. At times, all three criteria have been espoused, even within the same paragraph. Description, that implied an emphasis upon content (e.g., Moscovici, 1996) in addition to social representation, was said to occur when something became “a part of the culture” (Moscovici, 1988, p.227). Functional attributes were evident when a social representation influenced “the ways of thinking and acting of a large number of people in their everyday life” (ibid., p.227) whilst referential indices were indicated when a social representation had become “at least a shared reference point for interpreting events and relationships in their society” (ibid., p.227).

Although the distinction between description, function and reference may be useful as a means of developing a systematic approach to the study of social representations, caution was advocated. There were two reasons for this caution: the first was to avoid reductionism that may be contrary to an integrative, holistic or holographic (Wagner, 1994b) view of social representation and the second related reason was to avoid this
distinction becoming absolute. With regards to the latter, a similar concern has been expressed in relation to the use of a four-level approach to the study of social representation (Doise, 1984) and this concern was also echoed in the preceding discussion about objectification.

To review, according to TSR, a novel entity would be experienced in terms of the sociohistorical context and pre-existing representations held by the receiver about similar entities. Familiarisation was achieved through the complementary processes of anchoring and objectification that involved comparison, normalisation and imagination. Imagery was an important but under-researched dimension of the process of social representation, that it was argued could be investigated through a study (of the largely unconscious process) of day dreaming. Day dreaming constituted a means of accessing imagery associated with social representation and a form of intra-individual communication. Since communication was the medium of social representation, i.e., transformation of social knowledge, it was important to access communication at different levels, e.g., intra-individual, inter-individual and societal (Doise, 1984).

1:7 Individuation

Since each individual contributed to the process of social representation, this suggested that it was desirable to consider in more detail the factors that contributed to the development and access of particular social representations. Individuation was defined earlier as a micro-level process by which an individual modified or adapted their identity in accordance with the process of social representation. And it was proposed to consider this process in more detail in relation to existing approaches to individual factors in TSR.

"I set out to investigate the place where social representations were generated, not where scientific knowledge was corrupted and distorted. The place where they linked together to form communication networks vitalizing society. Each of us, to a different extent and from his own niche, contributes to this shared knowledge which is transmitted, evolves and spreads by means of representations, becoming as ubiquitous as a rumour" (Moscovici, 1988, p.216).
The theory of social representations attempts to describe the means by which the individual and society interact in the acquisition and transformation of social knowledge. The emphasis has been placed upon social representation as a social process that results in a degree of sharedness that does not preclude diversity at different levels of analysis (Moscovici, 1985).

"By de-emphasizing each person's distinctive features and internal details, we can bring out the social characteristics of the total operation, from both the intellectual and the emotional points of view. By analogy, we could think of social representations as being produced by a collective decision making committee. Its members cast their votes and can express a broad range of opinions...There is no need to reach an explicit consensus...so long as the individual initiatives are in line with the social flow, nothing more is needed...In these exchanges, all representations are at the interface of two realities: psychic reality, in the connection it has with the realm of the imagination and feelings, and external reality which has its place in a collectivity and is subject to group rules" (Moscovici, 1988, p.220).

The function of the process of social representation was to anchor and objectify novel experiences and in order to understand the function of a specific representation, it was necessary to investigate what (individual) actions the representation might legitimate or motivate and this in turn could be related to the structure of the representation (Breakwell, 1993b; Doise, 1993; Wagner, 1995b; Spini and Doise, 1997).

An investigation of the relationship between the individual and the process and structure of social representation was necessary, if TSR was to genuinely account for the way in which social knowledge was generated, developed and transformed. It was noted that issues of identity and social categorisation were implicit in research conducted by Moscovici (1961) and Jodelet (1991) and also in the way research by others (e.g., Joffe, 1996a, 1996b; Markova, 1996; Wagner, 1996) suggested a differentiation between 'them' and 'us'. But these relationships, that described conflicts of identity within the symbolic universe of a particular social representation were not always made explicit (Duveen, 1996). Therefore, it would seem useful to consider individual factors in terms of identity. The effect of the process of representation on the individual and the extent to which a representation constrains behaviour of the individual have had theoretical implications for both TSR and
theories of identity (Fraser, 1994), e.g., social identity theory (Tajfel and Turner, 1986) or identity process theory (Breakwell, 1986) and it is the latter of these theories that formed the focus of this review and research.

Identity process theory (Breakwell, 1986, 1993b), like TSR, does not posit a distinction between the level of the individual and society. Rather, identity process theory emphasised three (Breakwell, 1986) and more recently four (Breakwell, 1992) identity principles that guided the development of identity across time. The four principles included: distinctiveness or uniqueness, continuity over time, self-efficacy and a feeling of personal worth, i.e., self-esteem.

The similarity between identity process theory and TSR went beyond a lack of distinction between the individual and society. In addition, both theories utilised Piagetian processes of assimilation, accommodation and evaluation; were concerned with temporality in that they emphasised factors that influenced change in identity or social knowledge respectively and included an affective component in the notion of coping with a threat to identity or in the process of familiarisation. Possible theoretical and empirical equivalence between these two theories has led to the suggestion of further integration between them (e.g., Breakwell, 1993b). Thus, it seemed desirable to develop a measure of identity based upon identity process theory, include an assessment of the experience of threat (Kaës, 1984) as a 'normal' reaction to novelty (Moscovici, 1988) or as a fear, e.g., of contagion (e.g., mental illness, Jodelet, 1991; AIDS, Joffe, 1996a) or to existing values, (e.g., 'Protestant Work Ethic', Joffe, 1996b) and assess emotions experienced in conjunction with a target representation.

1:8 Empirical issues

The choice of methods of data collection and analysis for the study of social representation(s) has been influenced by the mode of research adopted. Two approaches have been identified: those who studied "grande" representations, e.g., health and illness, culture or participation and those who sought to verify the relationship between parts of a representation using experimental manipulation of representations (Di Giacomo, 1981a). On the whole, studies published in English have been concerned with "grande" representations rather than the relationship between elements within a representation.
Further consideration was given to the second type of research in the following chapter on structure and conformation.

It can be argued that theoretical vagueness attributed to the theory of social representations permitted exploration and elaboration of the process of social representation using a variety of empirical methods. The variety of methods has been extensive, e.g., interviews (e.g., Moscovici, 1961), analysis of documentary sources (e.g., Moscovici, 1961; Rouquette, 1996), observation (e.g., Jodelet, 1991; Duveen and Lloyd, 1993), free associations (e.g., Di Giacomo, 1980), questionnaires (e.g., Wagner, 1995a, Wagner, Valencia and Elejabarrieta, 1996) and structured and semi-structured interviews (e.g., Herzlich, 1973; Jodelet, 1991; Dickinson and Sell-Trujillo, 1996; Joffe, 1996b). Common to this research was a belief that social representation could be approached empirically (Breakwell and Canter, 1993). This section will consider in more detail, some empirical issues concerned with the process of social representation and individuation.

Certain methodological principles were required for an empirical study of social representation (Moscovici, 1984b), namely: a study of normal conversation, since social representations originated in social exchange (Moscovici, 1984a); acknowledgement of the process by which social representations recreated reality (transformation); emphasis upon the character of representation at times of change and acknowledgement that those who elaborated representations were types of ‘scholars’, i.e., active ‘experts’ in the process of social representation. In addition, the target entity should, in preference, be novel as well as being relevant (Wagner et al., 1996).

Particular methods, e.g., observation of groups (Moscovici, 1961) and means of analysis could be used to describe contemporary society in vivo (Moscovici, 1961) and this manner provided for a relational and explanatory study of social phenomenon (Moscovici, 1984a; Jodelet, 1989). An additional criteria was relevance of the target representation to the people accessed during the research process (Flick, 1996). Given the complexity of interaction between “social ideas or feelings and our individual mental possibilities” (Moscovici 1984a, p.941) different even conflicting approaches and methods may be required.
When social representation research was concerned with genesis and development, observation was advocated (Moscovici, 1988). Observation did not necessarily mean visual monitoring of a subject, but referred to systematic observation using qualitative and quantitative methods of enquiry.

"Observation stimulated by theory and armed with subtle analytical methods will still give us the means of understanding the genesis and structure of social representations in situ" (italics in original, Moscovici, 1988, p.241).

As such, particular conditions suited the use of different methods. Interviews and textual analysis were appropriate for establishing a necessary aspect of social representations, namely, the content (Moscovici, 1996). The use of a particular method was dependent upon the salience of social change. If it was acknowledged that social representations could exist outside of individual heads and their image component was emphasised, other resources, e.g., wall murals (Finn, 1996) or paintings (Beloff, 1994) could be studied. It was suggested that interviews were particularly appropriate when change was contemporary (Moscovici, 1961). Furthermore, in-depth interviews were suitable for investigation of less conscious processes, e.g., intra-individual communication as they permitted respondents to reflect upon their responses (Markova, 1996). However, there have been two caveats to the use of interviews: the first concerned the individualism inherent in such an approach (Ibáñez, 1994) and the second the susceptibility of interviews to context effects (Potter and Litton, 1985a). These effects concerned expectations associated with the relative importance and role of the respondent compared to the interviewer. Nevertheless, even if these effects were salient it was possible through the use of a variety of complementary methods, to overcome weaknesses inherent in a particular method.

Focus or discussion groups, in which a small number of people were brought together to discuss a particular topic provided a possible means of accessing social representations. Whereas interviews were useful to establish opinions of an individual, focus groups could provide a means of accessing views expressed during the process of exchange between individuals and therefore emphasised the role of communication in the formation of social representations.
A multi-methodological approach to the study of social representations has been advocated (e.g., Moscovici, 1988; Sotirakopoulou and Breakwell, 1992; Breakwell and Canter, 1993; Markova, 1996) and seen as particularly important if research aimed to establish consensus (Gaskell, 1994). Sotirakopoulou and Breakwell (1992) used a diverse range of methods including: in-depth interviews, content analysis of media sources, attribute check lists and questionnaires, to investigate social representations of European Integration. However, when a multi-methodological approach was adopted there should be a clear articulation of the rationale behind adopting this approach (Flick, 1992). It was argued that multiple methods, or triangulation was not necessarily a form of validation (Flick, 1992) because even if it was conducted at a theoretical, methodological and data-analysis level, across time, place and people, one could not be sure that the data obtained pertained to the same object or entity of study. However, if no agreement was found between the results obtained using a variety of methods this did not necessarily negate the assertion that multi-methods could constitute a form of validation (Breakwell, 1997). Furthermore, it could be argued that the systematic use of a variety of methods may 'flesh out' the target representation, in terms of describing aspects of the process of representation from different perspectives. Use of a variety of methods at different levels was advocated if a target entity was a complex, social phenomena and the aim of the research was to trace the process of social representation across time. In this sense, it would not be possible to categorise any resultant 'representation' as 'the' social representation of a target entity; only to investigate conditions under which social representations developed and individuation occurred in relation to this process.

Just as a variety of methods have been adopted in the study of social representation, different forms of both parametric and non-parametric statistical procedures have been used including: multi-dimensional scaling (Purkhardt and Stockdale, 1993); factor analysis (Doise et al., 1993); content analysis (Moscovici, 1961; Chombart de Lauwe, 1984) and cluster analysis (Doise et al., 1993; Fife-Schaw, 1993), sometimes in combination (e.g., Echabe, Castro and Guede, 1996). As above, the type of analysis conducted should be appropriate to the method of data collection and the theoretical aims of the research.

A variety of methods of data collection and means of analysis could facilitate an understanding of the relationship between different levels applicable to social representations. For example, multidimensional scaling was a means of establishing the
relationship between responses or elements on the basis of similarity (Purkhardt and Stockdale, 1993) whilst cluster analysis was useful to facilitate comparison between nominative groups within a sample (Doise et al., 1993). Cluster analysis was particularly suitable for establishing comparative differences in terms of the combination and strength of relationship between elements. As such it was a useful analytical tool for the study of relative rather than absolute consensus or sharedness.

Content (or media) analysis was an alternative, albeit time-consuming means of analysis. It has been contested that the identification of 'themes' using these methods was not a subtle enough means of analysis (Potter and Litton, 1985b). However, this criticism was less relevant if analysis of what was talked about informed a description of the medium of transformation in addition to the content (subject matter) of particular social representations (e.g., Rouquette, 1996).

Factor analysis could be used to confirm patterns of response identified using non-parametric methods of analysis, e.g., multidimensional scaling. The use of systematic methods and forms of analysis (even with qualitative data) could demonstrate that more than a 'jumble of attitudes' (Fraser, 1994) existed, that is, there was some consensus. In this sense, both qualitative and quantitative techniques have been advocated for the study of the process of social representation (e.g., Fraser, 1994; Gaskell, 1994) and suitable forms of analysis could be used to show that the shared content of social representations was structured (Doise et al., 1993). The merits of various types of analysis for establishing structured aspects of social representations will be discussed in more detail in chapter two that refers explicitly to conformation.

To summarise, various empirical approaches to TSR have been adopted since the study of social knowledge about psychoanalysis conducted by Moscovici (1961). It was necessary to state clearly the theoretical rationale behind the adoption of particular methods prior to research and to conduct empirical studies in a systematic manner. The theory of social representations seemed particularly appropriate as a means of investigating the process of familiarisation that accompanied the advent of a novel social phenomenon as it permitted the inclusion of analysis at both a societal and individual level. Several theoretical issues were identified including: an emphasis upon change; novelty; the processes of anchoring and objectification (and consequently, figurative and iconic elements) and communication
as the means by which social representation occurred. In order to permit the examination
of these issues, it was proposed that a novel social entity be identified that could provide
the context for this research and a multi-methodological approach be adopted that would
permit social representation and individuation to be investigated at a variety of levels
including the intra-individual, unconscious level. To this end, it was decided that the
launch of the UK National Lottery provided an opportunity to study the genesis and
transformation of social knowledge about a 'topical' (Wagner, 1994b), novel social entity.
Further details of the context were presented in chapter three.
CHAPTER TWO

Conformation and Social Representation

As stated in chapter one, the choice of methods of data collection and analysis for the study of social representation(s) has been influenced by the mode of research adopted. Chapter one dealt predominantly with research on “grand e” representations (Di Giacomo, 1981a), e.g., psychoanalysis, health and illness or AIDS and it was suggested that given the complexity of social knowledge and hence, social representation, a variety of methods of data collection should be used. Within this chapter, more micro-analytical, experimental research on the relationship between parts of a representation was reviewed (e.g., Abric, 1984). On the whole, this research was concerned with structural attributes of social representations. Discussion between advocates and critics of a structural approach has tended to be about the appropriateness of different forms of analysis rather than the form of data collected. Consequently, ‘structural’ research was reviewed in light of the how different forms of analysis influenced the processes of social representation and individuation.

There has been explicit reference to structural attributes of social representations since 1976 when Moscovici coined the term ‘noyau figuratif’, that arguably preceded Abric’s (1976) ‘central core’ and ‘peripheral system’ (Moliner, 1994). Since 1976, various terms have described structuration in relation to social representations (Guimelli, 1993), e.g., ‘hard core’ (Mugny and Carugati, 1985), ‘organizing principles’ (Doise, 1985), the ‘representative nodal’ (Jodelet, 1989) and more recently, ‘stable core’ (Wagner et al., 1996). It may be stated that the choice of term, reflected adoption by these researchers of essentially a ‘structural’, or, a ‘dimensional’ approach to social representations. Given that the choice of term was likely to be related to the form of analysis adopted, consideration was given to the appropriateness of various methods for the study of social representations. It will be argued that objectification resulted from both types of approach to structure and that this has informed (albeit intrinsically) subsequent development of the theory of social representations. In this paper, the concept and term ‘conformation’ was introduced as a means of reconciling these two approaches to structural issues of social representation(s) and to provide an approach to structure appropriate for understanding social knowledge, as a ‘network’ (Moscovici, 1988) of related components.
Two approaches: structural and dimensional

Structure of social representations has been approached in two different ways and each way has had its own advocates. What may be considered 'typical', has been the 'structural approach' that has described attributes of a target representation, e.g., l'artisan (Abric, 1989), an ideal group (Moliner, 1992; Flament, 1994a) or sportsmanship (Flament, 1996b). This research has been founded upon a conceptual and functional distinction between two complementary parts of a social representation: the central core and a peripheral system (Abric, 1976, 1993). By contrast, a second approach to the structure of social representations, can be described as 'dimensional' (e.g., Di Giacomo, 1980, 1981a; Doise, 1993; Doise et al., 1993). Table 4. summarises attributes of both approaches to social representation: structural and dimensional.

Table 4: Summary of attributes associated with two different approaches to structure within literature on social representations

<table>
<thead>
<tr>
<th>Attribute</th>
<th>'Structural' approach</th>
<th>'Dimensional' approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach to measurement</td>
<td>Quantitative</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Typical context of research</td>
<td>Experimental, laboratory-based</td>
<td>Experimental, field-based</td>
</tr>
<tr>
<td>Examples of target representations and research</td>
<td>Ideal group (Moliner, 1992, 1994); l'artisan (Abric, 1989); unemployment (Flament, 1994b, 1996a); sportsmanship (Flament, 1996b)</td>
<td>Student protest movement (Di Giacomo, 1980), mental illness (De Rosa, 1988), gender (Lorenzi-Cioldi, 1991, 1996)</td>
</tr>
<tr>
<td>Typical methods of data collection adopted</td>
<td>Word association, memory tasks</td>
<td>Word association, semi-structured questionnaires, card sort</td>
</tr>
<tr>
<td>Examples of type of data analysis conducted</td>
<td>Similarity analysis (e.g., Flament, 1981a), frequency (Moliner, 1992, Flament, 1994b)</td>
<td>Factor analysis, MDS, cluster analysis, correspondence analysis</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Dichotomous distinction between central core and periphery</td>
<td>Emphasis upon dimensions, permitted investigation of individual or group 'position' in relation to 'field' of social representation</td>
</tr>
<tr>
<td>Relevance to processes</td>
<td>Organisation and meaning of social representation, relationship between representation and reality</td>
<td>(Social) anchoring, objectification and evidence for structural dimensions, i.e., 'organising principles'</td>
</tr>
</tbody>
</table>
A description of research conducted using the ‘structural approach’ will proceed a review of ‘dimensional’ approaches to the study of social representations. Those who have adopted a ‘structural approach’, have based their research upon the theory of the central core (Abric, 1976) that proposed that all social representations were organised around a coherent collection of characteristics in two distinct but related systems; the central core and the peripheral system (Abric and Flament, 1996). Thus, research on the structure of social representations from this perspective, has become synonymous with a study of the particular content and function of elements within these systems. Attributes of each system have been described and summarised in table 5. (Abric, 1994).

Table 5: Attributes of the central system and peripheral system according to Abric (1994)

<table>
<thead>
<tr>
<th>Attribute</th>
<th>The central system (central core)</th>
<th>The peripheral system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of individual or collective influence</td>
<td>Product of collective memory and history of the group</td>
<td>Permits integration of individual experience and history</td>
</tr>
<tr>
<td>Degree of consensus</td>
<td>Consensual: defines homogeneity of the group</td>
<td>Permits heterogeneity amongst group members</td>
</tr>
<tr>
<td>Dynamism</td>
<td>Stable, Coherent, Rigid</td>
<td>Supple, Permits contradiction</td>
</tr>
<tr>
<td>Temporality</td>
<td>Resistant to change, Independent of immediate context</td>
<td>Evolves over time, Influenced by immediate context</td>
</tr>
<tr>
<td>Context-effect</td>
<td>Generate meaning, Determine organisation of elements</td>
<td>Adaptation to concrete reality, Differentiation of content</td>
</tr>
<tr>
<td>Functions</td>
<td></td>
<td>Protection for the central system</td>
</tr>
</tbody>
</table>

Table 5. illustrated how different the central core was compared to the peripheral system (Abric, 1994). Whereas the central core was characterised by stability and was relatively resistant to change, hence, temporally independent; the peripheral system permitted individual differentiation and modification of the social representation. Given the context independence of core elements, they were expected to conform less directly to physical attributes of a material or social object than peripheral elements (Moliner, 1994). The central core was conceptualised as consensual and independent of any immediate context.
unlike the peripheral system that was reflexive, adapting to situational variation. The central core was deemed to provide meaning for the social representation and was implicated in the representation's structural organisation. On the other hand, the peripheral system supported the central core, acting as a means for representation to be related to reality. When a social representation was identified, it was claimed that the central core was surrounded by a peripheral system. It was the exclusivity of elements within the central core that distinguished between two (or more) social representations (Moliner, 1994) and this implied that representations could share peripheral but not core elements.

Research adopting this approach to structure has tended to be experimental and laboratory-based (e.g., Flament, 1984; Abric, 1989; Moliner, 1992). Typically, the target representation was neither novel, nor necessarily salient, e.g., the ideal group (Flament, 1984, 1994a; Moliner, 1992) or l’artisan (Aric, 1989). Typically, social representations of a particular entity were studied using word association or memory tasks with a relatively small number of participants in a laboratory environment. The aim of this type of research was to verify the existence of a central core and provide evidence of how social representations functioned (Aric and Flament, 1996).

Examples of three recent studies from a structural approach follow. The first was conducted by Aric (1989), the second by Moliner (1992) and the third by Guimelli (1993). Each of these studies aimed to verify the existence of a central core to the social representation of the target entity researched.

Aric (1989) studied what (single words) constituted an hypothesised central core of social representations of an occupational group, l’artisan, that had formed one of the six categories of respondents in the original Moscovici (1961) study of psychoanalysis. L’artisan can be considered a member of a particular French social class, consisting of professionally trained and skilled crafts people, for example, furniture makers, cooks or tailors. In the experiment, two groups of participants were presented with thirty words about l’artisan in two conditions. For the members of the first group, five of the thirty presented words were specific to the concept of an artisan whereas these words were absent in the thirty words presented to the second group. Following presentation, there were two conditions for each group. In the first condition, the social representation of
l'artisan was ‘activated’, that is, made salient by asking subjects to remember words associated with l'artisan. In the second condition, there was no such priming. Abric (1989) found that the five specific words were more likely to be remembered even when absent from the list. It was concluded that these five words constituted a central core to the representation of l'artisan (amongst the target population).

Moliner (1992) aimed to verify the existence of a central core and proposed a method of controlling the centrality of an element within a representation. Building on the work of Flament (1984), the experiment consisted of a study of the representation of an ‘ideal group’ organised around two reportedly central elements, fraternity and equality. A third characteristic of an ideal group ‘common opinion’, that is, sharing of the same opinions or ideas was manipulated along with the central elements. A short text that described five ‘related’ people was presented to each respondent and was subsequently verified as an example of an ‘ideal’ group. Subjects received new information concerning attributes of group members in two conditions. In the first condition, an hypothesised central element, i.e., ‘equality’ of the group was challenged, by the suggestion that one member of the group was giving orders to the other members. In the second condition, a peripheral element was manipulated, i.e., they were told that group members differed in their opinions. The results showed that when a central element was contested, 78% of subjects no longer thought the group constituted an ‘ideal group’ whilst 73% continued to regard the group as ideal when the peripheral element was manipulated.

It may be posited that this method constituted an indirect means of assessing the transformation of a social representation since the manipulation addressed the relative impact of modification of core versus peripheral elements (Moliner, 1992). However, despite contending (that may be equated with threat) one of the three core elements, 22% of respondents continued to regard the group as ideal. This suggested establishment of the presence or absence of one or more elements in the social representation was insufficient and that there may be an hierarchical arrangement to elements within the core. Recently, in accordance with an hierarchical arrangement (Moliner, 1992), Abric (1993) suggested that it was necessary to distinguish between two types of elements within the central core of a social representation: normative and functional elements. Consequently, certain elements would be ‘activated’ as a function of the objectives of a particular situation and the nature of groups to whom the social representation was relevant.
Guimelli (1993) manipulated an additional element, namely, 'same social background' in a study of social representations of an 'ideal group' based upon the findings of Moliner (1992). Like Moliner (1992), Guimelli (1993) used a word association task and concluded that the concepts of equality and friendship were core whilst common opinion and same social background were peripheral elements in the representation of an ideal group.

Subjects generated three verbal associations for one of four elements: equality, friendship, common opinion or same social background. Then each respondent explained why they had chosen the particular associations. Following this, the respondents were presented with twenty-eight operatives that could describe the relationship between the target element and the generated associations. For example, was the chosen word a synonym? Subjects responded in three ways: yes, no, or maybe. On the basis of a comparison between the number of 'yes' responses for each element with the total number of responses in the operative conditions, it was concluded that 'friendship' and 'equality' were more central to the representation, ideal group, than the other two elements (Guimelli, 1993).

However, no and maybe responses were combined prior to analysis. This was required because the number of subjects in each of the four groups was very low, that is, between 18 and 20 respondents. Combining responses in this manner for such a small sample may have obscured qualitative differences between no and maybe responses indicative of ambivalence toward certain associations.

There were a number of observations and problems identified with the structural approach outlined above, that led to consideration of the theoretical compatibility of this approach with the theory of social representations that had been outlined in chapter one. Firstly, it was noted that despite the proposition of the two complementary systems, there had been more research on the central core than the peripheral system. Given the proposed function of the periphery being to permit modification and adaptation to context this seemed an important omission. Secondly, the nature of this type of laboratory-based, experimental research de-emphasised the influence of temporal and situational factors. In fact, this was achieved in two ways: through the type of research and the relative stability of the central core concept. Therefore, structural research tended to be content-oriented, concerned with the establishment of acceptable levels of agreement in terms of presence or absence of
particular elements in a given social representation at one point in time (e.g., Abric, 1989; Moliner, 1992). The relationship between elements in the core or periphery was seen to be relatively static, despite the peripheral system being characterised by flexibility and evolution (e.g., Moliner, 1995). If the central core was characterised by stability, what conditions were necessary for the evolution of social representations (Di Giacomo, 1981a)? Furthermore, research from this perspective tended to be with pre-existing phenomenon for example, work (e.g., Mannetti and Tanucci, 1993) or occupational groups (e.g., Abric, 1989) and the study of singular rather than multiple representations of a target entity. Therefore, it seemed that these factors contradicted one of the fundamental attributes of social representations, namely, an emphasis upon dynamism (Moscovici, 1988) or change.

2.3 Dimensional approach to the study of social representations

Given this limitation of the structural approach, it was considered appropriate to review an alternative, ‘dimensional’ approach in more detail. It should be noted that most of the following description was based upon a review of Doise et al., (1993). To recap, typical attributes of a dimensional approach were described in table 4. and these included: that this approach was quantitative, experimental and field-based; used, e.g., word association, semi-structured questionnaires or card sorts; analysed data using a variety of methods including factor analysis, MDS, cluster analysis or correspondence analysis and that the results were conceptualised as dimensions that permitted the investigation of how individual or cluster ‘positions’ related to ‘fields’ of social representation.

What has been referred to within this review as the ‘dimensional’ approach, has been very influenced by the choice of analysis techniques for the study of social representations (Doise et al., 1993). Rather than go into great detail about the merits of each form of analysis, it will be suffice to describe what forms of analysis were appropriate for three areas of study. Cluster analysis, multidimensional scaling (MDS) and correspondence analysis were recommended as means of establishing common knowledge about a target representation. Secondly, individual differences were conceptualised as ‘positions’ relative to this shared or common knowledge and could be analysed using factor analysis and forms of MDS. Finally, group effects could be monitored using forms of (textual) correspondence analysis, factor analysis or discriminant function analysis (DFA) (Doise et
On the basis of previous research it has been proposed that multivariate statistics were most appropriate for "bringing to evidence the dimensions of the representation, the intergroup comparisons and the measure of evolution" (Di Giacomo, 1981a, p.397). As such, the dimensional approach rather than the structural approach, seemed more appropriate for investigating dynamism in relation to social representation.

2:4 Means of analysing conformation

A variety of forms of analysis were deemed suitable for the study of social representations and these included cluster analysis, DFA and MDS. Multidimensional scaling in particular, has become established as a means of analysing social representations at least amongst British researchers using TSR (e.g., Purkhardt and Stockdale, 1993; Tanner, 1998). By contrast, correspondence factor analysis may be more familiar to French researchers than MDS (Doise et al., 1993). However, the present author was acquainted with MDS rather than correspondence factor analysis so MDS was preferred in this research. Meanwhile, DFA provided a useful means of differentiating between groups as it maximised homogeneity between individuals within the group. Consequently, DFA was suitable for testing the homogeneity of groups of subjects and for investigating inter-group differences. Cluster analysis by contrast, provided a means of grouping individuals or responses on the basis of shared similarity. It was considered to be a technique that was "particularly effective in revealing structures of representations" (Doise et al., 1993, p.17) and had been used effectively to study social representations, e.g., of a student protest movement (Di Giacomo, 1980).

However, Doise et al., (1993) have been particularly strong advocates of the 'reasoned' use of factor analysis. Although it has been acknowledged that factor analysis alone did not provide sufficient means of establishing consensus, it could be used to explore inter-individual differences and redress the suggestion that the theory of social representations was "not individualistic enough" (Moscovici, 1990b, p.384).

"Inter-individual differences which we will regard essentially as variations in individual positions in relation to common reference points. Showing that social representations are also organizing principles of differences in individual positions is perhaps the most important contribution of the reasoned use of factor analysis" (Doise et al., 1993, p.8).
"Factor analysis, among others, [was] a measure of the specific *positioning* of locations of the individuals on dimensions of interrelated responses (i.e. factor scores)” (italics in original, Doise et al., 1993, p.65).

Factor analysis could be used to confirm patterns of response identified using non-parametric methods of analysis, e.g., multidimensional scaling. The use of systematic methods and forms of analysis (even with qualitative data) could demonstrate that more than a ‘jumble of attitudes’ (Fraser, 1994) existed. In this sense, both qualitative and quantitative techniques have been advocated for use when studying the process of social representation (e.g., Fraser, 1994; Gaskell, 1994) and with suitable forms of analysis, empirical research could be used to show that the shared content of social representations was structured (Doise et al., 1993).

“If we give priority to the discovery and examination of structured sets of shared attitudes, or social representations, we will be increasing the chances of understanding the social and psychological mechanisms involved in creating, sustaining and transmitting socially significant belief systems” (Fraser, 1994, p.7).

It can be argued perhaps, that the dimensional approach has been informed more by theoretical concerns than the structural approach. Explicitly, methods adopted for a structural study of social representations should be informed by the theoretical perspective of the research (Di Giacomo, 1981a, 1981b) and the particular issues and topic of investigation. Just because certain forms of analysis existed, e.g., ‘analysis of similitude’ (Flament, 1981a) they did not need to be used (Di Giacomo, 1981b).

Doise et al., (1993) aimed to investigate the processes of anchoring and objectification and seemed to provide evidence of a meta-system of ‘organising principles’ that “regulate symbolic relations” (ibid., p.65). Essentially, ‘organising principles’ have been synonymous with social representations. The introduction of the term, organising principles, can be seen as an attempt to de-emphasise the role of consensus in defining a social representation and concentrate instead upon identifying underlying factors that may influence the form that a social representation adopts (Doise, 1993). However, despite a great deal of detail being afforded to different types of analysis (Doise et al., 1993), it was
difficult to extrapolate exactly, what consequence different forms of analysis had for understanding the processes of anchoring and objectification or organizing principles.

Given the above, it was necessary to state that a dimensional approach assumed that the cognitive organisation of elements associated with a particular social representation could be reproduced statistically. Furthermore, certain forms of analysis, notably, multidimensional scaling required the presentation and interpretation of results in a pictorial format and this may have resulted in the objectification of particular forms. However, it seemed appropriate given the tradition of empirical research on social representations to believe that statistical solutions did, to some extent at least, reflect the socio-cognitive reality in which social representations existed. Therefore, it was proposed that a multi-methodological approach that utilised both qualitative and quantitative forms of analysis be used to overcome limitations associated with a purely quantitative approach. So long as results were interpreted in light of the possibility of reification, it should be possible to use these forms of analysis to investigate processes of both representation and individuation.

2:5 Summary and rationale for conformation

Having reviewed both the structural and dimensional approaches to the structure of social representations, it was necessary to consider which would be most useful for the present research. Firstly, it should be noted that generally, these two approaches were exclusive of each other. For example, there was no reference to the work of Abric (1976) or associated researchers, e.g., Flament, Moliner or Guimelli, and their work on the central core of periphery within Doise et al., (1993) aside from a brief discussion of the similarity coefficient used by Flament. To counterbalance this omission, there has been an explicit discounting of similarity between the central core from Doise’s organizing principles, from those who advocate a structural approach. For example,

“Non-negotiable elements of an autonomous representation constitute its central core (Aric, 1976). This central core is not a simple organizing principle, but a structure (in the strong sense of the term) giving meaning to the whole representation, that is, to the numerous peripheral elements, which for their part are negotiable” (italics in original, Flament, 1996b, p.104).
The opposition of these two approaches may more generally, reflect historical preferences for particular forms of conceptualising. It can be argued that the theory of the central core (Abric, 1976) was designed to counter a tendency toward reification of dimensions in psychology generally (Flament, 1981b) and that recent dimensional approaches reflect a continuation rather than a break from this tradition. Furthermore, the unidimensional emphasis, i.e., the hypothesised relationship between a central core and periphery, could also be interpreted as an attempt to avoid geometric reification.

"Une géométrisation du psychisme des représentations qu’il faut élucider" (Flament, 1981b, p.426).

This was likely to have ensued from the use of multidimensional scaling and just as social representation was unlikely to be unidimensional, it need not be multidimensional. However, it could also be contended that the notion of two complementary systems, i.e., a central core and periphery reflected an even earlier and dominant tendency toward dualism. The review suggested that a description, at both a theoretical and empirical level, of processes of social representation and structural attributes of social representation were dualistic, being based upon complementary opposites: social versus collective; consensual versus reified; core versus periphery. Having identified this dualism it was proposed to establish through the use of systematic empirical research, the extent to which dualism characterised structure and processes associated with social representation.

One, neither, or both of these approaches, may be suitable for the study of social representations and this research proposed to consider their suitability on the basis of empirical evidence. An issue of concern was the degree to which either approach facilitated replicability. Given that the ‘structural’ approach was essentially experimental, it seemed more suitable to consider issues of replication with this type of research than the more context-specific research conducted from a dimensional or conformational perspective. However, it was noted that even advocates of the structural approach made euphemistic reference to replicability being influenced by “difficult subjects” (Flament, 1994b, p.99) or ‘careless’ use of data.

"The fact that this type of data answers the questions we have set ourselves within the context of a structural approach to social representations is not the point: it seems to us
that this type of data can be perfectly reproduced (if used with care)” (italics in original, Flament, 1994b, p.97).

In order to evaluate their respective relevance, it was interesting to consider how other TSR theorists (e.g., Philogene, 1994, 1998) and even Moscovici, explicitly or implicitly, referred to one or other of these approaches. Arguably, the structural as opposed to a dimensional approach has predominated in existing literature on social representation. Despite the presence of an alternative approach to structure, it would seem that the concepts of a central core and a peripheral system have become reified in literature on social representations. For example,

“In terms of... properties, we find in a representation a nucleus through which a classification, some information and a meaning are articulated. However, the consensus associated with them is a dynamic; or a holistic one. We can be sure that this consensus does not reduce to uniformity; nor, on the other hand, does it preclude diversity” (Moscovici, 1985, p.91/92).

Both advocates and critics of TSR have it seems used a dualistic distinction between core and periphery and this may have furthered the reification of these as structural attributes of social representations. What could be called an ‘ideology of the core’ has been identified even amongst critics (e.g., McKinlay and Potter, 1987; Ibáñez, 1992, 1994) and advocates alike (e.g., Markova, 1996; Wagner et al., 1996). For example, despite criticising TSR for being influenced by structuralism (Ibáñez, 1992), Ibáñez (1994) later described two important but not new ideas as having made “up the core of the theory of social representations” (p.376). Meanwhile, McKinlay and Potter (1987) stated that the ‘nucleus’ of social representations acted like a prototype to which something unfamiliar was anchored, whilst Markova (1996) implicitly referred to a differentiation between the volatility of the content of representations that was reminiscent of a core-periphery distinction.

“With respect to the structure of social representations, one might be able to discover those thought contents that are relatively stabilized and those that are more volatile and easily accessible to consciousness” (Markova, 1996, p.192).
By contrast, the search for a “well structured domain of knowledge” (Wagner et al., 1996, p.333), whereby a social representation “has a certain form and structure” (ibid., p.332) was reminiscent of a structural approach. It would seem as if only those who have collaborated with Willem Doise, have tended to adopt a ‘dimensional’ approach to social representation.

Importantly, it seems as if these two approaches differ in terms of their compatibility with essential qualities of the theory of social representations as proposed and developed by Moscovici (e.g., 1961, 1984a, 1984b, 1988). In particular, given the apparent stability of concepts associated with the structural approach, e.g., the central core, this approach seems less compatible with dynamic aspects of TSR. However, it could also be argued that a structural approach that adopted a “minimal theoretical conception of social representation” (Flament, 1981a, p.375) was less constrained by the explicit integration of the processes of anchoring and objectification than those using a more dimensional approach and may therefore be more harmonious with the kind of loose theorising associated with TSR (e.g., Moscovici, 1996).

Given the apparent exclusivity of these approaches, the current research proposed to utilise an alternative, flexible definition of structure, that of, conformation, that would permit the investigation of ‘structuration’ and individuation associated with social representation. This permitted an examination of social representation without a priori bias toward one, or other, existing approaches to structure. However, given that a field-based, systematic study of a novel social entity, the UK National Lottery was proposed, using a variety of methods of data collection and analysis, it seemed likely that evidence would point toward the existence of dimensions rather than a central core or peripheral system. Details of the particular context of this research were provided in the following chapter whilst consideration was given to the merit of all three types of approach in the final discussion.
CHAPTER THREE

Context of the research: the case of the UK National Lottery

This chapter sought to review the context in which this research was conducted, namely the UK National Lottery. Research on lotteries in the USA, Europe, Israel and Australia has tended to concentrate upon their economic and social impact. Particular aspects that have been emphasised have included: their economic impact (Kaplan, 1984; Evans and White, 1996); the characteristics of players or non-players (Kusyszyn and Rubenstein, 1985; McConkey and Warren, 1987; Meinert, Lumpkin and Reich, 1989; Dickerson, Walker, Legg and Hinch, 1990); excessive play or gambling (Kaplan, 1984; Corless and Dickerson, 1989; Lorenz, 1990; Griffiths, 1990); characteristics of lottery winners (Kaplan, 1984, 1987); luck or (mis)understanding of probability (Tversky and Kahneman, 1988; Friedland, 1992; Teigen, 1995; Smith and Wiseman, 1996) that has been related to degree of perceived control (Corless and Dickerson, 1989; Dickerson et al., 1990; Friedland, 1992) and the role of wishful thinking in a gambling context (Babad and Katz, 1991).

Due to the novelty of the UK national lottery, there have been few published studies specifically on this entity to-date. Nevertheless, some comment has resulted from a mapping of existing research interests on to the UK national lottery, e.g., Griffiths (1997), whilst other research has been commissioned specifically for the national lottery, e.g., the Department of National Heritage (Evans and White, 1996). Other research about the UK NL has been conducted but has been unpublished to date, for example, Smith and Wiseman (1996). The novelty of the UK National Lottery suggested that it provided a suitable target entity with which to investigate the processes of social representation, individuation and conformation.

Studies of gambling and regressive tax have tended to dominate studies in the USA (Evans and White, 1996). There have not been many academic studies of state (or national) lotteries and few have distinguished between players and non-players. An exception has been the market survey of 496 residents in two states in the United States conducted by Meinert et al., (1989). Their market survey found some differences in opinion between non-players and light or heavy players. However, they used a simple form of
categorisation for respondents as ‘players’, based upon whether the respondent had purchased one or more lottery ticket(s) during the previous six months. Play was considered to be light, medium, or heavy, as a function of the amount of money spent on lottery tickets per month. The amount that categorised each type of player was arbitrary. Furthermore, in subsequent analysis only light (n=164) and heavy (n=86) players were used. Respondents indicated extent of agreement or disagreement with six statements, using a six-point scale that meant there was no mid-point on the scale. The six statements covered: how favourable the state lottery was; who spent most on the lottery, that is, those least able to afford to; that success in life was due to hard work rather than luck; that the lotteries in each state were honestly run; that the reason for play was because the lottery provided money for good causes (economic development or education) and finally, that more money would be spent on the lottery if money was distributed to other types of projects. Irrespective of being categorised as a non-player or player of different type, respondents in the Meinert et al., (1989) study, regarded state lotteries favourably. However, non-players were more likely to agree that the lottery constituted a form of regressive taxation.

Other literature has concentrated upon gambling in general, or the pathology of gambling and the economic impact of lotteries rather than the characteristics of players (McConkey and Warren, 1987). However, there has been some inconsistency within these studies, for example, despite citing research that stated that players were more likely to be male than female (Paulson, 1986), McConkey and Warren (1987) solely targeted women respondents. In addition, ‘light’ and ‘heavy’ players were arbitrarily categorised (to provide an approximate 30% division between categories of non-players, light and heavy players respectively). They also included scales in their discriminant function analysis with alpha less than .6 that should be considered unreliable. There was no theoretical rationale for the order of entry of variables in the discriminant analysis. Furthermore, there was no test of significant differences between the mean scores of the three categories on the various (unreliable) scales. The means did not appear to be significantly different, despite which the authors claimed meaningful difference and furthermore, they generalised their findings to the general population without reference to the limitations of their sample or methods.
“Lotteries generally do not possess the inherent qualities of fast-paced action, risk, strategy, and excitement that are characteristics of activities conducive to compulsive gambling” (Kaplan, 1984, p.104).

This finding was supported by Lorenz (1990) who conducted a study of pathological gamblers and distinguished between two types of gamblers: ‘fast action with big money’ who bet on horse racing, in casinos or on other sports and ‘solitary, less action’ types who bet on lotteries, poker machines or bingo. The first type were more likely to be male and employed full time; ’solitary, less action’ type players were more likely to be female, less educated and under- or unemployed.

A recent study of the UK NL (Griffiths, 1997) suggested that although the NL may constitute a form of ‘soft’ gambling like football pools and bingo, lottery scratchcards constituted a form of ‘hard’ gambling akin to horse or greyhound race betting and fruit machines. Griffiths (1997) based his judgement upon a combination of the psychology of a near miss, event frequency, win probability and payout ratios and suspension of judgement, i.e., the stake for scratchcards was calculated per purchase rather than the total amount spent. Although scratchcards constituted a form of ‘hard’ gambling (Griffiths, 1997) they did not fit the ‘fast action with big money’ criteria outlined by Lorenz (1990).

In another ‘hard’ gambling context, the relationship between degree of control and subjective reports of skill and success at off-course betting was investigated (Dickerson et al., 1990). In a follow up to this study, Friedland (1992) distinguished between chance that was uncontrollable and luck that had an illusion of control. A series of experiments with undergraduate students established that perceived degree of control over a situation or outcome was related to the attribution of an event to chance or luck. They concluded that luck, unlike chance, did not have any formal expression, e.g., in terms of probability.

“When an event deviates from the naïve conception of the fair and balanced working of chance (e.g. when an uninterrupted sequence of ‘heads’ lasts too long), an alternative cause is invoked—luck” (Friedland, 1992, p.279).

However, a game of luck is akin to a game of skill (Friedland, 1992), so the outcome of the game was dependent upon the skill and competence of the player. This implied that
irrespective of the probability of winning, it was the way in which a game was framed, as a game of chance or luck, that related to the behaviour of the participant.

The behaviour of a small number of adolescent fruit machine addicts (n=8) was investigated by Griffiths (1990). The addicts talked about their playing to the researcher. Play was seen to involve skill, so some people were regarded as experts. Length of time spent on the machines was regarded as an index of skill. Familiarity, that is, repeated use of a favourite machine was interpreted as a belief that they were more skilled when using that particular machine (Griffiths, 1990). This type of belief has also been investigated in relation to perceived luckiness on the UK national lottery (Smith and Wiseman, 1996).

In a study conducted in collaboration with the BBC ('Out of this world' programme), Smith and Wiseman (1996) investigated 'perceived luckiness' in relation to the UK national lottery. They found a slight effect of perceived luckiness being related to increased level of playing. They asked lottery participants if they were confident that they would win that week to determine who thought they were lucky and who did not. Typically 'lucky' people thought that 'chance would be in their favour'. Therefore, with the large sample provided through collaboration with the BBC, some evidence was found that people who perceived themselves to be lucky were more confident that they would win. According to Smith and Wiseman (1996) lucky people felt that their luck was controllable and this perceived luckiness may be related to a poor level of understanding about probability in a lottery context (Tversky and Kahneman, 1988; Friedland, 1992; Teigen, 1995). For example, in a study of hypothetical lotteries, Teigen (1995) reported that the degree of luck ascribed to a winner was related to the size of the lottery jackpot rather than the actual probability of winning.

Nevertheless, perceived probability of winning has been cited as an important factor in maintaining interest in national lotteries (Blakey, 1979). Perception of the odds of winning on a lottery could be altered by increasing the number of prizes available without doing anything about their size. Nine factors (all met by the UK National Lottery) have been suggested for improving the success of lotteries: frequent draws; inexpensive tickets; good chances of winning a prize; high payout ratios; attractive prizes, including a large first prize; simple buying, drawing, and paying procedures; readily accessible ticket
outlets; fast notice of results and the opportunity for players to choose their own ticket numbers (Blakey, 1979).

Despite these nine factors, the addictive potential of a lottery in the UK has been attributed by official government sources to 'intermittent reinforcement'.

"Gambling - and a lottery is a form of gambling - by its very nature, is inclined to be habit-forming. This arises out of the fact that the periodic pay-outs that occur in gambling result in the activity being encouraged (intermittent reinforcement). This ultimately can lead to excessive gambling" (Memorandum submitted by the National Council on Gambling, National Heritage Committee, 1995).

However, it may be possible that in addition to external factors influencing gambling behaviour, intra-psychic processes promote participation, e.g., wishful thinking. Babad and Katz (1991) defined wishful thinking as predicting a more favourable outcome for a preferred team and investigated it in the context of a soccer stadium and betting stations in Israel. When the outcome of a gambling event was seen to match wishes, a solution became reified as truth. However, the imagined win for a team (or an individual) may have more far-reaching consequences:

"This illusory dream [of winning] can also be used as a method of social control-to placate people by diverting attention from their misfortunes and meaningless lives" (Kaplan, 1984, p.104).

A form of 'directed' day dreaming was used in a study that involved subjects being asked to 'relax and imagine' one of two scenarios: winning a lottery prize or being arrested for sexual harassment (Gregory, Cialdini and Carpenter, 1982). In both a laboratory and field context, subscription to a cable TV service increased when imagined to do so. However, those respondents "not responding to the survey in a valid manner" (Gregory et al., 1982, p.94) were eliminated from the analysis. For example, one female subject was removed who "indicated a 40% probability for being arrested for sexual assault" (ibid., p.93), despite the possibility that a particular individual may have committed or been the target of, these activities in the past. Furthermore, it was unlikely that the results of this study...
could be generalised since the sample consisted of introductory psychology students at an American University.

Nevertheless, there was some suggestion that an intra-individual process of imagining may be related to actual behaviour and that this relationship may be tempered by the frequency of the behaviour. According to the availability heuristic (Tversky and Kahneman, 1973), frequent events were more easily imagined and recalled than infrequent events. Thus, imagining an event may be an index of participation in a particular (gambling) activity and in a lottery context a likely imagined event could be ‘winning’.

In a survey of USA and Canadian lottery winners, Kaplan (1987) investigated the extent to which four myths about lottery winners matched the actual experience and sociodemographic characteristics of winners. The myths included that lottery winners were: predominantly working class and poor (a function of the stereotype of the typical lottery player); left their jobs following a win; became spendthrift and lost their money and that they were millionaires. In fact, they found: the sociodemographic characteristics of winners were similar to those of the general population; that likelihood of leaving employment was dependent upon the amount of money won, the age of the person at the time of winning, their level of education and the length of time at their present employment. The ethics of winning were associated with the Protestant Work Ethic (PWE) that had been integrated into American (and British) society. The PWE imbued work with various social and moral meanings such that work became designated as the preferred means by which to obtain economic security and success (Kaplan, 1987). Despite having suggested that winning led to financial arguments, divorce and pressure to provide for strangers (Kaplan, 1978), it was later stated that most winners made financial provision for family members, bought homes, cars or holidays or furthered their education.

“Few people lived extravagantly... Over the years there have been many stories in the popular press depicting winners as forlorn, dispirited and unhappy. But the data in this study indicate winners are quite happy with their lives and families. Winning even enhanced their marriages by relieving financial stress and affording them the opportunity to spend more time together” (Kaplan, 1987, p.176).
State lotteries were re-introduced into the state of New Hampshire in 1963 after a seventy year cessation and by 1983, seventeen states had legalised lotteries and twenty-seven states were considering their introduction (Kaplan, 1984). As a consequence, much of the research on lotteries, that has formed the basis for projections about the success and effect of the UK national lottery, has been derived from studies conducted in the United States. This has been complemented by a number of the shareholding companies of Camelot, the body licensed to run the UK national lottery, having existing interests in lotteries in the United States as well as Australia and Europe.

Many of the earliest state lotteries were short-lived due to delays in distributing prizes or rigging of winners (Kaplan, 1984). Private lotteries proliferated as the state lotteries declined but these were legislated upon in order to protect ‘the public interest’ (Blakey, 1979). It was suggested that as institutional monetary sources became well-established, the original function of lotteries in America, as a means of funding development of the infrastructure, became replaced by the promotion of lotteries for the generation of money for its own sake (Blakey, 1979). Nevertheless, lotteries in the US were often used to raise money to settle private debts, raise revenue to fight wars or revolutions and finance public projects (Kaplan, 1984) and it has been suggested that lottery proprietors manipulated politicians and the public alike through bribery in the form of cash handouts to the former or buildings for the use of the public (Blakey, 1979).

The notion of lotteries as a means of raising revenue was exported to the United States in the nineteenth century following their successful introduction and use in Britain since the sixteenth century. Official government lotteries were abolished in Britain in 1826 following widespread illegal betting on their outcome and accusations that “idleness, dissipation and poverty are increased, domestic order is destroyed, madness often created” (quotation from 1808 Parliamentary Select Committee Report, The Guardian, November 12, 1994). Similar reasons were cited for the abolition of the majority of lotteries in the United States in 1878, the state of Louisiana introduced legislation to bar lotteries in 1893 (Kaplan, 1984).
Notably, government publications have differed from other sources in terms of the date of inception of national lotteries in the UK and their original function. According to government publications, national lotteries had been operating in Britain since 1569 and were annual events by the mid-18th Century (Office of the National Lottery, 1994). Funds raised through national lotteries were used for projects that included the building of the British Museum and Westminster Bridge. However, Blakey (1979) cited the advent of 'English public' lotteries as three years earlier in 1566. Lotteries at this time were managed by the Lord Chancellor and the Archbishop of Canterbury, although they were introduced by Queen Elizabeth I to pay for harbour repairs. It would seem as if official, government sources interpreted the history of national lotteries in the UK in terms of projects that were salient, in addition to credible, worthy and 'good', e.g., the construction of national institutions like museums.

Official sources have presented previous national lotteries in the UK as established, regular, respectable events with an emphasis upon them being national, rather than regional or English. Notably, these sources did not refer explicitly to previous lotteries as a form of taxation, e.g., raising money to repair harbour facilities, despite the concept of public lotteries as a means of raising taxation having been 'exported to America shortly after the death of Queen Elizabeth I when the Crown authorised the Virginia Company of London to conduct them' (Blakey, 1979). It was suggested that the 'colonies' desperately needed to improve their infrastructure and lotteries raised money before institutional forms of money raising such as banks became established in America. In fact, "gambling even financed the nation’s defenses" (Blakey, 1979 p.64). Whilst lotteries were controlled by the state, used to finance the defence of the realm and conserve national ‘heritage’, some ‘members of the establishment’ e.g., the Lords of Trade in England objected to lotteries because they dissipated wealth (Blakey, 1979).

In the UK, lotteries were traditionally ‘managed’ by a triumvirate: the monarch as head of state; the Lord Chancellor as head of government and a senior representative of the church, e.g., the Archbishop of Canterbury. According to official documentation, lotteries were "a respectable Government undertaking... which at one time had the then Archbishop of Canterbury as a Trustee. It ceased only in 1826, not least because although the lottery itself was honestly run, there was widespread illegal betting on its outcome" (Home
Office, 1992). Accordingly, the demise of lotteries in the UK in 1826 was attributed by official sources to misuse, rather than corruption of aims or mismanagement.

Subsequent Royal Commissions investigated the (economic) potential of both large and small lotteries in the UK, despite lotteries having been declared illegal (Kay, 1992). Although small lotteries were not so controversial, large lotteries were opposed on the basis that they: encouraged a belief in luck as they did not involve skill; appealed to those in impoverished circumstances and were open to exploitation and fraud (Royal Commission on Gambling, 1978).

3:2 The establishment of the UK National Lottery in 1994

According to the Office of the National Lottery (1994), “The Royal Commission on Gambling, chaired by Lord Rothschild, recommended in 1978 that there should be a single National Lottery with its proceeds going to the arts, sport and other deserving causes. The possibility of generating new money for such causes has maintained interest in a National Lottery since the Rothschild Report”.

Opposition to the notion of a National Lottery was expressed by the Christian Churches. Of these, the Methodist Church was considered the most vociferous, acting as a mouthpiece for other religious groups who might oppose gambling (Kay, 1992). Although gambling was no longer rejected on ethical grounds, the Church advocated strict regulation and expressed detailed opposition toward the proposed National Lottery in the UK. This opposition was particularly focused upon: the extensive advertising that would accompany the launch of the NL; that the NL might encourage excessive gambling amongst those most vulnerable, with the suggestion that ‘British citizens’ might have a particular propensity to gamble in addition to the ‘less well-off’; that lottery funding might replace existing government subsidies; that revenue from the football pools would be adversely affected; that revenue would be redistributed away from ‘essential’ services towards ‘entertainment’ (particularly arts facilities) and that the main beneficiary of a NL would be the company appointed to administer this facility (Kay, 1992). Opposition from the Catholic Church was less virulent, e.g., they were not so opposed to the use of advertisements; however, gambling was expressly forbidden according to the Qur’an.
Those who represented the Jewish faith were more lenient towards gambling; a National Lottery already exists in Israel (Kay, 1992).

In the UK, a private members bill was introduced in December 1991 and this was followed by a white paper in January 1992. In April 1992, there was a General Election and the new Conservative Government transferred responsibility for the establishment of the UK National Lottery to a new department of National Heritage (DNH). The National Lottery bill was established on 17 December 1992 and Royal Assent was granted on the 21 October 1993. The Director General of the National Lottery (Peter Davis) was appointed to his post on 25 October 1993.

At the time of this research, funding was not designated from the UK NL for the NHS, education or other similar programs. Instead, lottery-generated funds were designated for ‘deserving’ or ‘good’ causes (Office of the National Lottery, 1994) that included: the arts, sports, heritage, charities and “projects of lasting benefit to the nation” (Kay, 1992, p.11). The later became encompassed in the award of money to the ‘millennium commission’.

“The primary purpose of the Lottery is to raise money for the five good causes specified in the Act: the arts, sport, heritage, charities, and projects to mark the year 2000 and the beginning of the third millennium.... The money raised for good causes is paid into the National Lottery Distribution Fund (NLDF) which is administered by the Department of National Heritage. The distributing bodies draw down money from this fund for the payment of Lottery grants. Each of the five good causes receives 20 per cent of the money available. The Act became law in October 1993, and the successful applicant for the licence to run the Lottery, Camelot, was announced in May 1994...” (National Heritage Committee, 1995).

The closing date for applications to be evaluated by the Director General was February 14 1994. On 25 May 1994, it was announced that of the nine competing groups, ‘Camelot’, had won. One group, chaired by Richard Branson, explicitly stated that it would operate the lottery on a non-profit making basis. However, this was not considered one of the central criteria for successful bidding, therefore the licence was awarded to Camelot. The licence to operate the UK NL was granted on 29 July 1994 and the first draw set for 19 November 1994.
There were five shareholder companies in Camelot: Cadbury Schweppes plc (22.5%); De La Rue plc (22.5%); GTECH UK Limited (22.5%); International Computers Limited (10.0%) and Racal Electronics plc (22.5%). The principal staff at Camelot included a chief executive, four executive directors, five non-executive directors representing each of the investor companies and three independent directors representing tourism, transport and the police.

A central tenant for successful bids for the licence was the amount of money each company estimated they would raise. However, the capacity to raise revenue in the UK was limited because of a requirement, common to lotteries in the USA, to provide a return in the form of prize money to players of between 40 and 50 percent and to meet overheads, particularly advertising (Kaplan, 1984). In the UK, initial costs were limited to the installation of terminals in each designated outlet; the subsequent cost of their upkeep was minimal. However, the amount spent upon advertising in the UK was substantial, for example, £39 million between 1994 and 1995. Like state run lotteries in the USA, lottery advertisements in the UK made reference to dreams of riches or other fantasies (Lorenz, 1990).

Camelot forecast that they would raise £32 billion over the seven year licence period with £9 billion going to ‘good causes’. The breakdown of sales was forecast to consist of 50% for prizes, 28% for good causes, 5% as retailers commission, 5% to cover Camelot operating costs (including VAT and corporation tax) and 12% in the form of government lottery duty. A total of approximately £12.8 billion was to be raised as indirect taxation over seven years. Of this, £9 billion constituted an estimated 28% for the ‘good causes’ and approximately £3.8 billion (12%) equated to lottery duty.

The actual percentage of revenue distributed to the various recipients varied between 1995 and 1997, according to the Annual Report and Accounts from Camelot for each year. This information was summarised in table 6.
Table 6: Percentage contribution from sales including prizes, contribution to good causes, retailers, the government and Camelot

<table>
<thead>
<tr>
<th>Year ending</th>
<th>Percent to 'good' causes</th>
<th>Percent for prizes</th>
<th>Percent to retailers</th>
<th>Percent to Camelot</th>
<th>Percent of tax</th>
<th>Total percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 March 1995</td>
<td>47.2</td>
<td>26.6</td>
<td>5.1</td>
<td>9.1a</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>31 March 1996</td>
<td>48</td>
<td>27.14</td>
<td>5.1</td>
<td>9.39b</td>
<td>12</td>
<td>101</td>
</tr>
<tr>
<td>31 March 1997</td>
<td>50.48</td>
<td>26.94</td>
<td>5.1</td>
<td>5.5c</td>
<td>12</td>
<td>100</td>
</tr>
</tbody>
</table>

Note:

a: Percentage to Camelot in the year ending 31 March 1995 consisted of 7.5% operating costs plus 0.5% profit plus 1.1% VAT and tax (total = 9.1%)
b: Percentage to Camelot in the year ending 31 March 1996 consisted of 3.87% operating costs (including 'terminal and data communication costs') plus 4.54% profit and 0.98% VAT and tax (total = 9.39%)
c: Percentage to Camelot in the year ending 31 March 1997 consisted of 4.21% operating costs (including 'terminal and data communication costs') plus 0.38% profit and 0.91% VAT and tax (total = 5.5%)

In the Annual Report and Accounts 1995, the income of Camelot (9.1% compared to 5% predicted) was not emphasised. This discrepancy was attributed to setting up and promotion costs of the lottery. Instead, emphasis was placed upon the amount generated for good causes. According to Sir Ron Dearing, Chairman of Camelot at that time, "We have raised £110 million for good causes and for another good cause, the Exchequer, a further dutiful £51 million..." (National Heritage Committee, 1995). More recently, total sales for the year ending 31 March 1997 were £4723.0 million of which £3846.5 million related to 'The National Lottery Game' and £876.5 million to 'National Lottery Instants' (Annual Report and Accounts, 1997).

3:4 Operational aspects of the national lottery

Camelot collects money from the public through the sale of lottery tickets at a cost of £1 each. At the time of this research, money was deposited with the department of National Heritage (DNH), established in 1992. The DNH has policy responsibility for the £24 million (approximate) deposited every week in the heritage fund. Proceeds from this fund were invested, with interest and unclaimed prize money going to the good causes.
There were eleven subsidiary bodies responsible for the actual distribution of money to designated projects. These included: the National Arts (4 bodies), the Sports Council (4 bodies) and the Millennium Fund and Charities. Each of these bodies was allocated 20% of the money raised. The Arts Council of Northern Ireland received a statutory 2.8% based upon the relative population of Northern Ireland. The eleven bodies were self-regulating and financially accountable to the DNHI.

OFLOT was established as the industry regulator in the same way as other public utilities (e.g., OFTEL for telecommunications) and was regulated by a non-government department. Peter Davis (the Director General of the National Lottery) was appointed as the head of OFLOT and was answerable directly to parliament rather than the secretary of state.

The ‘on-line’ game was launched in November 1994. To play, a selection of six numbers from a possible forty-nine was made and these were marked on a specially designed ticket that was processed through a computer terminal in the retail outlet. This terminal was connected to Camelot’s control centre. The number of terminals was estimated at 35,000 outlets by the end of 1996. These terminals were located in post offices, newsagents and supermarkets and this meant that the lottery met situational characteristics associated with the promotion of gambling (Griffiths, 1997). Tickets could be bought locally each week at a participating outlet to cover participation in the next eight weeks. Camelot provided an advance play facility for a period of 26 or 52 weeks, but only one or two lines could be bought each week.

Because the lottery was national, playing was restricted to people resident in the UK. This potentially disadvantaged ex-patriots or holiday makers. However, a media campaign in the summer of 1995 (repeated in 1996 and 1997), encouraged people to buy tickets before they left on holiday. Those detained at Her Majesty’s pleasure were not eligible to participate in the national lottery.

Only one person could win a prize and claims required a (verifiable) name and address on the back of a winning ticket. Transient populations or people of no fixed abode were technically excluded from participation. Officially all members of a playing group constitutive of a syndicate, were required to complete a written agreement about
membership, the level of weekly contribution and how winners proposed to share their prize money. Claims for all prizes had to be made within 180 days of the draw.

Arguably, prize money has not been evenly distributed. For example, the first major winner of the lottery received £18 million in November 1994. If the maximum amount won on the UK NL was £500,000, this would have benefited thirty-six winners. However, Camelot justified this level of prize money because the principal factor affecting sales was the size of the jackpot. Since the aim of the UK NL was to maximise revenue, an estimated 20% increase in the level of participation during a ‘roll-over’ week, seemed to lend support to Camelot’s claims. A roll-over occurred when the jackpot from the previous week (or draw following the introduction of the mid-week draw) was not won. A maximum of three roll-overs was permitted in the UK lottery. This limited the amount of the maximum jackpot. However, although higher levels of prize money may have increased participation during a roll-over week, some of this increase may be attributable to higher levels of associated advertising.

On 5 February 1997, Camelot introduced a second mid-week draw on every Wednesday in addition to the existing Saturday draw. The event was marked by extensive advertising including the free distribution of one of the daily national newspapers, ‘The Sun’, that was the self-appointed, lottery paper of the nation. In the event that the jackpot was not claimed from the previous draw the jackpot was ‘rolled-over’ to the following Wednesday or Saturday as appropriate. This research was conducted prior to the launch of the mid-week draw.

3:5 ‘Instants’ or national lottery scratchcards

‘Instants’ were a type of scratchcard, launched on the 21st March 1995. The percentage of prize money from Instants was 55.2% compared to 45% on the lottery. Like the NL, a further 28% was donated to the NLDF. In 1995, there were nine versions of Instants with various jackpots and prize structures ranging from ‘Aces High’ (£5000 jackpot and 421 jackpots) to ‘Instants (red)’ (£50,000 jackpot and 48 jackpots). Each game closed when either all the cards had been sold or all the jackpots had been won. No information was made available about how many of the jackpots had been won at any particular time.
Summary

Existing research on national or state lotteries as a form of gambling has tended to emphasise their social or economic impact. This type of research has been conducted predominantly in the United States. Recent empirical research has disputed that the UK NL has been perceived positively by most people (Griffiths, 1997). The opportunity exists for a study of the development of attitudes or opinions, expressed in both the media and by individuals, toward a state lottery. The launch of the UK NL in November 1994 provided an opportunity to conduct research into the genesis and transformation of opinion about a novel social entity with a clearly defined starting point. Therefore, the UK NL was considered an appropriate context in which to utilise the theory of social representations.
CHAPTER FOUR

Study One:  An exploratory study of opinions about the UK National Lottery (NL) using focus groups

4:1 Abstract

This study sought to explore what people understood about a novel social entity, the UK National Lottery, in the form of a ‘universe of opinions’ (Moscovici, 1961). A series of four focus groups were conducted with participants drawn from a combination of adult education and sport classes. Content analysis of transcribed data both within and across the focus groups, resulted in the identification of fourteen major themes, each with sub-elements. As part of a sequential design, it was hoped that these themes and sub-elements could be used to inform the development of measures in subsequent studies.

4:2 Introduction

A sequential design was deemed appropriate given that this study sought to provide a content-based, ‘universe’ of opinions (Moscovici, 1961) about the UK National Lottery that would inform subsequent investigation of processes inherent in social representation, individuation and conformation. It had been suggested in chapter one, that opinions, rather than attitudes or stereotypes, characterised the form of social knowledge generally addressed by research using the theory of social representations (TSR). Opinions were regarded as evaluative assertions on a controversial issue or question that could influence the behaviour of an individual. Rather like social representations per se, they were characterised as unstable, plastic and contradictory. Consequently, they were considered to be relatively unstructured.

According to ‘authorised’ reports (e.g., literature from government or Camelot sources), levels of awareness about and participation in the UK National Lottery were high within a relatively short period of time subsequent to its launch in November 1994. It was assumed that during this time, individuals began to develop and share opinions about the NL. However, the novelty of the NL when the present research was conducted, meant that there was a paucity of pre-existing, published literature about the content of such opinions,
or information concerning what factors might have influenced their development. To address this omission, this chapter sought to discover what opinions people held about the NL.

Given the exploratory nature of this study, it seemed appropriate to use focus groups that would permit the systematic elicitation of a broad range of opinions from several individuals simultaneously. It was proposed that this method might simulate social exchange, where it had been suggested, social representations originated (Moscovici, 1984a). Focus groups therefore, provided a means of investigating the "intensity of communication, frequency of exchanges and usages of vocabulary" (Moscovici, 1990b, p.384) that were at the heart of social representation. As such, they provided a means of documenting the process by which a novel social entity, i.e., the UK National Lottery became familiarised.

4:3 Aim

To explore the content of opinions expressed by individuals about the UK National Lottery

4:4 Method

Focus groups have become an established means of investigating consumer opinion about, for example, products or advertisements (Denzin and Lincoln, 1994) and have recently been advocated as a suitable method for adoption by social psychologists (Millward, 1995). This method was flexible, inexpensive and even stimulating for respondents, in addition to which focus groups could provide a rich source of data. However, focus groups were less appropriate if the topic for discussion was sensitive or participants were unfamiliar with the topic (Millward, 1995). Given the national awareness of the UK National Lottery, it was anticipated that neither sensitivity nor lack of awareness would be a prohibitive factor in the present study.

The success of focus groups as a means of eliciting individual opinions was dependant upon the ability of the facilitator to manage inter-individual discussion (Denzin and Lincoln, 1994). For example, it was preferable to prevent the discussion being dominated
by a small number of respondents, hence it was necessary to encourage all to participate. Theoretically, full participation would also elicit maximum coverage of the target topic.

A series of four focus groups were conducted in the present study. Table 7 summarised the source and number of adult participants in each focus group (excluding the facilitator). Each group consisted of both males and females except group C who were all male.

Table 7: Source and number of participants in each of four focus groups

<table>
<thead>
<tr>
<th>Focus group</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Psychology evening class</td>
<td>Psychology evening class</td>
<td>Martial arts class</td>
<td>History of Art evening class</td>
</tr>
<tr>
<td>Number of participants</td>
<td>7</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

Three of the groups were accessed through contact with Adult or Further Education classes. Permission was granted to conduct the discussion prior to the commencement of these classes. The fourth group consisted of 5 members of an Aikido (martial arts) class. All four groups were 'naturally' occurring in the sense that members regularly met to discuss topics intrinsic to their particular course or interest, plus topics of wider interest. Although no a priori mention was made about the nature of the topic to be discussed, members of these groups did not consider the national lottery to be an extraordinary topic of conversation.

A protocol was used to minimally direct the discussion within each group (Appendix A). With the permission of each group, the discussion was recorded on audio tape. Following completion, each tape was transcribed verbatim. Confidentiality was assured and participants were identified according to focus group, i.e., A-D and seated position within the group, that is, 1-10 respectively, depending upon the number of participants in each group. For example, participant (A1) was a member of the first group whilst (D2) was a member of the fourth focus group. This research was conducted between October and November 1995.

Ideally, analysis of the transcripts would have been conducted simultaneously with data collection in order to inform how remaining focus groups were directed. However, it was
not possible given the amount of time required to transcribe such data, to achieve this in the present study. Nevertheless, since each of the groups was conducted by the present author over a relatively short period of time (one month), it was assumed that the researcher would remember the content of each session in enough detail to be able to recognise when similar or novel opinions emerged. Given the degree of repetition identified audibly in the fourth group compared with the preceding groups, it was decided that this number of groups would suffice for exploring a 'universe' of opinion about the UK National Lottery.

Having transcribed the four focus groups, it was necessary to decide upon a form of qualitative analysis that was conducive to the aim of this research; to explore the diversity and content of opinions about the NL. To this end, the first stage of the analysis involved immersion (Miller and Crabtree, 1994) in the content of each transcript separately. This was followed by comparison of content between the four focus groups. It was decided on the basis of immersion in the data, that themes were the most appropriate unit of analysis for the present study. Consequently, each transcript was examined sequentially and fourteen major themes were derived from the text. Having identified these themes, subcategories were established on the basis of the particular references made by respondents under each thematic heading. Overall, the analysis reflected a process of distillation, whereby essential issues emerged from the opinions expressed by the participants. The outcome of this analysis was presented in the following section.

4:5 Results

Table 8 described the frequency with which each of fourteen major themes were mentioned and provided examples of sub-categories within each of these major themes.
### Table 8: Frequency and examples of sub-category within each of fourteen major themes

<table>
<thead>
<tr>
<th><strong>Major theme</strong></th>
<th><strong>Number of sub-categories</strong></th>
<th><strong>Example</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing</td>
<td>16</td>
<td>'reasons of others to play'</td>
</tr>
<tr>
<td>Gambling</td>
<td>12</td>
<td>'addictive, easy-to-do, accessible'</td>
</tr>
<tr>
<td>Distribution of money</td>
<td>12</td>
<td>'popular projects such as cinemas have not received money'</td>
</tr>
<tr>
<td>National lottery</td>
<td>10</td>
<td>'creates hysteria, social chaos'</td>
</tr>
<tr>
<td>Scratchcards</td>
<td>8 (from only two groups)</td>
<td>'use up limited resources'</td>
</tr>
<tr>
<td>Camelot (the operating company)</td>
<td>7</td>
<td>'contracted to operate the lottery by the government'</td>
</tr>
<tr>
<td>Winning</td>
<td>7</td>
<td>'chances of winning are small'</td>
</tr>
<tr>
<td>Media coverage</td>
<td>5</td>
<td>'is negative about the lottery and creates scandal to maintain readership'</td>
</tr>
<tr>
<td>Saturday night draw</td>
<td>4</td>
<td>'poor quality and uninformative'</td>
</tr>
<tr>
<td>Government and tax</td>
<td>4</td>
<td>'form of tax (on the poor)'</td>
</tr>
<tr>
<td>Information about NL</td>
<td>4</td>
<td>'not easily accessible'</td>
</tr>
<tr>
<td>‘Good causes’ (funding bodies; arts, heritage, millennium, charities, sport)</td>
<td>3</td>
<td>'giving money to charity makes you feel good'</td>
</tr>
<tr>
<td>Prizes</td>
<td>3</td>
<td>'would be better to have smaller prizes'</td>
</tr>
<tr>
<td>Retailers</td>
<td>1</td>
<td>'retailers receive 5p per £1'</td>
</tr>
</tbody>
</table>

In addition to the fourteen categories listed in table 8 there was an ‘omitted’ category for elements noted as absent from the transcripts, e.g., losing/losers.

It should be noted that inter-rater reliability was not sought because it was considered inappropriate to seek a second rater when the mode of qualitative inquiry had been inductive, i.e., had required the immersion of the researcher in the data (Morse, 1994).
The following summary analysis of the focus group material was based upon the thematic analysis described above. It should be noted that emphasis was placed upon themes that were common to all four focus groups.

There was evidence that the NL was a normal topic of conversation and that ideas about it were elaborated at an inter-individual level that had been derived from national newspapers. When asked where did people learn about who received money from the NL, there was unanimous agreement that it was the “media” (group B). The NL was considered as “something that was talked about” (B6) although there was some evidence that people were becoming habituated to it. For example;

“don’t you think that people get bored and talk less about it now” (A7)
“uhm (agreement) not as much as we used to” (A5).

Both the NL and scratchcards were compared with previous examples of their kind. The UK National Lottery was often compared with existing lotteries abroad, e.g., in Spain (A1), Hong Kong and France (D7), South Africa and America (B9) or Germany the “much more disciplined nation” (A3). By comparison, scratchcards were familiar in other guises in the United Kingdom, e.g., ‘spot the ball’. The lack of mention of previous lotteries in the United Kingdom suggested that they did not provide a context for discussion of the present NL.

Comparisons were made between the NL and existing forms of gambling, particularly premium bonds (D2) and horse racing, for example, “We have always had [a] form of national lottery in the form of the premium bonds and things of that nature haven’t we?” (C1). The NL was seen to differ from pre-existing forms of gambling on the basis of various attributes that were either physical, temporal or psychological, i.e., ease-of-use. For example, the NL was regarded as very accessible and seen to appeal to people who did not or should not gamble, e.g., ‘the poor’, ‘aged’ and ‘women’. For example;

“Women do not go into betting shops” (D3)
“No, not usually” (D3)
“I have been in once, it frightened me to death” (D5)

(laughter).
However, a correlate of the accessibility of the NL, was the increased likelihood of addiction to the lottery, and its wide appeal was associated with it generating 'hysteria' (C5).

Scratchcards were more familiar than the NL, having existed in a similar form in the UK as charity scratchcards or, 'spot-the-ball' type competitions. Unlike the NL, they were associated with concern for minors and identified with other 'harmful to health' purchases, e.g., cigarettes (C4). Whilst legal constraints were advocated for controlling the sale of scratchcards to minors (B5, C3), the sale of scratchcards and the lottery to others was considered to be the responsibility of the individual, or the state, depending on the "ability to withstand temptation" (A2) of the participant, especially as scratchcards were considered more addictive than the NL (C4).

The lottery was linked to perceptions of 'dissatisfaction with society' and the 'political system', for which the government was held responsible. The appointment by the government of Camelot to run the NL was questioned. It was suggested that Richard Branson "should have done it in the first place" (B6). Camelot had an indeterminate status between the government and commerce that affected the legitimacy of their presentation on commercially independent BBC television. The televised draw was described as low quality and "distasteful" (B10). "There is also something so tacky about the way in which the draw is done on a Saturday evening it is so appalling" (A2) or "it is like one of those over-hyped American game shows" (B6).

The most significant and consistent theme was the differentiation between the profile of the 'masses' or 'them' (as players) and 'us'. 'They' were often 'poor', likely to "play it more" (A6) and yet receive less money from the NL. It was believed that the lottery was "aimed at people who... are unfortunate, people on the dole, people on income support who haven't got much money" (B5). And these people were described as having less willpower,

"we talk about freewill but so often in life..." (D2)

"...but you cannot control for people who cannot control themselves can you?... they will go onto something else..." (D7).

By contrast, 'rich' people who played the lottery could absolve their conscience (about taking part in a non-discriminatory form of gambling) by thinking "well, we are doing our
bit for charity" (A6). Whilst, the 'poor' people were more likely to undertake particular types of entertainment, e.g., watch television rather than visit the opera.

Dreaming about the lottery was opposed because it conflicted with a Protestant Work Ethic (PWE), acting as a replacement in 'real time' for 'hard work'. "It is undermining what a lot of our upbringing is about, we work hard to get reward" (A1). A correlate of the Protestant work ethic was the value placed upon activity rather than passivity and its relation to the lottery. For some, the lottery was seen to have encouraged lethargy which was not a positive virtue.

Knowledge of mechanisms for distributing money from the lottery was very low and subject to misunderstanding. For example, "[money for] that research that was on the radio yesterday a million [pounds] or something into why cornflakes go soggy when you pour milk onto them! (laughter)...I suppose that the whole point is that you don’t really know what or who..." (B2). Alternatively, there was suspicion that a disproportionate amount of money was spent on 'administration', e.g., "Camelot shareholders get an awful lot of it. Camelot’s friends get another large proportion... the great and the good... [it is] in their interest to keep politicians sweet for example a lot of money goes on that..." (A6).

The 'arts' especially in London, were the archetypal recipient of funding whilst charities equalled 'good causes'. However, funding of “arty farty” (B10) projects under the guise of charity funding was both negative, i.e., “a tragic waste of public money” (B10) and positive (D1), i.e., “one of the best ideas that they could have” (B5). By contrast, money for heritage was positively evaluated since it was associated with 'conservation' (e.g., A5). The millennium commission was an enigmatic recipient of funding (e.g., C2).

Winners were characterised as 'them' rather than 'us' along the same dimensions as those that differentiated players as 'them' from 'us'. The archetypal win was a million (e.g., B9) and this was the amount envisaged to induce 'change' in winners. Although generally positive (C3), a minority thought that such a win could have negative consequences in terms of changing family relationships (B3). Winning was estimated along 'a risk of experiencing a violent outcome' dimension, e.g., "...more likely to get murdered" (D7). Chance of winning was increased by association with something 'lucky'. However, winning was considered to be an unlikely event, e.g., "Isn’t it more likely that you will be hit by a comet in the next two hours or something absurd than winning the lottery, 1 in 40
million [underestimated probability of winning]” (C5). Participation was motivated by the chance of winning money, e.g., “I am a selfish person I play because I want to win the money not because I want to donate the money to charity” (C2) and maintained by fear of self-hatred or death, including suicide (A3) that could result from not playing and missing a winning combination on the lottery. For example, “Isn’t it that thing as well that you chose your numbers and it is the fear that on the week that you decide that you are not going to bother that if those numbers that you chose each week...that you would absolutely hate yourself so much if...[you won]” (B2). This effect was aggravated by a pattern of playing in which people chose to play with the same set of numbers each week or when people were responsible for purchasing lottery tickets on behalf of others, i.e., as a member of a syndicate. However, in the event of a possible win there was considerable emotional arousal (albeit that few participants had had such an experience). An exception was (B1) who described the effect of nearly winning as follows: “I got one, two, three and I thought oh well I have won a tenner and then four and I thought oh Jesus Christ and I was going like... and my heart was going and it was really exciting...” (B1).

Losing was ‘not talked about’ and effectively absent from the representation of the lottery even amongst participants. For example, “My dad is spending about £8 a week on the lottery with his flatmate... and they love talking about the £30 they won but they never talk about the amount of money they have spent” (B5).

Amongst the discussants, participation provided a means of establishing group cohesion and conformity. Participation was indexed by direct action, e.g., purchase of a lottery ticket or scratchcard (infrequently or frequently) or, taking part in an associated activity, e.g., watching the televised draw of the lottery or, talking about the lottery with others. Participation was also indexed by thinking about the lottery. All forms of participation were negatively evaluated by non-participants but were neutral or positive for participants.
4:6 Discussion and conclusions

The ease and enthusiasm with which participants talked about the NL suggested that this particular social entity had become a social representation in that it had become "a part of the culture, of the ways of thinking and acting of a large number of people in their everyday life. Or at least a shared reference point for interpreting events and relationships in their society" (Moscovici, 1988, p.227). It was evident that inter-individual communication provided a means of elaborating upon salient aspects of the NL and that the national press constituted an important source of information about the NL. This relationship will be explored in more detail in the next study that will examine the content of opinions about the NL in the press. From this study it was noted that opinions about the NL were influenced by the degree of direct participation, e.g., buying a lottery ticket, or, indirect participation, e.g., watching the televised live-draw, engaged in by respondents (or their immediate family or friends).

Despite an established history of lotteries in the UK since 1826, comparison was generally made between the contemporary lottery and lotteries abroad rather than pre-existing lotteries in the UK. The national lottery was also associated with examples of alternative forms of gambling, e.g., premium bonds and horse racing. Scratchcards by contrast were compared with existing familiar categories (Doise et al., 1993), i.e., other scratchcards in the UK. In order to establish the potential field in which a representation could be anchored, a variety of sources, e.g., documentation and verbatim resources were required to note absence as well as presence of reference entities for the representation. This implied that research on the anchoring process must draw upon a variety of sources other than verbatim reports of a particular sample.

Particular elements were identified that may constitute part of the social representation of the UK NL. These included: accessibility to the lottery and the frequency of play, i.e., weekly draw; the archetypal win as one million pounds, an amount which would lead to 'change' in the winner; reference to hopes, dreams and fantasies in the form of imaginary outcomes from a win on the national lottery; the risk of the lottery to 'weak' sections of the population, e.g., poor, aged and women, through the erosion of 'willpower' and the likelihood that psychological health would be threatened, i.e., 'hysteria' would result from an erosion of willpower. By contrast, scratchcards constituted a threat to the physical
health of minors rather than adults in a manner similar to the smoking of cigarettes. Overall, losing was not considered a salient aspect of either the national lottery or scratchcards.

Vocabulary used in connection with salient aspects of the national lottery involved distinguishing between ‘them’ as players and ‘us’ as non-players that was related to stratification by social class. ‘Them’ and ‘us’ were divided on the basis of activities undertaken, occupation and wealth. This accorded with the notion that people draw upon ideas and ways of thinking about something novel which were acceptable to the groups with which they identified (Joffe, 1996b). The distinction between ‘them’ and ‘us’ accorded with existing research in which ‘contagion’ was cited as a reason for differentiation (e.g., Jodelet, 1991). Given that this research was concerned with a particular social entity, the UK NL, rather than a pre-existing belief system, e.g., definitions of (physical or mental) health and illness, it was somewhat surprising to find the NL described in similar terms. The novelty of the UK NL as a social entity seemed to threaten physical and psychological aspects of the ingroup, e.g., their sanity, health or willpower, through loss of control in the form of hysteria or questioning of values of the group expressed in the Protestant Work Ethic (PWE). Values commonly associated with a PWE included: hard work, asceticism, negative views and being anti-leisure (Mudrack, 1997). The national lottery was opposed by respondents in this study, on the basis that it encouraged lethargy and this mitigated against working to earn money.

This study provided some indication of important content elements in the social representation of the national lottery and scratchcards. Obviously, it was not expected that this method would provide access to all the possible salient aspects of the social representation. Nevertheless, language and terms associated with the national lottery were identified, particularly in relation to differentiation between ‘them’ and ‘us’. The use of focus groups was commended for investigating content elements of social representations of a novel social entity at an inter-individual level. However, focus groups may not constitute the most appropriate method for investigating clusters of individual differences since they may be subject to certain group conformity effects, e.g., the dominance of particular members of the group. It was considered desirable to investigate possible sources of information about the UK NL, in particular the national press. In this sense,
other forms of data collection including questionnaires and media analysis were proposed for use in subsequent stages of the present research.
CHAPTER FIVE

Study Two: The content of social representations of the UK national lottery and scratchcards derived from an analysis of three sources of newspaper articles

5:1 Abstract

The social representation of the UK National Lottery was explored at a societal level through the content analysis of three sources of national newspapers, the Daily Telegraph, The Guardian and the Sun. The results of this analysis were presented in both a pictorial and textual format. Over time, the relative importance and relationship of elements within the representation changed such that three ‘active’ and two ‘fallow’ phases were identified. The implication of the results for the genesis and transition of a social representation was elaborated upon in the discussion.

5:2 Introduction

Having investigated what people talked about when asked about the UK NL in the previous study, it was appropriate to consider how their opinions might have been influenced by external sources, e.g., the national newspapers. Given that media analysis was an established means of investigating social representation at a societal level (e.g., Moscovici, 1961), a study of contemporary, relevant articles was proposed.

Study one provided some evidence of what may constitute the content of shared representations of the UK National Lottery (NL) and scratchcards, at what could be considered, an inter-individual level. However, the focus groups were conducted approximately one year after the launch of the national lottery, in October and November 1995. In this sense, to study genesis and development in social representation, it was considered appropriate to conduct a retrospective examination of possible sources of information, e.g., popular books or the mass media. These sources may have influenced opinions about the NL and consequently, informed how people related to each other and to the world in general (Moscovici, 1984a).
It was proposed that the adoption of an analysis of newspaper media articles would permit the exploration of the content of representations of the NL at a societal rather than inter-individual level of analysis. At the time of the research, there were relatively few sources of published information about the UK NL. It was assumed that the media would be an important source of influence for 'versions of the truth' (Moscovici, 1984b) about the UK NL. Media articles were chosen because they constituted a form of communication associated with diffusion of information that was in turn considered to be related to opinion formation and transformation. This assumed social representation was more likely when communication was invoked at both an inter-individual and individual-societal level.

The emphasis within study two was temporal, in that this study was designed to provide an insight into the process of social representation, particularly genesis and transition of social representations and the processes of anchoring and objectification respectively. It was hoped that the relational nature of study two would also permit an exploration of issues associated with conformation, i.e., how potential content elements may be related to each other albeit in a less than coherent but not random manner (e.g., Moscovici, 1996).

Media analysis (e.g., Priest, 1996) was a qualitative methodology considered particularly appropriate to use, given it was an established method in studies of social representation (e.g., Moscovici, 1961; Sotirakopoulou and Breakwell, 1992). It was anticipated that a degree of similarity would be noted between the content elements derived from the focus group discussions and the analysis of media articles in the present study. In essence, it was hoped that media analysis would provide a means of exploring how social representations emerged and were transformed in the context of a novel, social entity, i.e., the UK National Lottery.

5.3 Aims

- To explore the content of social representations of the UK National Lottery at a societal level of analysis
- To investigate how content elements were implicated in the process of social representation, i.e., anchoring and objectification
- To consider the implication of particular content and processes for conformation
5:4  Method

5:4:1  Source materials

Three national newspapers were selected for analysis that had reasonable levels of readership and were associated with different political interests. Two broadsheet and one tabloid newspaper were sampled. It was expected that tabloid reporting on the lottery would be relatively consistent and a greater difference would exist between broadsheet papers of opposing political orientation. This was supported by a random sampling and comparison of tabloid articles during the data collection period, i.e., tri-monthly.

In 1996, the Daily Telegraph (DT) was a broadsheet with an estimated daily readership of 2.5 million people and a 'right' political bias. The Guardian (G) was a less widely read, 'left-of-centre', broadsheet, with an estimated daily readership of 500,000 people. The third newspaper to be sampled was The Sun (S), that was a tabloid paper with a 'right' political bias and the highest estimated daily readership of the three papers sampled, i.e., 4 million readers. It was noted that both DT and S were part of the Murdoch-owned media empire that included The Times.

5:4:2  Means of collection

Newspaper articles were accessed from three sources; the Internet, CD ROM and hard copy. The Internet articles were easy to access, quickly collected and collated and provided a comprehensive and accurate search of all relevant editions of the paper. Downloading from electronic sources, i.e., the Internet or CD ROM permitted analysis without articles being typed into a file before the content was analysed. It was suggested that these methods reduced researcher fatigue and hence mistakes at the collection and collation stage of the research.

5:4:3  The Daily Telegraph (DT)

The Daily Telegraph articles were collected using the Internet. By using the Internet, a thorough search of all articles concerning the lottery was possible as it provided a search facility driven by 'keywords' that could be time-stratified. Consequently, articles between Monday and Saturday of the specified period were downloaded onto a computer disk. All
post-November 1994 articles were collected using the search terms; 'lottery', 'national lottery' and 'Camelot'. No articles using these search terms were found prior to November 1994. 'Scratchcard' articles were also located using the search term 'lottery'. A total of one-hundred and forty-two articles were sampled from DT.

5:4:4 The Guardian (G)

The entire edition of G was unavailable on the Internet (only the second section). A search of articles about the lottery in this section only produced six articles. The Guardian was collected up to and including September 1995 using (G) on CD ROM. In a similar manner to the Internet, the CD ROM source provided a keyword search facility. All searches were conducted using the term 'lottery'. Terms such as 'National Lottery' and 'Camelot' were used but all articles produced were also found using the keyword 'lottery'. A total of two-hundred and fifteen articles from G were collected from the CD ROM. Between October and December 1995, hard copies were photocopied and used for the analysis. There were twenty-six articles collected during this period.

5:4:5 The Sun (S)

All the photocopied articles from The Sun were collected from Brixton Library, London. A total of one-hundred and sixty-seven articles about NL were collected using this method.

5:4:6 Sampling rationale

A combination of time series and event sampling techniques were used. Articles to be analysed were collected from the Saturday preceding an event (as appropriate) up to and including the following Friday with the exclusion of the intervening Sunday.

5:4:7 Event sampling rationale

In order to decide upon the events to be sampled since the launch of the lottery, a CD ROM search of The Independent was conducted. This paper was not used in subsequent analysis. A broadsheet rather than a tabloid, with a liberal-political bias, it was considered to provide adequate coverage of major topics in the life of the national lottery. In
addition, an alternative source of information about the life of the lottery was sought in the form of a WWW site on the Internet about the lottery. This site information was compiled by an individual using official lottery publications and was accessible to all Internet users. It provided a summary of important events in the life of the lottery. However, this summary was biased toward events about system and/or computer failures that were not reported in detail, if at all, by the Independent newspaper.

It was noted that a major lottery issue arose during approximately one week of every month. Exceptions were however, February and May of 1995 when according to the Independent and the Internet source it seemed as if there were no significant lottery events. Confirmation of this was sought and obtained using a search of the dates and titles of articles from the entire data collection period from the Internet version of DT.

5:4:8 Time-sampling rationale

Consequently, to minimise bias toward events, it was decided that articles be selected from one week of each month, at three month intervals, from the launch of the lottery in November 1994. As the lottery was launched on the 14 November, the corresponding Saturday-Friday for each tri-monthly period was sampled irrespective of what lottery events did or did not occur during that time. In this manner, four weeks were sampled during the fourteen month period, making a total of eighteen weeks sampled in total. Despite the benefits of this additional sampling in terms of minimising bias toward events, it was acknowledged that the distribution of weeks sampled throughout the fourteen month period would be uneven. Table 9, illustrated when each period of data collection occurred and the rationale for collection during each period. A total of five-hundred and fifty articles were collected from the three sources from a period between November 1994 and December 1995 according to the time and event sampling procedures specified earlier.
Table 9: Period of data collection for articles from each of the three papers and the event and time rationale

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Dates</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>November</td>
<td>12-18</td>
<td>Launch of the UK National Lottery</td>
</tr>
<tr>
<td>1994</td>
<td>November</td>
<td>19-25</td>
<td>First draw</td>
</tr>
<tr>
<td>1994</td>
<td>December</td>
<td>10-16</td>
<td>First major winner announced</td>
</tr>
<tr>
<td>1995</td>
<td>January</td>
<td>7-13</td>
<td>First double jackpot</td>
</tr>
<tr>
<td>1995</td>
<td>February</td>
<td>11-17</td>
<td>TIME SAMPLE</td>
</tr>
<tr>
<td>1995</td>
<td>March</td>
<td>18-24</td>
<td>Launch of scratchcards</td>
</tr>
<tr>
<td>1995</td>
<td>April</td>
<td>22-28</td>
<td>Purchase of Winston Churchill Archives</td>
</tr>
<tr>
<td>1995</td>
<td>May</td>
<td>13-19</td>
<td>TIME SAMPLE</td>
</tr>
<tr>
<td>1995</td>
<td>June</td>
<td>10-16</td>
<td>Record National Lottery win</td>
</tr>
<tr>
<td></td>
<td>March</td>
<td>19-25</td>
<td>Camelot Annual Report Published</td>
</tr>
<tr>
<td>1995</td>
<td>July</td>
<td>15-21</td>
<td>Award announced for Opera House</td>
</tr>
<tr>
<td>1995</td>
<td>August</td>
<td>5-11</td>
<td>Award for Eton school announced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12-18</td>
<td>TIME SAMPLE</td>
</tr>
<tr>
<td>1995</td>
<td>September</td>
<td>16-22</td>
<td>National Lottery reviewed by politicians</td>
</tr>
<tr>
<td>1995</td>
<td>October</td>
<td>21-27</td>
<td>Charities board awards £40 million</td>
</tr>
<tr>
<td>1995</td>
<td>November</td>
<td>11-17</td>
<td>TIME SAMPLE (1st anniversary)</td>
</tr>
<tr>
<td>1995</td>
<td>December</td>
<td>9-15</td>
<td>Richard Branson contention</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16-24</td>
<td>OFLOT questioned</td>
</tr>
</tbody>
</table>

5:4:9  Stages in the analysis of the media material

Themes were identified on the basis of their occurrence and distinctiveness from each other during the first month of analysis in November 1994. Articles from subsequent months were categorised under these thematic headings. In the event that the substantive content of an article did not fit into any of the existing categories, a new category was established. The emergence, erosion, modification, re-association and persistence of themes formed the focus of the analysis.

Stages and guidelines for the analysis of media sources were provided that were suitable for conducting inter-rater reliability. There were three stages in the analysis. Guidelines for each stage were:

- The substantive content of each article provided the major theme(s) that the majority of the content referred to.

- Within each article information about ‘content’, ‘emotions’ and ‘moral’ aspects were distinguished and significant ‘omissions’ noted.
The whole of the chosen textual extract was quoted with source and date of publication. In ascending order of importance these were: what was contained within a single sentence; how this was contextualised within the paragraph and what other, if any, themes were included or excluded from the whole article.

Purely factual information was extracted and placed under the heading 'content', i.e., the size, number, type, time, name, position of, people, places, events or objects. References to feelings or emotions were placed under the heading 'emotions'. For example, expressions of fear, happiness, sadness, regret, joy or concern. In addition, information was included about who expressed the emotion and what the expression of emotion achieved. For example, what message was reinforced and how the credibility of a particular source of emotion was negated.

References to beliefs or values were placed under the heading 'moral' and included details about who and from what media source, e.g., winners, or the state these references had been made. It was noted that often, the moral imperative of a particular article was expressed through the use of 'should'. Where applicable, evidence of conflict of interest was noted, i.e., who the interested parties were, what values they espoused and how these related to the lottery.

'Omissions' were noted when either one or more of the papers reviewed failed to refer to a known event or person associated with the lottery at a particular time. Any 'other' observations or comments were recorded separately.

To review, having collected all the published articles within each of the three papers that referred to the national lottery or scratchcards within each of the specified periods outlined in table 9., a data file was compiled for each of the three papers; DT, S and G. Each file contained all articles in a chronological order for the specified period for each newspaper. The first stage was to note the date and substantive content of each article. A total of eighteen major themes were identified, sixteen of which were evident in November 1994. The two exceptions were OFLOT, the regulating body and scratchcards that were introduced in March 1995.
Having noted the substantive content, each article was analysed according to its factual content, historical references, emotions, morals, themes, leitmotifs and significant omissions. From this, separate files were compiled for each of the major themes with articles from all three sources as available (with details of the source, date and page within the original source noted). In this manner, eighteen data files were produced that provided the basis for analysis of the development of themes across the specified, fourteen month period of data collection across the three sources.

5:5 Results

A total of 18 major themes were identified within the specified period. These were subdivided into 52 minor themes. Thirty-eight minor themes arose within November 1994, the first month of the media analysis. Themes included: historical aspects of the National Lottery (November 1994 only); the size of the jackpot; aspects of Camelot; factual procedural information including who received money; the economic impact of the lottery; profiles of projects which had applied for and received lottery funding; the relation of the lottery to other gaming industries; the distributing bodies or five 'good causes' (charities, arts, millennium commission, sport and heritage); comment on the lottery by members of Parliament; OFLOT (the regulatory body); the BBC; gambling; playing; strategies for winning (Sun predominantly); winners, losers and scratchcards.

Figure 2 provides a key to describe the elements derived from the media analysis. The relationship between themes and sub-themes was explored pictorially (figures 3, 4 and 5 respectively). The choice of symbol for each element was arbitrary, being limited by the repertoire of symbols available within the drawing programme used. However, the size of the elements was important as this indicated the relative amount of coverage each element had within the newspaper articles at a given time. Elements closer together were discussed in relation to each other, whereas elements at opposite sides of a pictorial phase were relatively unrelated. The relationship between the elements was considered important for an investigation of conformation.
Figure 2: Key for the elements derived from the analysis of three sources of media. Size of element was indicative of amount of coverage in the media.

- gambling
- scratchcards
- previous lotteries
- Camelot
- government
- winners (individuals and projects)
- "good causes"
- OFLOT
- moral objections
- strategies for winning
- playing
- jackpot
- BBC/lottery live
- Richard Branson
- losers
- direct connection
- indirect connection
Figure 3: Exploration of relationship between elements within the social representation of the UK national lottery derived from analysis of media articles. Active phase I
Figure 4: Exploration of relationship between elements within the social representation of the UK national lottery derived from analysis of media articles: Active phase II
Fallow phase II

Figure 5: Exploration of relationship between elements within the social representation of the UK national lottery derived from analysis of media articles: Active phase III
It was suggested that five phases could be discerned in the development and transition of the UK national lottery social representation according to the media analysis conducted in this study. Three phases were ‘active’, i.e., the importance or position of elements within the representation altered leading to restructuring in the representation. Two phases were ‘fallow’, i.e., coverage of the lottery or scratchcards was limited during this time and the relationship between elements did not alter.

**Active Phase One (November 1994- Jan 1995): ‘Pre-representational Phase’**

Previous lotteries in the UK and other countries were initially important. Reasons for the demise of previous lotteries in the UK were discussed at this time, e.g., the results of an 1808 parliamentary select committee report that found that “idleness, dissipation and poverty are increased, domestic order is destroyed, madness often created” (Guardian, November 12, 1994). The government seemed close to other lotteries and connected to ‘good causes’, the BBC and ‘playing’. The connection between the government and the BBC was based upon the credibility of previous lotteries in the UK. Credibility, respectability and nationalism were salient aspects of the BBC that Camelot hoped would become attributes or values associated with the lottery. It was deemed important to associate the National Lottery with existing qualities of the BBC. When the quality of the televised live-draw was questioned, it implicitly reflected upon the quality of this particular gambling phenomenon, e.g., “...The 15-minute draw programme has been labelled tawdry and downmarket, and there have been persistent rumours that Camelot... are unhappy with the format” (Guardian, December 14, 1994). During this phase, the BBC was one of the largest elements.

At the interface between the BBC (the ‘lottery live’ programme) and Camelot was the element ‘playing’. Playing in phase one, was the pivotal element around which Camelot, BBC, government, winners and strategies for winning developed.

Most of the elements in phase one were concrete and distinct from each other. A vague element at this stage was gambling (in which other forms of gambling ‘nested’, especially the football pools). This was in the same temporal zone of ‘phase one’ as previous lotteries and the government due to its prior establishment. Moral objections at this stage were relatively minor and principally voiced by members of the Methodist church.
concerned about gambling and the size of the jackpot. However, this was achieved in a ‘referential’ rather than concrete manner, i.e., the objection was indirect. The Methodists, through their ownership of shares in Cadbury-Schweppes, De-La-Rue and till recently Racal electronics, were economically associated with Camelot.

During this phase, the connection between Camelot and the government was mediated through ‘good causes’ that were ‘good’ according to government, e.g., the National Lottery etc. Act 1993 and Camelot promotional literature. By establishing the term ‘good causes’ within official literature, subsequent sources, i.e., the media also adopted this form of description, e.g., “…We’ll save the cheering until we see how much is going to REAL good causes... like medical research or the NSPCC” (Sun, September 18, 1995). At this time, charities were slightly more salient as a ‘good cause’ than the millennium commission, arts, heritage or sport,

Prior and post-launch, strategies for winning (including psychic and ‘lucky’ objects, people or methods) were strongly associated with playing. In some papers, particularly the broadsheets, strategies for winning were not emphasised. As the first winners were announced, a profile of winners began to develop centred around their age, status, e.g., married or single and with or without children, sex (predominantly male), the region in which they lived and their occupation (which was closely linked to class). The amount of money won, especially if a jackpot, was linked to winners. The greater the sum of money involved, the more likely moral objections were to be raised.

It was noted that the three press sources differed in terms of their perspective toward the amount of money awarded as the jackpot prize. The Daily Telegraph adopted an economic perspective, justifying the amount as an incentive to maintain levels of participation in the NL (akin to official government sources), the Guardian cited moral objection particularly from religious sources, e.g., the jackpot was described as ‘obscene’ and ‘ridiculous’ whereas the Sun was more emotive, appealing for recognition of the jackpot in terms of ‘excess’.

Revelation of the identity of the first major lottery winner during this phase prompted concern about privacy. Within the privacy element, OFLOT, the regulatory body of the
national lottery emerged at an interface between winners and Camelot. OFLOT, at this time was a minor element and distanced from Camelot and the government.

Fallow Phase Two (February 1995)

During this fallow period, scratchcards were introduced as a possible future element. Moral objections were mediated through scratchcards. Information was provided about the operation of the charities board. The Sun associated aspects of the lottery with temporally specific events, e.g., Valentine's day on 14 February 1995. It was found that strategies for winning and the BBC were linked from phase one to phase three through fallow phase two.

Active Phase Three (Mar 1995-July 1995): ‘Representation Phase’

During phase three, a coherent representation of the lottery seemed to emerge. Elements within the social representation included; Camelot, charities, losers (which did not persist), the jackpot, winners (as people and projects) and peripherally the BBC (specifically the ‘lottery live’ programme). The introduction of scratchcards in March 1995 provided a focus around which moral objections crystallised. Other forms of gambling joined ‘will power’ as sub-elements of gambling.

Playing which had been the pivotal element of phase one and indirectly connected to gambling through Camelot, became directly connected through the will power sub-element. Furthermore, playing that had been relatively neutral in terms of moral implications became tagged with under-age playing and the propensity of poor and working class people to gamble. Playing was distanced from winning and winners through the introduction of the new element of ‘losers’. Losers emerged as a relatively small but important element at the centre of phase three. Losers acted as a pivotal element for playing, winners and the ‘good causes’ (that were becoming increasingly synonymous with charities).

During phase three, the ‘good causes’ element fragmented so that the millennium commission, arts, heritage and sports moved toward a diversification of the original winning element into project ‘winners’ and people as ‘winners’. Since the first award of
the charities' commission had not been announced, charities remained synonymous with a 'good cause'. Camelot, closely connected to 'good causes' in phase one, was distanced from them by the emergence of 'Richard Branson' at an interface between charities and Camelot in phase three, albeit that Richard Branson was a vague element.

The five share-holding companies of Camelot were joined by 'profits' as sub-elements. The conceptual distance between Camelot and the government decreased significantly during this phase and OFLOT became a distinct element joining them in a relatively close knitted triple-element. This triple-element was connected to scratchcards through OFLOT. However, scratchcards were not connected directly to Camelot and were distanced from the distributing bodies and winners.

The Department of National Heritage, a sub-element of the government, emerged and operated in close alliance with the charity's element. However, the role of the Department of National Heritage and the other distributing bodies remained indistinct during this phase.

Whereas the BBC had been a major element in phase one, by phase three it had become less important to the development of the social representation of the lottery. However, the importance of this element may have been more salient if analysis had been conducted of TV programmes in addition to newspaper articles. Of credibility, respectability and nationalism associated with the BBC in phase one, only credibility remained salient. This was operationalised through the discourse of the lottery live presenter 'Anthea Turner'. The BBC was related to other elements through coverage of projects that received funding during this phase.

Of particular salience were awards from heritage for the purchase of the Churchill papers and from arts to opera and the Royal Opera House in particular. Through the Churchill papers, the government became allied to projects receiving money and the award raised suspicion about the independence of the government from the bodies making the awards. As the awards became more controversial, so the degree of exaggeration increased, e.g., the actual award of £12.5 million became systematically increased to £13.25 million and finally £14.25 million by the Sun. The purchase of the Churchill papers was differentially reported by the Guardian and Sun as compared with the Daily Telegraph. Whilst the
former described the award as a 'misuse of public money' (Guardian, April 27, 1995) and "furious Sun readers shook their fists in anger" (Sun, April 28, 1995), the Daily Telegraph reported that "a Downing Street spokesman said later that people should 'rejoice' that the archive was being kept together in this country" (Daily Telegraph, April 28, 1995).

It was noted that the sports council made the first and least controversial awards during this phase. Even the debate about which site (Wembley favoured) should receive lottery money for the new national stadium project was relatively mild. The millennium commission remained vague and unknown and hence not contentious, since it was a less emotive issue.

On the whole, financed projects became 'worthy' or 'unworthy' rather than 'good' or 'bad'. Despite a lack of awards made by the charities' commission during this phase, these projects were still regarded as 'good'.

Winners were divided (much like a cell), into projects as winners and people as winners. Akin to phase one, the amount of the jackpot remained an element in the social representation of the lottery connected predominantly to individual rather than syndicate winners. Strategies for winning became less important, being connected more distantly to winners. The association of the jackpot with moral objections was cut as scratchcards emerged as an important element.

**Fallow Phase Four (August 1995)**

Scratchcards continued to feature as retailers were prosecuted for fraud. All the retailers reported were male. At the same time a major jackpot winner (also male) was prosecuted for crimes committed prior to his win. Camelot and the government were implicitly connected to these elements and unified through law enforcement. The BBC continued to cover the lottery through it's 'lottery live' programme-acting as a link between phase three and phase five.

As in fallow phase two, procedural aspects of the charities element featured, as information about members of the charities board increased.
Active Phase Five (September 1995-December 1995): ‘Consolidating Phase’

By phase five, moral aspects had become prominent to the social representation of the lottery. Gambling was synonymous with moral concern and the entire element was further supplemented by scratchcards that had become integrated into moral concern. Sub-elements of gambling included: public ethics and other forms of gambling as in previous phases. Associated with gambling and scratchcards that had become ‘evil’, was concern about children’s purchase of scratchcards. The Liberal Democrats and a multi-denominational contingent of churches denounced both scratchcards and the size of the jackpot. By phase five, the jackpot had become separated from winners.

Branson who had emerged in phase three at the interface between charities and Camelot became a ‘champion’ of moral concern, strengthening the connection between Branson and charities that epitomised ‘good causes’ by this time. The relationship between Branson and the BBC was interesting, by phase five, the BBC had become a minor element in the social representation of the lottery, distanced from Camelot and the government. This was epitomised by the following quotation.

“The BBC has a strong sense of its identity and is extremely reticent about losing any of its editorial control. Camelot is a hard-nosed commercial operation full of Americans and Australians who look on this sort of attitude as being wonderfully quaint” (The Daily Telegraph, November 15, 1995, p.22).

By providing a forum (a BBC Panorama programme), for the airing of allegations by Richard Branson concerning the propriety of GTECH (one of the share holding companies of Camelot), the BBC aligned itself with Branson rather than Camelot.

The tripartite element of Camelot, the government and OFLOT was consolidated by the Department of National Heritage at the interface between OFLOT and the government. This involvement effectively moved the Department of National Heritage away from charities (and their associated ‘goodness’) toward the government. By phase five, the representation of the government and it’s attendant credibility and responsibilities were allied closely with Peter Davis of OFLOT and Camelot. Due to the coverage of GTECH and Branson, other companies within Camelot receded in importance. The Methodist
church did not have shares in GTECH and its moral objections centred around the size of the jackpot and scratchcards rather than where the money was going.

In fact projects that received lottery money, besides charities, seemed less important during this phase. This was in direct contrast to the emphasis placed upon them during phase three. Only the first charities awarded lottery money were salient. Sub-elements within charities included, ‘good causes’, projects financed and medical research (not financed at this stage).

Other projects, rather than being aligned with ‘winners’ became satellites of the government element. They were associated particularly closely with the millennium fund (that remained relatively anonymous). Coverage of the Arts Council was mediated through the vociferous Department of National Heritage and became completely disassociated from any of the other funding bodies. There was, by phase five, a distinct lack of unity between the different funding bodies. The sports council did not feature as an element at all.

Also absent by phase five was playing that had been so central to the representation during phase one. Playing had become subsumed within moral concern, an element it had been moving toward since phase three.

Winners had also reduced in significance. This was possibly due to the amount of alternative issues covered at this time in the press about the lottery, i.e., Branson and OFLOT. However, when reviewed, aspects of winners that formed sub-elements were more negative than during previous phases, i.e., winners were ‘bored’. This may have been related to the coverage of the renegade winner in fallow phase four.

Strategies for winning persisted but as a minor element unconnected to any element other than winners (still with psychic and lucky sub-elements). These two interconnected elements appeared to be in orbit around other elements.
Overall, it seemed as if there was a social representation of the lottery that began as a series of disparate elements with temporal anchoring in previous lotteries in the UK and other countries. Playing, was a Camelot or advertising element, introduced to provide a neutral, or positive focus for the UK lottery. However, the introduction of scratchcards marked a significant shift toward a re-organisation of elements around emotionally significant events that displaced the neutrality of playing. By phase five, the elements had coalesced around politically and morally contentious issues. This left a series of elements in orbit around a selection that included; charities, the government, Camelot and moral issues (epitomised through scratchcards).

Discussion and conclusions

This section considers the extent to which the results, described in both a pictorial and textual format, supported the three aims of the study, namely, to explore the content of social representations of the UK National Lottery at a societal level of analysis; to investigate how content elements were implicated in the process of social representation and to consider the relationship between content and processes of social representation for conformation.

In terms of content, the results suggested the existence of eighteen major themes within newspaper articles published about the NL across the period of data collection, from the launch of the NL in November 1994 through to the end of December 1995. These themes provided the substantive content of NL articles and as such were regarded as indicative of content of social representations of the NL at a societal level of analysis.

The results suggested that social representations of the national lottery evolved through five stages. These stages or phases were not considered as absolute and it was not envisaged that all representations would evolve through identifiable stages in their development. Three of these stages were described as ‘active’ and two as ‘fallow’ phases. Each of the fallow phases occurred between the active phases and seemed to provide a period for transition in the development of the representation of the national lottery.
In order to investigate social representation, it was necessary to study the process by which the novel social entity, the UK National Lottery became familiarised. The first phase was considered ‘pre-representational’ in that the elements were loosely related, i.e., there was a relative lack of elaboration between elements within the sampled articles. An exception was the close association, in the earliest phase of the analysis, between the NL and reputable organisations, i.e., the BBC. It was suggested that this association constituted a means of attributing credibility and respectability to the novel entity. In fact, it seemed as if establishing credibility was of central importance to the establishment of a social representation of a novel social entity such as the UK National Lottery.

It was noted that historical references to the demise of previous lotteries in the UK were limited to the first month of coverage, i.e., November 1994. As participation increased, the source of information for newspapers about the NL shifted from historical and official (Camelot) sources to contemporary events, e.g., the disclosure of the identity of the first major winner. As such, it could be argued that the NL was initially associated with previous examples of its kind in the UK and abroad mainly as a consequence of the type of official sources that were used by the media in the first weeks following the launch of the NL. However, these sources provided information that did not have an emotive content, since they consisted largely of historical ‘facts’. For objectification to result, it seemed necessary to engender extensive communication about the NL within the national press and by corollary, amongst their readers. As a result, it seemed as if it would be in the interest of both the newspapers (for readership) and Camelot (for levels of participation) to create a situation in which the NL became an emotive topic of discussion. This it is suggested, was achieved initially, through the publication of information about the identity of the first major winner. Revealing this information led to discussion about the integrity of both Camelot and the media as a function of the rights of the individual to privacy. As a morally contentious and familiar issue, privacy provided a vehicle for the objectification (e.g., Lorenzi-Cioldi, 1996) and familiarisation (Moscovici, 1984b, 1990a) of the NL. Following the establishment of conditions of contention, associated with particular elements in the representation, familiarisation could commence.

Thus far, it has been suggested that a first step in the process of familiarisation or establishment of a social representation of a novel social entity at a societal level of analysis, involved comparison with historical examples of its kind and the association of
the novel entity with pre-existing institutions that were regarded as legitimate, (national) and credible, e.g., the BBC. However, comparisons of similitude were not enough to sustain the development of an independent representation, it was necessary to engender debate about the target entity. In this case, revelations about the identity of the first major jackpot winner, provided an opportunity for the press to elaborate the representation. The particular perspective adopted differed between the three sources; the Daily Telegraph adopted an economic perspective, the Guardian cited moral objection particularly from religious sources and the Sun was more emotive, appealing for recognition of the jackpot in terms of 'excess'.

The fallow phase two prior to the 'representational phase three' may have provided a period of time during which (social) accommodation of elements associated with the NL occurred.

In terms of conformation, the pictorial rendition of the results suggested that certain elements were more central to the social representation, e.g., winners (both people and projects), playing and scratchcards. By contrast, some elements (e.g., the BBC), became less important to the social representation of the NL. This relationship between elements remained essentially the same in the later stages of the analysis, i.e., phase five, despite the relative importance of some elements changing, e.g., the BBC element became smaller. This suggested a degree of conformation in the social representation of NL at a societal level albeit based upon the categorical analysis of data.

In fact, the analysis suggested it may be appropriate to describe two parts to the social representation of the NL at a societal level and that these parts may constitute structures akin to a central core and periphery. This was supported by the way in which the relative centrality of elements within the representation changed over time. For example, in phase three, the jackpot element was related to individual rather than syndicate winners but the strategies for winning element became a peripheral element connected more distantly to winners. Also, the association of the jackpot with moral objections was weakened as scratchcards emerged as a more important element. Meanwhile, some elements, notably the millennium commission, remained vague and not contentious and were characterised by an absence of emotive content when mentioned by the press.
However, it could be argued that the presentation of the results in a pictorial format constituted a form of objectification of the NL (e.g., Doise et al., 1993) and therefore care must be taken in when interpreting and generalising from these findings. It may be possible that the rendition of results in a two-dimensional pictorial format increased the likelihood of finding patterning amongst the elements. Nevertheless, elements present during the second and third active phases were similar to those identified within study one (chapter four) at an individual level and this lent some additional support to the suggestion that a social representation of the UK NL had developed. These elements included: willpower as a sub-element within gambling; the salience of the 'arts' and a lack of unity between the different funding bodies. Furthermore, in both this and the previous study, losing was relatively absent from the developing representation of the lottery. However, playing which had been so central to the representation during phase one, had by phase three become subsumed within moral concern. This had not been noted within the analysis of the discussion groups conducted in study one. A reason for this may involve the relative importance of participation for individuals compared to the press, the later would not have been so directly involved in playing the national lottery. It may be necessary to consider in more detail the relationship between participation and social representation of the UK NL in further studies.

On the whole, the results were indicative of similar content to the social representation of the UK National Lottery at a societal level as had been described at an individual level in the previous study. In fact, the results suggested the development of a social representation of the NL occurred over a period of months following the launch of the NL. By the time the focus groups were conducted for study one, in late 1995, the press had established a pattern of discourse about the NL that may be seen to have been picked up by respondents. Given the influence of the press on opinion formation, it was therefore, not surprising that there was a similar content at both an individual and societal level of analysis.

However, there were a few methodological issues to consider before overstating the similarity of content outlined above. These included the possibility that the present study was biased toward contentious 'events', e.g., relating to the distribution of money from the national lottery or, events with negative consequences for individuals, e.g., suicide or addiction, that may be the particular concern of newspapers keen to maintain and enhance
readership figures through sensationalism. However, these types of events were also important to people interviewed in the focus groups that suggested that the emotive content of articles was important to the process of diffusion of opinions from the press to the individual. Finally, it can be reiterated that establishing credibility was important to the process by which the social representation of the NL formed. Elements had an implicit evaluative dimension being connected through credibility and degree of moral objection. Further analysis was required to investigate how clusters of individuals differed in respect to their use of a similar social representation of the lottery as had been shown by this study.
CHAPTER SIX

Study Three: An interview study of day dreaming about the national lottery

6:1 Abstract

Four reasons were identified for conducting a study of the content of day dreams about the UK NL. The first reason concerned the image component of social representations (Moscovici, 1984a, 1988); the second, the suggestion that unconscious processes be investigated in relation to social representation (e.g., Jovchelovitch, 1995, 1996; Markova, 1996); thirdly, that day dreaming could be described as a form of intra-individual communication and thus, provide a means of investigating social representation at this level in addition to the inter-individual and societal levels (Doise, 1984) and finally, given a proposed relationship between expectations and wishful thinking (Babad and Katz, 1991) or day dreaming, this study constituted a means of exploring how possible selves (Markus and Nurius, 1986) might be related to social representation. Consequently, a semi-structured interview study was conducted with 33 respondents with the focus upon both day dreaming generally and specifically about the UK NL. The results supported the notion that day dreaming constituted a form of unconscious, intra-individual communication with a strong image component that provided an opportunity for some respondents to explore possible future selves.

6:2 Introduction

In the first instance, figurative and iconic components may be acknowledged as important for both the content and process of social representation (Moscovici, 1984a, 1985, 1988). However, studies that have examined the role of imagery in social representation have tended to concentrate upon external manifestations, e.g., paintings (Beloff, 1994) or wall murals (Finn, 1996) rather than internal iconography, i.e., the imagination, the study of which has been "relatively neglected so far" (Moscovici, 1984a, p.943). Given this omission, it seemed appropriate to consider how day dreaming that had an explicit imagery component (Singer and Antrobus, 1972) may be related to social representation. In addition, a study of day dreaming seemed particularly important since it constituted a widespread form of figurative (social) thought.
“At the present time we see a predominant tendency to convert ideas and events into figurative thought which depicts instead of describing, shows instead of explaining, thus reinforcing the day-dreaming, wishful thinking and dream worlds that are relentlessly churned out in public media and conversation places” (Moscovici, 1988, p.238).

This suggested that day dreaming was an important source of information about a particular entity in a way that might be similar to the influence of external sources such as the national press or inter-individual communication. Therefore, day dreaming may function to provide iconic and abstract components of representations since it was through imagery, metaphor and symbolism that elements became concrete in a representation (Wagner et al., 1995).

Day dreams themselves, have been acknowledged as widespread, normal phenomena (Singer, 1975a, 1975b) that were future-oriented and whose content and frequency have been shown to be related to level of self-esteem (Singer and Antrobus, 1972). Their temporal orientation and the apparent importance of self-esteem suggested that day dreams could be implicated not only in social representation, but also in the existence of possible selves (Markus and Nurius, 1986).

On the basis of their study of the relationship between delinquency and self-esteem amongst young people, Markus and Nurius (1986) proposed that possible selves “represent individual’s ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation” (ibid., p.954). Possible selves were seen to have two functions; firstly, to act as an incentive (to aim for or avoid) future behaviour and secondly, to provide a means of evaluating and interpreting current views of the self (Markus and Nurius, 1986). It was suggested that the evaluation of current experience as either positive or negative related to possible selves envisaged by optimists and pessimists respectively.

However, it could be argued that possible selves were subject to limitation by what could be regarded as pre-existing social representations.
“An individual is free to create any variety of possible selves, yet the pool of possible selves derives from the categories made salient by the individual’s particular sociocultural and historical context and from the models, images, and symbols provided by the media and by the individual’s immediate social experience” (Markus and Nurius, 1986, p.954).

Nevertheless, an investigation of day dreaming provided a context in which to explore “expected, hoped for and feared selves ...[as] day dreams are often completely dominated by self-relevant images of the future” (Markus and Nurius, 1986, p.956).

A further reason for studying day dreaming was that day dreaming constituted a level of awareness not generally studied by advocates of TSR, that is, the unconscious (Markova, 1996) that may be implicated in the social construction of reality (e.g., Jovchelovitch, 1995). It has been suggested that day dreaming may function for adults, like play does for children (Piaget, 1962), that is, it provides a means by which novel experiences become assimilated. Since the process of assimilation was unconscious “even when rational” (Piaget, 1962, p.172), day dreaming was by analogy an unconscious process. During day dreaming, assimilation of thought about actions (enactive), images (iconic) or verbal forms (ratiocinative) was believed to occur.

“Since, over the course of his development, a person will have employed various forms of thought, verbal and non-verbal, not all of his ideas on a given subject will exist in the same form. Some will be stored in the form of schema’s of action and reaction (enactive), some will be stored in image form (iconic), and some will be stored in verbal form (ratiocinative). It is necessary, then, that there be available ways for these disparate forms of thought to become mutually assimilated. Dreaming is one such way, and the reason it seems puzzling to most adults is that it is not a form of thought readily assimilable to waking consciousness” (Piaget, 1962, p.152).

If accommodation rather than assimilation was involved in the process of day dreaming, one would expect actual behaviour or experiences to be modified in the dream sequence (Piaget, 1962). This study provided an opportunity to examine this relationship between day dream content and behaviour. The degree of modification of actual behaviour in reported day dreams could reflect the relative importance of the process of accommodation or assimilation during day dreaming. Given the essential similarity
between assimilation and anchoring (Markova and Wilkie, 1987) and accommodation and objectification (e.g., Moscovici, 1990b) it may be possible to suggest how behaviour might be linked to processes associated with social representation.

As an internal, unconscious process, day dreaming could be described as a form of intra-individual communication in that verbal, iconic or actual interactions could be rehearsed during day dreaming. The importance of communication at both an inter-individual (e.g., McKinlay and Potter, 1987) and institutional or mediatic level had been asserted (Jodelet, 1991) and a multi-level approach to communication appropriate to social representation has been advocated (Doise, 1984). Thus, day dreams may provide a means of investigating social representation at an intra-individual level. This would complement the two previous studies that investigated social representation at an inter-individual and societal level respectively.

Some further details of what constituted day dreaming were required for this study. To date, neither the phenomenon nor process of day dreaming has been extensively or recently researched. Most studies of day dreaming date from the 1960's or 1970's and have been experimental rather than field based (e.g., Antrobus, Antrobus and Singer, 1964; Singer and Antrobus, 1965; Singer, 1966; Singer, Greenberg and Antrobus, 1971; Marks, 1972; Klinger, Grégoire and Barta, 1973; Kripke and Sonnenschein, 1973; Rychlak, 1973; Singer, 1975a). They have tended to adopt a psychoanalytic or information-processing approach rather than consider social or interpersonal aspects of day dreaming. Although these aspects have been investigated more recently in relation to night dreaming (e.g., Ichiyama and Gruber, 1992) they remain largely absent from research on day dreaming.

Two reasons have been forwarded to account for why night dreaming has been more researched than day dreaming. The first involves the relative salience of night dreaming compared to day dreaming (Singer, 1975b), i.e., night dreams exist as "special" phenomenon in our repertoire of experience and as such were more likely to be elaborated upon through discussion and research. Secondly, day dreaming unlike night dreaming occurred concurrently with the use of other sensory modalities, for example, olfaction, audition, vision and motor movements and this may make night dreaming seem more unusual and accessible to investigation. This sensory-overload model was supported by Piaget (1962) who suggested that one of the reasons why dreaming remained enigmatic.
was that we were not used to using a variety of ways of thinking at the same time when we were fully awake. It may also be relevant to note that day dreams may have remained relatively under-researched because like some sense modalities, e.g., olfaction, there was a paucity of specialised vocabulary to describe the experience of day dreaming.

One of the principal authors on day dreaming has been Jerome Singer who began researching day dreaming in 1955. His work was based upon Freud’s theories about dreaming that were in turn influenced by Newtonian physics. According to the ‘Second Law of Thermodynamics’, energy cannot be created or destroyed. Therefore, dreams were seen to provide a safety valve for repressed psychological energy. It may be suggested that Singer (1966) implicitly used a Freudian model when he described day dreaming as occurring predominantly amongst people who were overwhelmed (cognitively, emotionally or behaviourally) in ‘real’ life, as a response to a desire to find solutions to their problems. At this time he defined day dreaming as “a shift of attention away from an ongoing physical or mental task or from a perceptual response to external stimulation towards a response to some internal stimulus” (Singer, 1966, p.3). However, the notion that day dreaming occurred within Freud’s ‘closed energy system’ was later rejected by Singer (1975b) and he adopted a more interactive, information-processing model. As a consequence day dreaming was redefined as:

“A complex processing system involving ever-reverberating content from long-term storage and almost continuous processing of input material from our physical and social environment” (Singer, 1975a, p.728).

Overall, day dreaming may be regarded as a widespread normal phenomenon described as “ongoing thought experience” (Singer, 1975a, p.728). Day dreaming could be used for problem-solving, was generally future-oriented and more likely to be realistic than fantastical (Singer and Antrobus, 1972). Incidence of day dreaming has been recorded as occurring over specific time periods ranging from 30 minutes (Rychlak, 1973) to 90 minutes (Kripke and Sonnenschein, 1973). Day dreaming may be cyclical and comparable to cycles of REM sleep during night dreaming. However, unlike night dreaming that was characterised by rapid eye movement, day dreaming occurred when eye movement was reduced and alpha activity was increased (Antrobus et al., 1964; Singer and Antrobus, 1965; Singer et al., 1971; Marks, 1972; Klinger et al., 1973). This was not surprising
given that day dreaming occurred during processing of other sensory information (Singer, 1975a).

The reasons for day dreaming remain unclear. Two alternatives have been proposed, both concerned with information-processing. The first perspective was that day dreaming reduced information-processing when a task became too demanding. Alternatively, day dreaming provided cognitive stimulation whilst undertaking mundane tasks. Experimental studies using ‘signal detection’ that manipulated attention during day dreaming concluded that “day dreaming may serve a modest arousing function, keeping subjects awake by its varied content under long and monotonous signal detection conditions” (Singer, 1975a, p.732). Therefore, it seems as if day dreaming provides a means of increasing stimulation or information processing.

By contrast to experimental studies of signal detection and information processing, Singer and Antrobus (1972) conducted field-based research into the personality characteristics that may correlate with type of day dreams experienced (distinguished by content). They administered a questionnaire to two-hundred and six psychology undergraduates from which an ‘imaginai processes inventory’ was developed comprising of twenty scales each with twelve items. Each scale represented a different aspect of day dreaming, e.g., frequency, positive reactions in day dreaming, acceptance of day dreaming, fear or failure, sexual day dreaming, hostile-aggressive day dreaming, guilt, visual imagery and distractibility in day dreaming. However, there was no differentiation or weighting between content and process oriented scales, e.g., sexual content versus reaction to day dreaming, or the context in which day dreaming occurred.

Nevertheless, three styles of daydreaming were proposed, characterised by various combinations of response to each of the scales. The first style was described as being characterised by the dreamer having low self-esteem, emotional instability, boredom, a sexual content to day dreams and a fear of day dreaming. In the second style, a creative use of day dreaming associated with extroversion was noted and the third style was characterised by an obsessional-neurotic style, in which the person feared failure, felt a sense of guilt and did not like to day dream.
It was interesting that all three styles of day dreaming identified by Singer and Antrobus (1972) involved varying degrees of self-esteem. The first style may be described as being characterised by low self-esteem, the second high self-esteem and the third, social self-esteem. This complemented existing research on the effect of perceived status on frequency (Singer and McCraven, 1961) and content of daydreams (e.g., Klinger and Cox, 1987-88). It was possible that other factors including identity principles (Breakwell, 1986, 1992), i.e., distinctiveness, continuity or self-efficacy may also be related to the incidence and content of day dreams although a relationship with self-esteem would seem to be the most likely.

In a gambling context, a relationship was found between wishful thinking about the favourable outcome of a sporting event and betting behaviour such that irrespective of a low likelihood of a winning outcome, wishful thinking led to bets being placed on the favoured team winning (Babad and Katz, 1991). Although wishful thinking did not necessarily correlate with day dreaming per se, it was proposed that day dreaming may fulfill a similar function in a gaming context, i.e., in relation to the NL. It would seem likely that day dreaming about an event, e.g., winning the UK National Lottery would influence expectations associated with the likelihood of winning in addition to actual levels of participation. In this sense, day dreaming may act as an unconscious means of developing social representations and as such could be implicated in the prescriptive nature of social representation (Moscovici, 1994).

Therefore, it was proposed that a study of day dreaming be conducted. Interviews were deemed an appropriate method since they had previously advocated as a suitable method for accessing the unconscious (Markova, 1996). Interviews provided respondents with an opportunity to elaborate upon the content and reasons for their day dreams. Diaries were considered an alternative means of accessing and recording the content of day dreams particularly as they were considered a useful means of recording “day-to-day experiences” (Fassaert, 1992). However, it was clear on the basis of previous literature that despite the everyday occurrence of day dreams, people were unlikely to be conscious enough of their day dreams to be able to record their content accurately using a diary format. By contrast, it was hoped that interviews would stimulate recall of day dreaming and day dreams. In the absence of any other means of assessing the validity of self-reports of day dream content, the verbatim reports were taken to be a true account of the content of the day

104
dreams experienced by the respondent despite the possibility that the content could be transformed when communicated to the researcher (Klinger, 1971).

6:3 Aims

- To explore the content of day dreams about the UK National Lottery
- To consider the role played by an unconscious form of intra-individual communication on the process of social representation
- To investigate how possible selves might be related to day dreaming
- To relate propensity and content of day dreams about the NL to participation in a related activity
- To act as a pilot for the development of a questionnaire to be used in study four

6:4 Method

Pilot work: As a result of interviews (n=8) conducted with a variety of staff and students at the University of Surrey it was concluded that the term ‘day dreaming’ was better understood than ‘wishful thinking’.

Adults (n=33) attending further education classes at Carterton Community College were contacted by telephone to arrange interviews prior to, or immediately following their classes between 14-17 October 1996 (Appendix B). Thirty-three participants represented approximately 5% of the total population of students at Carterton Community College. Participants were chosen from a wide variety of subjects, e.g., pre-GCSE English or Maths, introductory courses in microcomputers, ballroom dancing and upholstery. Each taped, structured-interview (Appendix C) lasted between 15-20 minutes and was conducted in a room made available by the Head of the Community College. Initially participants were asked to complete a questionnaire (Appendix D) after the interview, when the tape recorder was switched off. However, after four interviews had been conducted it became evident that relevant and additional information could be obtained by the interviewer asking the participant the questions and taping responses. This was carried out for the remaining 29 interviews. Confidentiality of responses was assured and all the taped-interviews were transcribed shortly after completion. Participants were referred to
in the order in which the interviews were conducted, i.e., P1 equated to interview number 1 and P33 was the last interview to be conducted.

The transcripts were content analysed using the structured interview schedule and questionnaire to generate a coding frame. All sections were coded: information about the content; frequency; associated emotions; context in which day dreaming occurred and questions about the self. Frequency data was compared for the different responses. Additional comments were categorised separately. Inter-rater reliability was conducted by two independent researchers who coded the transcripts (Appendix E). Agreement by the raters was >.8.

6:5 Results

A total of 33 interviews were carried out during the specified period with 24 women and 9 men, aged between 24 and 78 years. Participants classified themselves according to class in the following way: 11 working-class (4 men and 7 women); 5 lower middle-class (2 men and 3 women); 9 middle-class (3 men and 6 women) and 1 upper middle-class (woman). Seven participants preferred not to respond to this question. All the participants were British.

Results are presented in three sections; day dreaming generally, lottery-related day dreaming and lottery-related behaviour and opinions. The first two sections were derived from the structured interview whilst the third section was distilled from the questionnaire.

6:5:1 Day dreaming generally

Four people claimed not to day dream at all. Reasons for this included that they were “On the go all the time” (P5), i.e., too busy to day dream or thought that day dreaming constituted a “waste of time” (P9, P14 and P30). All 4 were neither in syndicates nor played the lottery individually.

Of the remaining 29 participants, 4 people, all of whom thought day dreaming was unimportant to them, ONLY day dreamed about the lottery. They were not members of syndicates (unless with family members, n=1) and were either non-lottery players or only very occasional players. Day dreaming about the lottery occurred when engaged in obtuse
lottery-related activities, e.g., driving to see family members and this led them to think about making financial provision for family members as a consequence of a win on the lottery.

The remaining 25 participants were considered to be regular day dreamers. Day dreaming was conducted when alone for the majority (n=22) of day dreamers. When day dreaming was in a social situation, e.g., at work, or, in a classroom environment, it provided a means of 'escape' for the individual from that particular situation (e.g., P9).

Day dreaming occurred in a variety of situations and for different reasons. There were 5 types of situations in which general day dreaming occurred. All were characterised by being alone, having 'peace and quiet' and time in which to day dream. Although the context for day dreaming to occur tended to be asocial, the content of day dreams was social, for example "I still go back over them... the streets and the people" (P19). The five situations in which day dreaming occurred were as follows.

1] Whilst engaged in mundane or routine chores, e.g., ironing, in which case day dreaming provided a form of escapism from routine and entertainment. Escapism was to another place and/or as another person. Day dreaming provided "relief from boredom" (P4) and "comfort" (P1) under these conditions.

2] During quiet periods at work, for example, "when... I am doing things that do not need my full attention" (P7) in which case chores in the immediate future could be planned, e.g., food to be prepared that evening (P16). Day dreaming was also a form of escapism to a different place but the identity of the dreamer remained the same.

3] In bed, predominantly as a precursor to sleep (one participant would day dream in the morning because he would be awake before his partner) for relaxation and planning major changes in one's life.

4] When engaged in relaxing activities, e.g., reading, listening to music, walking and particularly taking a bath. During these occasions, problem solving occurred, planning for the immediate future (not mundane) and imagining oneself being in
another place. Day dreaming also occurred whilst engaged in lottery-related behaviours, e.g., “Saturday afternoons as we put the bet on” (P6) or watching television if a programme was relevant, e.g., about winners and their experience.

Whilst travelling by either public transport, e.g., trains (P19), that tended to induce mundane, immediate future planning, e.g., of meals, or whilst driving (P10), in which case day dreaming was relaxing (until as a result of day dreaming the driver had not been aware of the last 20 miles covered) and provided an opportunity to plan medium term travel or personal holidays.

Day dreaming was distinguished from ‘planning’, ‘worry’ and ‘wishful thinking’. ‘Planning’ involved directed thought about a particular activity in the immediate future. ‘Worry’ was the antipathy of day dreaming in terms of the affective dimension of the experience i.e., day dreaming was a positive affective experience that often engendered happiness (P7, P9), whereas worrying involved negative emotions. All those who reported that they engaged in day dreaming described it as a positive experience which was characterised variously as pleasant, exciting, relaxing, enjoyable, controllable, good and satisfying. ‘Wishful thinking’ was described as “longing to do something when you are obliged to do something else” (P4). It seemed as if the difference between wishful thinking and day dreaming was that the former was characterised by being desired yet unattainable and thus less enjoyable, whilst day dreaming was more fanciful and less directed. For example, “...in your day dreams all kinds of wishes can come true and it is pleasurable...I enjoy it” (P22).

Six participants said that day dreaming gave them the opportunity to explore possible (future) selves. Generally these people felt that their social identity, e.g., as a mother or as an unemployed person was undervalued and they wanted to change this. They advocated “changing things, being a better person” (P8) or regaining their personal identity that had been subjugated to their social identity, e.g., as a mother (P11).
Lottery-related day dreams

Of the 29 people who regarded themselves as being someone who day dreamed, 11 did not dream about the lottery. These people were unlikely to participate in any lottery-related activities, e.g., "I do not think about it. I do not watch it. If it happens to be on I look at the numbers but I do not take any significance with the numbers" (P7). Of the remaining 18, 4 spontaneously mentioned a lottery content to their day dreams and as described earlier, another 4 people only dreamt about the lottery. One man had dreamt about winning the lottery until he had come very close to winning £258,000 after which he stopped playing and dreaming about the lottery.

The overarching lottery day dream involved winning money. There were three categories of lottery-related day dream content which varied in terms of significance, that is, frequency and importance.

1) Primary significance: provision of financial and material security, e.g., a house or car to provide a "better life" for the participant and their immediate kin. For example, "Well, on Saturday night I build a house and on Sunday morning usually take it down!" (P11). Of primary significance for members of work-based lottery syndicates, was the possibility of leaving work as a result of winning.

2) Secondary significance: providing for family and/or friends and going on holiday.

3) Tertiary significance: donating money to favourite charities or the arts.

The remit of lottery-related day dreams was very homogenous, centring around winning money and providing material and financial security. Occasionally participants day dreams about winning overlapped with the content of their general day dreams, e.g., being able to provide equipment/facilities for a favourite sporting club.
6:5:3 Similar day dreams prior to the lottery

The present study provided some evidence that the introduction of the national lottery altered the nature of participants day dreaming. In particular, the introduction of a Saturday night draw increased the likelihood that day dreaming would occur on a Saturday rather than on a Sunday (when the football pools were checked, e.g., P16). However, this effect was mediated by participants previous gambling activity (and the attendant likelihood that they would be engaged in day dreaming about the possibility of winning money from this source). The football pools and to a lesser extent premium bonds (e.g., P23) provided a similar stimulus to the content of day dreams prior to the launch of the national lottery, for example, “Dreams were the same with the pools as with the lottery just the source of money has changed” (P6). However, with the advent of a larger (than the pools) jackpot prize and more frequent (than the premium bonds) draw, some people who had not previously dreamt about winning and its consequences began to day dream. People who had previously engaged in either the pools or premium bonds kept the same dream but amended the source of the money to the lottery.

6:5:4 Lottery-related behaviour and opinions

There were 23 lottery players of whom 13 played weekly, 4 monthly and 6 occasionally. There were 10 non-players. Less committed non-players (n=6) did not engage in any other lottery-related behaviour, e.g., watching the draw on the television. However, 4 had played the lottery weekly, for a period in the past, all of whom still watched the draw on the television. It seemed that once lottery-related activities had been engaged in, particularly purchase of a lottery ticket, the respondent was technically a participant.

Approximately one quarter (n=6) of all players used the lucky dip option for choosing their numbers. This did not influence their perception of the likelihood that they would win on the national lottery. By contrast, 3 of the 14 people who used the same numbers each time they played the lottery, thought they had more chance of winning with their ‘own’ numbers.

Approximately one quarter (n=8) of those who played the lottery anticipated that they would change the sort of person they were as a result of winning. ‘Change’ in this context
was either material, i.e., lifestyle (n=2) or, psychological, i.e., type of person they considered themselves to be.

Scratchcards were not frequently purchased. Nobody bought them either daily or weekly. Two participants purchased them monthly and 10 occasionally (1 very occasionally). Everybody who purchased scratchcards also purchased lottery tickets but not vice versa.

The television draw was watched weekly by 8 viewers and 'sometimes' by 7 others. Of these 15 people, 4 did not currently play the lottery (but had) and one person watched the draw (despite not being a player) because their spouse played.

Only 3 people had benefited from any lottery-funded projects. One person indirectly, through funding of disabled riding facilities for their students, another from the funding of the refurbishment of football grounds in the Oxfordshire area (which they had played matches on) and a third, from alterations being made to theatres in Oxford. The latter participant was an atypical lottery player, he only participated in a work based syndicate because he owned the company and if his staff won he wanted to be part of it as a form of insurance policy.

Of the 7 who rated the lottery as somewhat (nobody rated it as very) important to them, all played the lottery individually and some in a syndicate (n=5).

Fourteen out of the 33 participants took part in other forms of gambling. Football pools were purchased by 7 people. Of these 7, 5 people also engaged in other forms of gambling: bingo (n=2); fruit machines (1 solely and 1 with the pools) and free-prize draws (6 solely and 2 with the pools). Two other categories of gambling activity arose from the interviews which were not included in the original questionnaire, premium bonds (n=3) and stocks or shares (n=2). These were included in study four.
Overall rating of the national lottery

Of those who expressed an opinion (32 out of 33), 14 people rated the lottery as ‘good’, 16 as ‘okay’ and 2 as ‘bad’.

The lottery was ‘good’ in four ways:

1] it helped/funded charities/good works/projects;
2] it provided people with an opportunity to win (‘a bit extra’) money;
3] it was ‘good for people’ in that it was a source of hope and excitement or,
4] it was ‘good’ because it was not considered to be fundamentally ‘wrong’.

However, it is possible that an element of bias was introduced into the questionnaire by using the adjective ‘good’ since this was used from the inception of the lottery to describe the causes which would receive money from the lottery.

Those who rated the lottery as ‘okay’ did so in eight ways:

1] they were either unconcerned/bothered about the lottery or found it ‘boring’;
2] were concerned about the fairness of the distribution of lottery money;
3] objected to the size of the jackpot;
4] raised the issue of who should operate the lottery e.g., Richard Branson;
5] regarded the lottery as engendering greed and temptation;
6] acknowledged the lottery as a source of excitement or hope but qualified this by stating that it was objectionable that this hope should be based on winning money rather than hard work;
7] noted that the lottery had reduced the income for charities and
8] described a gambling ‘mentality’ that had arisen and this was negatively evaluated.

Rating the lottery as ‘okay’ involved identifying negative (and contentious) issues.
The two participants who rated the lottery as ‘bad’ did so on the basis of:

1] the excessive amounts of prize money;
2] the inappropriateness in their opinion of funding ‘the arts’ rather than charities and
3] that the only real winners of the lottery were the government, Camelot and ‘the people in charge’.

One participant who described herself as ‘a Christian’ did not express an opinion about the lottery as she felt that she was still in the process of making up her mind about how she felt about the lottery.

6:6 Discussion

The results suggested that day dreaming was a widespread normal phenomenon (Singer, 1975b) that could be operationally defined as a medium-future-oriented, positive imaginary experience that involved free-thinking about a situation that was not necessarily temporally or spatially salient to the particular activity being engaged in.

The present study provided some evidence that the introduction of the national lottery altered the nature of participants day dreaming. However, this effect was mediated by participants participation in lottery-related activities, e.g., previous gambling activity (and the attendant likelihood that they would be engaged in day dreaming about the possibility of winning money from this source). The football pools and to a lesser extent premium bonds provided a similar stimulus to the content of day dreams prior to the launch of the national lottery. With the advent of a larger (than the pools) jackpot prize and more frequent (than the premium bonds) draw, some people who had not previously dreamt about winning and its consequences began to day dream. People who had previously engaged in either the pools or premium bonds kept the same dream (and possibly increased the frequency) but amended the source of the money to the lottery.

The results showed that elements of lottery social representations were present in the content of day dreaming about the lottery. Day dreaming was an important part of the social representation of the lottery especially as it was found that for some people (n=4), their day dreams were solely concerned with the national lottery. The remit of lottery-
related day dreams was very homogenous, centring around winning money and providing material and financial security. Occasionally participants day dreams about winning were related to the content of their general day dreams, e.g., being able to provide equipment or facilities for a favourite sporting club.

The absence of fantastical elements in the reported day dreams suggested that information was assimilated rather than accommodated (Piaget, 1962) in the process of day dreaming about the national lottery. The content of day dreams generally concerned the review and rehearsal of social activities or conversations; a socio-cognitive aspect of day dreams that had not been evident in previous research that had adopted a psychoanalytic (1960’s) or information-processing perspective (1970’s).

Rating the lottery as ‘okay’ involved identifying negative (and contentious) issues that were evident in phase five of the media analysis conducted in study two. This suggested that the media provided an important source of information about the lottery and these issues had been assimilated by participants into their representation of the lottery.

When remembered, day dreaming was reported to have occurred predominantly under conditions of low information-processing. Therefore, it seemed to have an arousing function (Singer, 1975a). Even if day dreaming was reported to have occurred when people were busy or in the company of others, it was used to maintain a level of cognitive stimulation otherwise absent from the activities in which they were engaged and to which they had become cognitively habituated. This was evident during routine activities in a work or home environment and whilst engaged in driving. Day dreaming whilst driving seemed like a hazardous activity. However, since day dreaming maintained levels of information processing it may be regarded as a means of avoiding sleep under driving conditions. There was no evidence that day dreaming had actually led to negative consequences although the sample size for this assertion was very small. Generally however, it seemed possible given the entertainment and positive aspects of ‘escapism’ invoked by day dreaming, that it served a similar function for adults, as play did for children (Piaget, 1962).

Day dreaming was predominantly future-oriented (Singer and Antrobus, 1972) with projections of self in ‘other’ places and in alternative roles. For some, day dreaming did
seem to provide an opportunity to explore what might be termed ‘possible selves’ (Markus and Nurius, 1986), i.e., more successful or popular versions of their current identity were imagined. Since this research did not include a measure of optimism or pessimism, it was not possible to ascertain whether day dreaming that was generally regarded as a positive event was undertaken only by optimists or whether other personality characteristics might correlate with particular styles of day dreaming as suggested by Singer and Antrobus (1972).

Contrary to what might have been expected according to research by Singer and Antrobus (1972), those who day dreamt in order to seek stimulation in the form of escapism from a mundane task did not necessarily fear day dreaming. However, there was some evidence that those who used day dreaming for problem solving in the form of planning differed from those who used it for escapism particularly in terms of the higher relative value attributed to day dreaming by the latter. Additionally, there was no evidence in this study that those who did not day dream, feared day dreaming. Nevertheless, there was the possibility that degree of threat, fear or pleasure associated with an anticipated win on the lottery, may be related to how much the respondent dreamt about winning.

There was some evidence to support the finding in study one that those who did not dream, felt that day dreaming conflicted with an ethic of achieving reward through hard work (the Protestant Work Ethic).

6:7 Conclusions

There was some evidence that day dreaming could be considered as a form of intra-individual communication and the study of day dreams may provide a useful means of accessing an unconscious level of social representation. The surprise that respondents expressed about being asked about the content of their day dreams suggested that it was not a typical topic of conversation. However, despite an absence of an elaborated vocabulary specifically for day dreaming, respondents seemed willing and able to describe the content of their day dreams particularly about the NL. The homogeneity of NL day dream content suggested a degree of sharedness and it was suggested that this might facilitate the adoption of a particular social representation of the target phenomenon. This was investigated in more detail in the following study.
CHAPTER SEVEN

Study four: Conformation and individuation in social representation: the case of the UK National Lottery

7:1 Introduction

The preceding three qualitative studies that provided a framework for this quantitative study, described elements constitutive of the content of a UK NL social representation at various levels of communication. In order to quantify how these elements might be related and to investigate conformation and individuation in social representation, items were developed in the present study that would approximate to these elements. This procedure formed part of a systematic exploration of social knowledge about the UK NL.

Establishing the content of a social representation was important (Moscovici, 1996) and various opinions about the UK NL had been explored in the previous studies but it had not been possible to quantify the extent of coherence between the opinions that constituted a 'network of related components' (Moscovici, 1985). It was considered that opinions that constituted content elements of the UK NL social representations could be described as 'shards' (Breakwell, 1997). The particular arrangement of salient shards could be seen to constitute the conformation of the representation. And it was proposed that various and 'appropriate' types of statistical analysis might permit the relationship between content elements to be examined in more detail. A perfect relationship between the elements (i.e., ideal conformation) was not expected since a questionnaire item would be only an approximation to the respective aspect of the representation. It was suggested that the form of analysis adopted would influence the extent to which the relationship between the elements could be conceptualised in terms of a core and periphery (e.g., Abric, 1976, 1989; Moscovici, 1985; Moliner, 1992, 1994; Flament, 1994a, 1994b; Philogene, 1994, 1998; Abric and Flament, 1996; Guimelli, 1996; Markova, 1996) or dimensions (e.g., Doise, 1993; Doise et al., 1993; Spini and Doise, 1997).

In the event that conformation was established, it was envisaged that individual factors would differentiate between the relative position clusters of people adopted. In this sense, individuation concerned the emphasis that might be placed on different aspects of the conformation, be that in terms of a central core and periphery or various dimensions.
Factors that might account for differences in position relative to the conformation were expected to include: action or behavioural indices, day dreaming and identity principles.

This research was particularly concerned with how individual factors including intrapsychic processes, might influence position relative to the conformation. Identity process theory (Breakwell, 1986, 1993a) provided a dynamic process account of the self. This theory transcended individual and social aspects of the self. The structure of identity was thought to be composed of content and value dimensions. Processes of accommodation and assimilation organised the integration of the content dimension over time. The operation of accommodation, assimilation and evaluation of content was guided by four identity principles: distinctiveness, continuity, self-efficacy and self-esteem. A main feature of identity process theory was the emphasis placed upon the way in which threat mobilised coping strategies in relation to the four principles.

It was noted that since level of self-esteem was acknowledged to be related to style of day dreaming undertaken (Singer and Antrobus, 1972), self-esteem in particular might influence positioning relative to the social representation of the UK NL. In previous research, different types of self-esteem had been described, i.e., global self-esteem and specific self-esteem (e.g., Rosenberg, Schooler, Schoenbach and Rosenberg, 1995). According to Rosenberg et al., (1995), global self-esteem constituted an “individual’s positive or negative attitude toward the self as a totality” (ibid., p.141) whilst specific self-esteem was contextualised, e.g., in academic performance. Rosenberg et al., (1995) measured both types of self-esteem between 1966 and 1968 amongst 1,886 high school boys. Evidence was provided for specific self-esteem being relevant to behaviour whilst global self-esteem was relevant to psychological well-being. They found that when a higher value was attributed to academic performance, then specific academic self-esteem was more likely to affect global self-esteem. The emphasis of Rosenberg et al., (1995) was upon establishing the personal relevance of the particular activity, in this case, academic performance and the personal value attributed to this activity. However, it would seem inappropriate to consider personal valence as distinct from the social context in which these judgements were made. In other words, it seemed necessary to investigate the way in which a particular target, i.e., academic performance or in this case the UK NL was socially represented and how this might relate to levels of global and specific self-esteem and behavioural indices such as participation and personal importance of the target.
entity. It would seem likely that specific self-esteem that was contextualised in the UK NL would be related to behaviour, i.e., participation in lottery-related activities and the extent to which specific self-esteem and global self-esteem were related would be as a function of the degree of importance attributed to the NL.

Given that this research was concerned with the relationship between social representation and identity principles, it was considered appropriate to include measures of self-esteem, distinctiveness, continuity and self-efficacy (Breakwell, 1993b). Furthermore, without evidence to the contrary, like self-esteem, the other three principles were operationalised at both a global and lottery-specific level.

The overall aim of this thesis was to investigate the role of individuation and conformation in relation to social representation. To various degrees, the three preceding qualitative studies had provided possible content elements of a social representation of the UK NL at different levels of analysis, i.e., an inter-individual, societal and intra-individual level respectively. The focus of these empirical studies had been upon establishing what constituted the content of a social representation of the UK NL. Nevertheless, they also suggested that other factors, including participation in lottery-related activities, may influence how individuals or clusters of individuals differ in their relationship to the social representation. Therefore, this study was designed to corroborate the existence of possible content elements in social representations of the UK national lottery identified at different levels; to investigate conformation in relation to the social representation and to empirically examine individuation with regard to the conformation.

**Aims of the study**

1] To corroborate the presence or absence of content elements in the social representation of the UK national lottery identified in previous studies

2] Investigate conformation of the social representation of the UK NL

3] Investigate individuation with regard to the social representation of the target entity
Method

Design of the questionnaire

The questionnaire used in study three (Appendix D) acted as a pilot for the development of the questionnaire used in this study. Several amendments were made to the previous questionnaire (Appendix F). Each questionnaire was accompanied by a covering letter (Appendix G), that explained the context of the research, assured respondents of the confidentiality of their responses and asked them to return the completed questionnaire the following week in the envelope provided. The covering letter was printed on light green paper to contrast with the white questionnaire. Research had suggested that the response rate would not be increased by using coloured paper for the entire questionnaire (Matteson, 1974; Pressley and Tullar, 1977; Duncan, 1979; Jobber and Sanderson, 1983; Dunwoody, 1993; Wood, 1997). Printing the questionnaire on coloured paper, (in addition to increasing the costs of production) may actually decrease the response rate, since potential respondents expected questionnaires to be a 'normal' colour, i.e., white.

In all, six-hundred and fifty questionnaires (Appendix H) were produced using ‘Formic’ (a layout and scanning program specifically designed for the production of questionnaires) that used a scanning procedure at the data entry stage. There were seven sections in each questionnaire.

Section 1: Sociodemographic information and details of lottery behaviour including addiction, estimates of probability of winning a major prize and other gambling activities engaged in (pages 1-2, questions 1-25).

Section 2: Items in the form of statements to access the social representation of the national lottery (pages 3-4).

These items were derived from the previous three studies. Items were not necessarily ‘factual’, since it was opinions about the entity that were accessed. There were 27 items in total. The items were designed to access ‘shards’ of the social representation of the NL, each of which was rated on a five-point scale ranging from strongly disagree to strongly agree through neither agree nor disagree at the mid-point. Items included general aspects
of the lottery, reasons for the abolition of prior UK lotteries, religious opposition, distribution of money generally and specifically to 'good causes', gambling, addiction, characteristics of players and winners, reference to Richard Branson, the BBC, OFLOT, the size of the jackpot and the lottery as a source of government revenue.

Since the statements contained within this section referred to opinions expressed about the UK NL at earlier stages in the research, it was considered appropriate to include an implicit evaluative dimension to each statement. Consequently, all but two of the twenty-seven items were counterbalanced such that 11 were positive and 12 negative evaluations of aspects of the lottery. Of the two items that concerned scratchcards, one was negative and the other was positive. The two neutral statements were: 'The lottery live programme is the type of programme I would expect from the BBC' and 'Chance of winning can be increased by choosing particular numbers on the lottery'. Where appropriate, the polarity of the statements was alternated with the two neutral items occurring 10th and 19th in the list of 27 statements. Each of the statements was subsequently referred to by the page of the questionnaire that they appeared on, i.e., page 3 or page 4 (e.g., P4) and the respective position of the statement (ST) on the page, e.g., P4ST11 would be on page 4 and refer to the statement placed 11th on the page 'The lottery encourages young people to gamble'.

Section 3: Global identity statements, possible selves, threat items (page 5).

The global identity statements were designed to access how closely the respondent identified with winners, losers, players and 'lucky' and 'worried' people. This was attempted through the use of statements worded as 'sort of person' who engaged in the respective activity or experience. Each statement was rated on a five-point scale from strongly disagree to strongly agree through neither agree nor disagree.

Possible selves items were based on the propensity of the respondent to imagine self as: a different, more confident, able, other type of person in relation to winning, playing, losing and the lottery generally.

There were two threat items, one related to the threat perceived by the possibility of winning and the other by change generally.
Section 4: Accessing the four principles of identity: distinctiveness, continuity, self-efficacy and self-esteem at a global level (page 6).

Two statements were generated for each of four identity principles: distinctiveness, continuity, self-esteem and self-efficacy. One statement from each pair was phrased negatively and the other statement remained positive. Each pair of statements, i.e., the global statement and the evaluative version, were placed together in the questionnaire. Statements were rated on a five-point scale as used in other sections of the questionnaire. The pairs of statements were ordered, i.e., self-esteem, self-efficacy, distinctiveness and then continuity. This order was repeated four times to provide sixteen statements. The first self-esteem item was positively phrased and the second negatively and this was reversed for the self-efficacy items. Distinctiveness was accessed through being ‘different’ to others in the first instance versus ‘same as’ others in the second statement. For continuity, it was necessary to access continuity over time in the first statement and across situation in the second (although it was acknowledged that both were implicit in each other). All of the statements were phrased using ‘I’ or ‘me’.

Section 5: Accessing four identity principles in relation to lottery-specific behaviour (page 7).

Lottery-specific self-esteem was conceptualised as self-esteem that was contextualised in the lottery and relevant to the individual rather than a group or society. Three aspects of lottery-related activities were used (as in section 3): winning, playing and losing (sometimes accessed as ‘not winning’). A fourth category of items were generated about the lottery generally.

A statement was developed for each of the sixteen combinations of identity principles (4) by lottery-related activity (4). These statements were counter-balanced to minimise an effect of bias in response toward statements worded positively or negatively respectively. The outcome of these permutations was summarised in table 10.
Table 10: Distribution of negative and positive items across four categories of lottery participation for each of four identity principles

<table>
<thead>
<tr>
<th>Identity principle</th>
<th>General</th>
<th>Losing</th>
<th>Playing</th>
<th>Winning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>positive</td>
<td>negative</td>
<td>positive</td>
<td>negative</td>
</tr>
<tr>
<td>Continuity</td>
<td>negative</td>
<td>positive</td>
<td>negative</td>
<td>positive</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>positive</td>
<td>negative</td>
<td>positive</td>
<td>negative</td>
</tr>
<tr>
<td>Distinctiveness</td>
<td>negative</td>
<td>positive</td>
<td>negative</td>
<td>positive</td>
</tr>
</tbody>
</table>

Order was varied to reduce bias that might result from the presentation of statements in the same sequence (Israel and Taylor, 1990). This was attempted by reversing the presentation of principles in section 5 compared to section 4, i.e., continuity, distinctiveness, self-efficacy and self-esteem. This sequence was repeated with the second principle, i.e., distinctiveness first, self-efficacy second etc., until all sixteen statements for lottery-specific identity were counter-balanced.

Section 6: Day dreaming generally and specifically about the national lottery (page 8, questions 26-30).

Items were derived from study three. They were designed to elicit the reasons why people did or did not day dream and whether the incidence of gambling, e.g., winning money on the football pools or premium bonds, had increased or decreased since the launch of the UK National Lottery.

Section 7: Emotions related to lottery activities (page 8, question 31).

Four negative emotions, three positive emotions and a no emotion (ambivalence) category were included in the table for each activity carried out by the respondent. Seven activities were listed: day dreaming about the lottery, purchasing of a lottery ticket or scratchcard, checking lottery numbers, collecting a lottery prize, not winning (losing) on the lottery and watching the lottery live draw on television.
Following development of the questionnaire, pilot work (n = 8) was conducted with a selection of staff and students at the University of Surrey to check the wording of the questionnaire.

**7:3:2 Distribution of the questionnaire**

Permission was sought and obtained for the questionnaires to be distributed through adult education centres in West Oxfordshire. Figure 7 showed the location of the West Oxfordshire region relative to other areas in Oxfordshire. There were seven centres in this region that participated in this research (figure 8).

Permission was sought and obtained from the head of each establishment to proceed with the research. Most of the centres required that the questionnaires be placed in the registers for each class. These were distributed (with the permission of class tutors) to attendees at the various classes. However, some centres did not have a centralised system, i.e., individual tutors kept their own registers and at these places, e.g., Eynsham, distribution was reliant upon the co-operation of the centre heads in distributing the questionnaires to the individual classes personally. The 650 questionnaires were distributed by hand on the 26th and 27th of November 1996 at all sites except Hook Norton. Distribution at this time followed closely after the second anniversary of the launch of the UK National Lottery (14th November 1996). At Hook Norton, the term ended one week prior to the other centres, so distribution was postponed until the commencement of the next term on 6 January 1997, when questionnaires were distributed through the registers.

It was noted that the response rate may have been influenced in some centres by the concurrent distribution of course evaluation questionnaires. This may have led to some participants experiencing a form of questionnaire fatigue. Furthermore, the method of returning the questionnaires (by hand rather than by post) may have reduced the response rate, since it was reliant on participants remembering to bring back the completed questionnaire on their next visit, which for a majority of students was the following week.
Figure 7: The location of the West Oxfordshire region.
Figure 8: The location of the seven adult education centres within the West Oxfordshire region used in this study.
Participants

The participant population consisted of attendees at further education centres in West Oxfordshire. At these centres a range of courses were offered including basic maths or English, art and crafts and line dancing. It was proposed that a variety of respondents would be accessed as a function of the range of classes in which they participated. Students were assured of the confidentiality of their responses.

The number of students attending courses in the Autumn term of 1996 varied across the centres. However, the approximate student population and number of questionnaires distributed to each centre were provided in table 11. Factors that affected the number of questionnaires distributed included the number of courses that were still running, the level of attendance of remaining classes and the ease with which questionnaires could be distributed to students.

Table 11: Details of distribution centres including numbers of questionnaires and response rates

<table>
<thead>
<tr>
<th>Centre name</th>
<th>Approximate student population</th>
<th>Number of questionnaires distributed</th>
<th>Number of questionnaires returned</th>
<th>Percentage of questionnaires returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burford</td>
<td>650</td>
<td>60</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>Carterton</td>
<td>500</td>
<td>150</td>
<td>58</td>
<td>39</td>
</tr>
<tr>
<td>Charlbury</td>
<td>380</td>
<td>100</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Chipping</td>
<td>600</td>
<td>100</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Norton</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hook Norton</td>
<td>320</td>
<td>150</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Eynsham</td>
<td>400</td>
<td>50</td>
<td>36</td>
<td>72</td>
</tr>
<tr>
<td>Woodstock</td>
<td>400</td>
<td>40</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>3250</td>
<td>650</td>
<td>249</td>
<td>40</td>
</tr>
</tbody>
</table>

Data entry and categorisation of open responses

The questionnaires were scanned using Formic and an SPSS Windows data file created. Open questions (Q10 and Q12) were categorised and coded accordingly (Appendix I). Inter-rater reliability was not sought for the categorisation of the open questions since these results were not considered important factors in establishing conformation or individuation in subsequent analysis. Once created, this data file formed the basis for subsequent analysis, the results of which were presented in the following section.
Results

7:5:1 Sociodemographic information about respondents

Of the 249 respondents, 181 (73%) were female and 68 (27%) male. The age range was 15-89, with a mean age of 47 years. The majority (56%) of respondents classified themselves as 'middle class' (n = 136), 69 (29%) were 'working class' and only 3 (1%) 'upper class'. Thirty-four (14%) respondents classified themselves as 'none of these'.

A high proportion of respondents had 'ever' bought a lottery ticket (84%) and of these people, 128 (61%) currently bought a ticket every week, 67 (32%) occasionally and 15 (7%) never. Ninety-seven per cent of current ticket purchasers claimed to spend less than six pounds on the lottery with 90 (47%) buying a single line (£1), 51 (27%) two lines, 16 (8%) three lines, 9 (5%) four lines and 19 (10%) spending five pounds on the lottery.

The lottery 'lucky dip' facility to choose random numbers was utilised by 39 (21%) of the regular lottery players. The most commonly cited reason for using this facility was 'expediency' (45%). A significant proportion of respondents used the same numbers each time they did the lottery (43%) and the most frequently cited reason for using the same numbers was that they had 'personal significance' for the player (38%). 'Expediency' accounted for 20% of reasons cited. The third reason was 'avoidance of fear' (16%) that was associated with feelings anticipated in the event that familiar numbers 'won' on a week in which the player did not enter the lottery. Other reasons for using the same numbers included recourse to 'chance' (15%) and lottery syndicate membership (7%).

Data was collected prior to the launch of the mid-week (Wednesday) draw. At this time, Saturday (46%) and Friday (23%) were the most popular days for the purchase of lottery tickets. All other days bar Sunday (2%) averaged 7% of all purchases.

Most players did not anticipate that it would be difficult for them to stop playing the lottery (78%), although 29 (16%) of respondents thought it may be somewhat difficult to stop and 12 (6%) very difficult to stop.

Members of syndicates totalled 57 (23%) and the majority (78%) of these were work-based syndicates. Families accounted for 8%, friends (6%) clubs and societies (5%) and
pubs (3%) of other syndicates. Scratchcards had been bought by 98 respondents (40%) and the majority of scratchcard purchases were occasional (75%) rather than monthly (6%), weekly (6%) or daily (1%).

The lottery draw was watched weekly by 30 (12%), sometimes by 131 (53%) and never by 87 (35%) of the respondents. Only 25 (10%) people had benefited personally from a project funded by the lottery. One hundred and eighty-eight (76%) respondents rated the lottery as 'not at all' important to them personally, 58 (23%) somewhat important and only 2 (1%) rated it as very important.

Gambling in other forms, e.g., football pools, premium bonds, fruit machines was calculated on the basis of increase or decrease in the activity since the launch of the lottery. Overall, gambling activity had increased for 25 (10%) respondents whilst it had decreased amongst 48 (20%) people and 107 (44%) respondents had not changed their gambling activity since the launch of the NL. Sixty-one (25%) people did not engage in any other gambling activity before or after the UK lottery started. However, this index did not take account of qualitative differences between the forms of gambling, e.g., temporality, whereby stocks and shares or premium bonds represented a long-term investment, whilst fruit machines or football pools (and the lottery or scratchcards) were short term forms of gambling. Long term investments may not have been as salient to respondents as short term gambling activities.

Emotions experienced with each activity were calculated as a percentage of total emotions of each type expressed. Happy and excited constituted positive emotions, whilst negative emotions included feeling angry, fearful, disappointed or depressed. Activities were ranked according to their degree of emotionality, i.e., low on 'no emotion' ranked as a high emotional activity, whilst a high percentage of 'no emotion' ranked as a low emotional activity.

Thus, the activities according to their degree of emotionality were as follows, with the most emotional activity ranked as number one and the least emotional activity ranked as number seven.
1] Collect a lottery prize (most emotional)
2] Day dreaming about the lottery
3] Check lottery numbers
4] Purchase a scratchcard
5] Realise not won (lose)
6] Watch the lottery live draw on TV
7] Purchase a lottery ticket (least emotional activity)

Most of the activities were rated as positive emotional experiences with the exception of 'realise not won' that rated highly on disappointment (47%) and anger (7%). It was somewhat surprising to find that a small number of respondents, (n = 6 or 3%) associated losing with happiness or excitement. It seemed as if the range of emotions experienced for 'realise not won' was greater than for some of the more 'emotional' activities, i.e., collecting a lottery prize (96% happy and exciting) or day dreaming about the lottery (81% happy and exciting).

Despite a proposed difference in temporal gratification for the purchase of a scratchcard (immediate assuming 'scratching' not delayed) compared to the purchase of a lottery ticket (delayed), the profile of emotions experienced for 'purchase of a scratchcard' and 'check lottery numbers' were similar (38% of respondents excited or happy about 'purchasing a lottery ticket' compared with 47% excited or happy about 'purchasing a scratchcard').

If purchasing a scratchcard was considered as synonymous with checking the scratchcard to see if the purchaser had won a prize, the profile of emotions experienced would be similar for these activities. However, more disappointment was expressed (22%) for 'checking lottery numbers' than 'purchasing a scratchcard' (6%).

Although people undertaking the highest emotional activity, 'collecting a lottery prize' were not accessed directly, the second most emotional activity 'day dreaming about the lottery' was investigated further. A total of 209 (87%) respondents claimed to have engaged in day dreaming and of these people, 132 (64%) day dreamt about what they would do if they won the national lottery. One hundred and thirty-two (64%) people were
likely to have had similar day dreams before the lottery started. Reasons cited for day dreaming were presented in table 12.

Table 12: Frequency, percentage and ranked reasons for day dreaming

<table>
<thead>
<tr>
<th>Reason for day dreaming</th>
<th>Frequency of response</th>
<th>Percentage of responses</th>
<th>Rank order</th>
</tr>
</thead>
<tbody>
<tr>
<td>plan immediate future</td>
<td>119</td>
<td>12%</td>
<td>1</td>
</tr>
<tr>
<td>way of relaxing</td>
<td>115</td>
<td>12%</td>
<td>1</td>
</tr>
<tr>
<td>form of escapism</td>
<td>100</td>
<td>10%</td>
<td>3</td>
</tr>
<tr>
<td>make chores less boring</td>
<td>79</td>
<td>8%</td>
<td>4</td>
</tr>
<tr>
<td>be inventive or creative</td>
<td>79</td>
<td>8%</td>
<td>4</td>
</tr>
<tr>
<td>solve problems</td>
<td>77</td>
<td>7%</td>
<td>6</td>
</tr>
<tr>
<td>aid sleep</td>
<td>69</td>
<td>7%</td>
<td>6</td>
</tr>
<tr>
<td>getting peace and quiet</td>
<td>61</td>
<td>6%</td>
<td>8</td>
</tr>
<tr>
<td>help me make sense of what has happened recently</td>
<td>59</td>
<td>6%</td>
<td>8</td>
</tr>
<tr>
<td>form of entertainment when travelling</td>
<td>49</td>
<td>5%</td>
<td>10</td>
</tr>
<tr>
<td>fantasise about sex</td>
<td>48</td>
<td>5%</td>
<td>10</td>
</tr>
<tr>
<td>increase skill, e.g., at a sport or a hobby</td>
<td>54</td>
<td>5%</td>
<td>10</td>
</tr>
<tr>
<td>make me feel good</td>
<td>37</td>
<td>4%</td>
<td>13</td>
</tr>
<tr>
<td>pretending to be someone else</td>
<td>34</td>
<td>3%</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>970</td>
<td>98%</td>
<td></td>
</tr>
</tbody>
</table>

It was assumed that conformation established on the basis of statistical analysis had psychological significance (Doise et al., 1993). Multi-dimensional scaling was considered particularly useful for exploring the spatial relationship between cases or variables. MDS provided a visual format of the similarity (in terms of distance) between items such that items that were more similar were shown to be closer together. Some versions of MDS, e.g., SPSS, provided a rotation facility and this was used to rotate the plot in real time to assist interpretation. Interpretation was based upon an assessment of an appropriately low stress value. A stress value of less than 0.1 was considered an appropriate criteria for accepting a particular dimensional solution (Doise et al., 1993).
Therefore, multi-dimensional scaling (MDS) of lottery representation items (excluding P4ST1 'the BBC is a highly reputable organisation') was conducted to investigate what dimensions might underlie responses across all cases. The three-dimensional solution was interpreted according to the criteria that the stress value should be less than .1 (Doise et al., 1993). The actual stress value was 0.08038 and the RSQ was 0.95622. Since the SPSS version of multi-dimensional scaling provided a rotation facility, this was used to rotate the plot in real time to assist interpretation.

Figure 9 summarised the results of the MDS of all cases across lottery social representation items (excluding P4ST1). It should be emphasised that although the results were presented in this format in order to illustrate the type of analysis conducted, figure 9 did not reflect the actual three-dimensional relationship between the elements. In order to address this issue, the same results were presented from a different perspective (figure 10.). Due to the lack of space on the MDS plots, it was necessary to reduce the variable names from for example, P4ST11 to 411, where the first number referred to the page number, i.e., page 3 or 4 and the second two numbers referred to the position of the respective statement on the page.
Figure 9: Three-dimensional multi-dimensional scaling (MDS) solution for all cases across lottery representation items (excluding P4ST1)
Figure 10: Rotated three-dimensional multi-dimensional scaling (MDS) solution for all cases across lottery representation items (excluding P4ST1)
The results of the MDS suggested that there were three items: P3ST5 ('There is too much fuss made about the lottery'), P3ST6 ('The lottery encourages laziness') and P4ST8 ('Scratchcards are more “evil” than the lottery') that appeared to be at the centre of the plot when reproduced in two-dimensions (figure 9). However, when the solution was rotated it became evident that it would be erroneous to describe these items as constitutive of a central core as these items, when studied from a different perspective, e.g., figure 10, appeared to be at the edge of the conformation.

Although the MDS had been useful for establishing conformation in the sense that it showed a relatively robust relationship between the elements, it was not possible using MDS alone, to categorically define what might be constitutive of a central core and a peripheral system or dimensions to the NL social representation. The essentially subjective nature of MDS required corroboration and it was considered appropriate to use FA in a confirmatory manner to investigate the relationship between the elements in more detail. Factor analysis was useful because the reasoned use of factor analysis has been regarded as a suitable means to investigate differences in individual positions relative to a field of social representation (Doise et al., 1993) that may be considered equivalent to the conformation.

7:5:3 Exploratory factor analysis to confirm dimensions within lottery social representation conformation

Principal component factor analysis (FA) with oblimin rotation of the lottery representation items was conducted in order to facilitate a better understanding of the relationship between elements within the conformation. One item, P4ST1, was excluded from subsequent analysis because this item had been used to contextualise the following statement, P4ST2 rather than reflect a ‘shard’ of the NL social representation. The resultant scree-plot supported interpretation of a four-factor solution and the eigenvalues-greater-than-one criteria suggested eight factors. Given that the four-factor solution accounted for 42.8% of the variance with the first factor accounting for 21.1% of this amount, four factors were identified and illustrated in table 13.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3ST1</td>
<td>The lottery is a form of entertainment which is fun</td>
</tr>
<tr>
<td>P3ST2</td>
<td>On the whole the lottery is a bad thing</td>
</tr>
<tr>
<td>P3ST3</td>
<td>The lottery is not objectionable in principle</td>
</tr>
<tr>
<td>P3ST4</td>
<td>It is right if religious leaders oppose the existence of the national lottery</td>
</tr>
<tr>
<td>P3ST5</td>
<td>There is too much fuss made about the lottery</td>
</tr>
<tr>
<td>P3ST6</td>
<td>The lottery encourages laziness</td>
</tr>
<tr>
<td>P3ST7</td>
<td>Money from the lottery is distributed fairly</td>
</tr>
<tr>
<td>P3ST8</td>
<td>The lottery encourages people to be greedy</td>
</tr>
<tr>
<td>P3ST9</td>
<td>British people should be proud of the UK lottery</td>
</tr>
<tr>
<td>P3ST10</td>
<td>It is wrong how much money from the lottery goes to 'the arts'</td>
</tr>
<tr>
<td>P3ST11</td>
<td>The lottery is currently a good way of helping under-privileged people</td>
</tr>
<tr>
<td>P3ST12</td>
<td>Money from the national lottery should be spent on the NHS</td>
</tr>
<tr>
<td>P3ST13</td>
<td>The lottery is a good source of hope for a lot of people</td>
</tr>
<tr>
<td>P3ST14</td>
<td>The people who spend most on the lottery are those who can least afford to</td>
</tr>
<tr>
<td>P3ST15</td>
<td>Scratchcards provide an instant source of happiness</td>
</tr>
<tr>
<td>P3ST16</td>
<td>It would be better if Richard Branson ran the national lottery</td>
</tr>
<tr>
<td>P3ST17</td>
<td>Charities are losing out financially as a result of the lottery</td>
</tr>
<tr>
<td>P4ST1</td>
<td>The BBC is a highly reputable organisation (excluded item)</td>
</tr>
<tr>
<td>P4ST2</td>
<td>The lottery live programme is the type of programme I would expect from the BBC</td>
</tr>
<tr>
<td>P4ST3</td>
<td>The amount that can be won by one person on the lottery is obscene</td>
</tr>
<tr>
<td>P4ST4</td>
<td>A good job is done by OFLOT, who regulate the national lottery</td>
</tr>
<tr>
<td>P4ST5</td>
<td>Chance of winning can be increased by choosing particular numbers on the lottery</td>
</tr>
<tr>
<td>P4ST6</td>
<td>The lottery jackpot should be limited to £1 million</td>
</tr>
<tr>
<td>P4ST7</td>
<td>Camelot, the company who run the national lottery are trustworthy</td>
</tr>
<tr>
<td>P4ST8</td>
<td>Scratchcards are more 'evil' than the lottery</td>
</tr>
<tr>
<td>P4ST9</td>
<td>Most jackpot winners are happy as a result of winning</td>
</tr>
<tr>
<td>P4ST10</td>
<td>The people who benefit most from the lottery are the present government</td>
</tr>
<tr>
<td>P4ST11</td>
<td>The lottery encourages young people to gamble</td>
</tr>
<tr>
<td>P4ST12</td>
<td>Projects in London or the South of England should get the majority of lottery funding</td>
</tr>
</tbody>
</table>
Table 13: Factor loading, communality and percentage of variance for principal components factors extraction and direct oblimin rotation for 249 cases: four factors extracted

<table>
<thead>
<tr>
<th>Item</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3ST13</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
<td>.53</td>
</tr>
<tr>
<td>P4ST2</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
<td>.45</td>
</tr>
<tr>
<td>P3ST11</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
<td>.51</td>
</tr>
<tr>
<td>P3ST9</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
<td>.64</td>
</tr>
<tr>
<td>P3ST1</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
<td>.53</td>
</tr>
<tr>
<td>P4ST5**</td>
<td>.46</td>
<td>.53</td>
<td></td>
<td></td>
<td>.28</td>
</tr>
<tr>
<td>P4ST9**</td>
<td>.43</td>
<td></td>
<td></td>
<td></td>
<td>.24</td>
</tr>
<tr>
<td>P3ST7</td>
<td></td>
<td>.75</td>
<td></td>
<td></td>
<td>.60</td>
</tr>
<tr>
<td>P3ST10</td>
<td></td>
<td>.69</td>
<td></td>
<td></td>
<td>.59</td>
</tr>
<tr>
<td>P3ST12</td>
<td></td>
<td>.54</td>
<td>.51</td>
<td></td>
<td>.56</td>
</tr>
<tr>
<td>P4ST7</td>
<td></td>
<td>.52</td>
<td>.45</td>
<td></td>
<td>.45</td>
</tr>
<tr>
<td>P3ST16</td>
<td></td>
<td>.45</td>
<td>.34</td>
<td>.25</td>
<td>.34</td>
</tr>
<tr>
<td>P3ST15**</td>
<td></td>
<td>.38</td>
<td>.17</td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>P4ST10**</td>
<td></td>
<td>.35</td>
<td>.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P4ST3</td>
<td></td>
<td>.74</td>
<td>.70</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>P4ST6</td>
<td></td>
<td>.70</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3ST8</td>
<td></td>
<td>.64</td>
<td>.49</td>
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<tr>
<td>P3ST6</td>
<td></td>
<td>.55</td>
<td>.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P4ST11</td>
<td></td>
<td>.54</td>
<td>.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3ST4</td>
<td></td>
<td>.50</td>
<td>.43</td>
<td></td>
<td></td>
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<tr>
<td>P3ST2</td>
<td></td>
<td>.50</td>
<td>.65</td>
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<tr>
<td>P3ST3</td>
<td></td>
<td>.43</td>
<td>.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3ST17**</td>
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<td>.43</td>
<td>.28</td>
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<tr>
<td>P3ST14</td>
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<td>.47</td>
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<tr>
<td>P3ST5**</td>
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<td>.47</td>
<td>.22</td>
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<td>P4ST4</td>
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<td>.43</td>
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<tr>
<td>P4ST8</td>
<td></td>
<td>.41</td>
<td>.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P4ST12</td>
<td></td>
<td>.36</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percentage of variance  | 21.1 | 8.7 | 7.5 | 5.5 | n/a

Note: * denotes item that did not load > .3 on respective factor
** denotes item that did not share > .3 communality with the respective factor
The confirmatory factor analysis resulted in the identification of four factors. Each of these factors was interpreted in light of the items that loaded highest on the factor. Items that loaded highest on the first factor included: P3ST13 ("The lottery is a good source of hope for a lot of people"), P3ST9 ("British people should be proud of the UK lottery"), P3ST1 ("The lottery is a form of entertainment which is fun") and P3ST4 ("It is right if religious leaders oppose the existence of the national lottery"). Consequently, the first factor, that seemed to be essentially evaluative, was seen to correspond to the social value ascribed to the NL. The items that loaded most highly on the second factor were: P3ST7 ("Money from the lottery is distributed fairly"), P3ST10 ("It is wrong how much money from the lottery goes to "the arts"") and P3ST12 ("Money from the lottery should be spent on the NHS"). This second factor seemed to refer to 'fiscal aspects of the national lottery'. Items that loaded highest on the third factor included: P4ST3 ("The amount that can be won by one person on the lottery is obscene"), P4ST6 ("The lottery jackpot should be limited to £1 million") and P3ST8 ("The lottery encourages people to be greedy"). This factor seemed to relate to 'moral objections' associated with the UK NL. The fourth factor contained items that seemed to be at the centre of the unrotated plot (figure 9) and included: P4ST4 ("A good job is done by OFLOT...") and P4ST7 ("Camelot, the company who run the national lottery are trustworthy"). The items in the fourth factor were essentially lottery-specific.

Table 14. illustrated the results of reliability tests conducted on each of the scales. These tests confirmed that three of the four dimensions were reliable on the basis of a Cronbach's standardised alpha > .6 criteria. The lottery-specific items did not form a reliable dimension and were omitted from subsequent analysis. The three reliable scales corresponded to: social value, fiscal aspects and moral objection and these were used in subsequent analysis.

Table 14: Reliability of four factor scales derived from FA of lottery representation items (excluding P4ST1) for all cases

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor label</th>
<th>Number of items</th>
<th>Cronbach's standardised item alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Social value</td>
<td>7</td>
<td>7660</td>
</tr>
<tr>
<td>F2</td>
<td>Fiscal aspects</td>
<td>7</td>
<td>6224</td>
</tr>
<tr>
<td>F3</td>
<td>Moral objection</td>
<td>9</td>
<td>.8096</td>
</tr>
<tr>
<td>F4</td>
<td>Lottery-specific</td>
<td>5</td>
<td>.4418</td>
</tr>
</tbody>
</table>
Having established three reliable dimensions that were considered to be constituent of the conformation of the social representation of the UK National Lottery, MDS of cases on the basis of response to the lottery items (excluding P4ST1) was conducted. The aim was to investigate whether there were clusters of people who could be differentiated on the basis of their similarity of response to lottery items.

Cluster analysis was similar to multi-dimensional scaling in that it provided a means of modelling structure. However, the ‘distance’ between variables was based upon graph theory for CA rather than the Euclidean space that was used in MDS (Rodgers, 1988). Whereas MDS presented the relationship between elements in a spatial format, cluster analysis provided a network or ‘tree’ pattern of relationships. Cluster analysis was particularly useful for identifying relatively homogeneous groups of cases based upon selected attributes (in this case the items that formed the ‘shards’ of the lottery representation). Advantages of CA included that the clustering was not based upon a priori assumptions about group membership and that CA did not require measures to be interval level or normal distribution criteria to be met.

Since ALSCAL on SPSS could not process more than 100 cases, two methods were utilised to select two samples of 100 random cases from the 249 total cases. Method one requested 100 random cases from all 249 cases. Method two selected 40% of all cases at random, i.e., approximately 100 cases. MDS was conducted for each of these samples.

The three-dimensional plots were rotated in ‘real-time’ using SPSS to visually assess whether there were identifiable groups or clusters of respondents. The aim was to identify groups within the sample. Each analysis produced a plot of relatively homogenous cases around each axis. Both analyses suggested two groupings of respondents.

Having identified two groupings of cases using MDS of lottery representation items, K-means cluster analysis was conducted and a two cluster solution was requested. The K-means method of clustering was a ‘quick’ method particularly appropriate for use with a
sample of more than 200 cases. Two hundred and twenty seven cases were 'valid', i.e., had responded to all items and were included in subsequent analysis.

On the basis of the K-means cluster analysis, two cluster groups were derived. These were arbitrarily described as 'cluster A' (n = 77) and 'cluster B' (n = 150) respectively. These descriptors will be used in subsequent analysis and discussion. The two clusters (cluster A and cluster B) identified in the analysis were considered sufficiently independent of each other on the basis that the mean score significantly different at the p<.01 level for 21 items, at the p<.05 level for a further 3 items and only 4 items were not significantly different. Therefore, the two clusters differed significantly on 24 of the 28 items included in the analysis. The 4 items that were not significantly different included: P3ST5 'there is too much fuss made about the national lottery'; P3ST10 'it is wrong how much money goes to the arts'; P3ST12 'money from the national lottery should be spent on the NHS' and P4ST8 'scratchcards are more evil than the national lottery'. Therefore, the two clusters, A and B, respectively were considered sufficiently different to warrant their use in further analysis.

7:5:5 Facets of the representation accessed by cluster A and cluster B using Discriminant Function Analysis (DFA)

To review, it was suggested on the basis of MDS and FA of the lottery representation items that there were four dimensions of which three formed reliable scales. The three reliable scales corresponded to social value, fiscal aspects and moral objection whilst the fourth dimension consisted of a selection of items that seemed to be lottery-specific. Cluster analysis of cases on the basis of the lottery items resulted in the identification of two clusters described as cluster A and cluster B respectively. Given the existence of these two clusters it was desirable to investigate whether and to what extent, they differed in terms of their response on the three reliable scales.

One possible method was to conduct MDS of representation items for each cluster group and interpret the resulting plots. However, MDS plots could not be compared directly with each other due to the inability to qualify the dimensions in which each plot had been calculated. In addition, this method would have limited subsequent parametric statistical analysis and was therefore not utilised. Instead, stepwise discriminant function analysis
(DFA) was used to predict the likelihood of membership of the two cluster groups on the basis of scores on each of the three reliable lottery item factors; social value, fiscal aspects and moral objection. In this manner, DFA could be used to corroborate the results obtained using the CA.

A stepwise discriminant function was calculated that accounted for 79% of the between cluster group variance. The correlation between the functions and the scales suggested that degree of social value of the national lottery was the best predictor between cluster A (n = 77) and cluster B (n = 150). 93.39% of cases were correctly classified on the basis of cluster membership with 100% of cluster B correctly classified. By comparison, 80.5% of cluster A were correctly classified. The DFA results of lottery representation dimensions by cluster group membership were summarised in table 15.

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable entered</th>
<th>Wilk’s Lambda</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Factor 1 (social value)</td>
<td>.53279</td>
<td>.0000</td>
</tr>
<tr>
<td>2</td>
<td>Factor 3 (moral objection)</td>
<td>.38349</td>
<td>.0000</td>
</tr>
<tr>
<td>3</td>
<td>Factor 2 (fiscal aspects)</td>
<td>.37014</td>
<td>.0000</td>
</tr>
</tbody>
</table>

The DFA demonstrated that the two cluster groups differed significantly on each of the three dimensions; social value, fiscal aspects and moral objection. The mean score for lottery derived social value for cluster A (n = 77, mean = 16.39, SD = 4.20) was significantly lower than for cluster B (n = 150, mean = 22.71, SD = 2.56). This suggested that cluster B regarded the lottery more positively than cluster A. This was further supported by objection to fiscal aspects being higher for members of cluster A (n = 77, mean = 25.31, SD = 3.61) than cluster B (n = 150, mean = 23.19, SD = 3.94). Furthermore, the mean score for moral objection to the lottery was higher for cluster A (n = 77, mean = 33.44, SD = 3.92) than cluster B (n = 150, mean = 25.23, SD = 4.35) indicating that this cluster were more likely to object to the lottery than cluster A.
To review, conformation was established on the basis of appropriate criteria using MDS of the lottery representation items. Confirmatory FA suggested the existence of three reliable dimensions within the conformation that corresponded to: social value, fiscal aspects and moral objection to the UK NL. On the basis of response to the lottery representation items that constituted the dimensions within the conformation, two clusters of respondents were identified. These two clusters were called cluster A (n = 77) and cluster B (n = 150) respectively. When DFA was used to determine the position of each of these clusters relative to the three dimensions, significant differences were found on each dimension. Having established conformation, it was desirable to investigate what other factors might account for membership of the two clusters. Consequently, a series of tests were conducted whereby scores on various factors were compared as a function of cluster membership.

7:5:6 Discriminating factors between membership of cluster A and cluster B

In order to examine what factors might discriminate between membership of cluster A and cluster B, sociodemographic factors, participation, lottery-related behaviour, propensity to day dream and score on identity scales were compared between the two clusters.

Independent samples t-test between cluster membership and age revealed no significant difference in mean age between the two clusters. Chi² revealed no significant difference between the two cluster groups on the basis of age or class. However, there were significant differences in terms of sex (Chi² = 4.08, df = 1, p<.05) with more members of cluster A (82%) being female than cluster B (69%).

Chi² revealed that significantly more of cluster B responded in the affirmative to whether they had ever bought a lottery ticket (Chi² = 32.19, df = 1, p<.001), with 93% of cluster B compared to 64% of cluster A having purchased a ticket. Furthermore, significantly more of cluster B (28%) than cluster A (13%) were members of lottery syndicates (Chi² = 6.49, df = 1, p<.01).

There was no significant difference between the clusters in terms of their propensity to day dream generally. However, the two clusters did differ significantly in terms of whether members day dreamt about the national lottery (Chi² = 22.27, df = 1, p<.01). Sixty-nine
percent of cluster B compared to 36% of cluster A affirmed that they daydreamt about the lottery.

7:5:7 

Identity issues

Members of cluster B (30%) were more likely than cluster A (13%) to rate the national lottery as having some personal importance to them ($\chi^2 = 8.02$, df = 1, $p<.01$).

Independent samples t-tests were conducted between the two cluster groups for the global identity statements, threat and possible selves items (page 5, Appendix H). Members of cluster A disagreed significantly more with the statement ‘I am the sort of person who would play the lottery’ (P5play3) than cluster B ($t = -7.38$, df = 131.85, $p<.001$). This suggested that a higher proportion of cluster B considered themselves to be ‘player’ types. Cluster B were more in agreement with ‘playing the lottery makes me think about being someone else’ (P5self4) than cluster A ($t = -2.41$, df= 173.33, $p<.05$).

A significant difference between the two cluster groups was found in terms of the degree to which participants found ‘the possibility of winning on the lottery threatening’ (P5threl10). Cluster B were more likely to disagree that they found the possibility of winning on the lottery threatening than cluster A ($t = 3.86$, df = 113.77, $p<.001$).

The perception of threat associated with winning was compared with the degree to which members of the two clusters imagined ‘winning the lottery would change my lifestyle’ (P5life12). Cluster B were significantly more likely to agree strongly that winning the lottery would change their lifestyle (mean = 3.9) than cluster A (mean = 3.5) ($t = -2.38$, df = 158 52, $p<.05$).

7:5:7:1 

Global identity principles

Four reliable scales were derived from the global identity items using principle components factor analysis that corresponded to the four identity principles: distinctiveness, continuity, self-efficacy and self-esteem. Two items were excluded from the analysis G04F (self-efficacy) and G10S (self-esteem) as their communality was less than 0.3. Without these two items the four factors accounted for 57% of the variance (table 16).
<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>G01S</td>
<td>I am a person of worth, at least equal with other people</td>
</tr>
<tr>
<td>G02S</td>
<td>Having a positive sense of personal worth is important to me</td>
</tr>
<tr>
<td>G03F</td>
<td>I am not a very able sort of person</td>
</tr>
<tr>
<td>G04F</td>
<td>Being able to do things well is not important to me</td>
</tr>
<tr>
<td>G05D</td>
<td>I am different from people around me</td>
</tr>
<tr>
<td>G06D</td>
<td>It is a good thing if I stand out from people who I consider to be like me</td>
</tr>
<tr>
<td>G07C</td>
<td>Over time, the sort of person I am changes</td>
</tr>
<tr>
<td>G08C</td>
<td>I desire to change as a person when I experience something new</td>
</tr>
<tr>
<td>G09S</td>
<td>I am the sort of person who does not have much to be proud about myself</td>
</tr>
<tr>
<td>G10S</td>
<td>Being proud of myself is not necessary for me in order to know who I am</td>
</tr>
<tr>
<td>G11F</td>
<td>I am able to achieve personal goals that I set myself</td>
</tr>
<tr>
<td>G12F</td>
<td>It is good that I achieve goals that I set myself</td>
</tr>
<tr>
<td>G13D</td>
<td>Generally, I am the same sort of person as people around me</td>
</tr>
<tr>
<td>G14D</td>
<td>On the whole, I prefer to be similar to people around me</td>
</tr>
<tr>
<td>G15C</td>
<td>No matter what happens to me I stay the same sort of person</td>
</tr>
<tr>
<td>G16C</td>
<td>I do not want to remain the same no matter what happens in my life</td>
</tr>
</tbody>
</table>
Table 16:  
Factor loading, communality and percentage of variance for principal components factor extraction and direct oblimin rotation: global identity

<table>
<thead>
<tr>
<th>Item</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>G07C</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
<td>.67</td>
</tr>
<tr>
<td>G08C</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td>.67</td>
</tr>
<tr>
<td>G15C</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
<td>.63</td>
</tr>
<tr>
<td>G16C</td>
<td>.56</td>
<td></td>
<td></td>
<td></td>
<td>.40</td>
</tr>
<tr>
<td>G05D</td>
<td></td>
<td>.75</td>
<td></td>
<td></td>
<td>.62</td>
</tr>
<tr>
<td>G06D</td>
<td></td>
<td>.61</td>
<td></td>
<td></td>
<td>.46</td>
</tr>
<tr>
<td>G13D</td>
<td></td>
<td>.59</td>
<td></td>
<td></td>
<td>.38</td>
</tr>
<tr>
<td>G14D</td>
<td></td>
<td>.59</td>
<td></td>
<td></td>
<td>.36</td>
</tr>
<tr>
<td>G01S</td>
<td></td>
<td></td>
<td>.81</td>
<td></td>
<td>.62</td>
</tr>
<tr>
<td>G02S</td>
<td></td>
<td></td>
<td>.62</td>
<td></td>
<td>.46</td>
</tr>
<tr>
<td>G09S</td>
<td></td>
<td></td>
<td>.74</td>
<td></td>
<td>.38</td>
</tr>
<tr>
<td>G03F</td>
<td></td>
<td></td>
<td>.62</td>
<td></td>
<td>.36</td>
</tr>
<tr>
<td>G11F</td>
<td></td>
<td></td>
<td></td>
<td>.72</td>
<td>.68</td>
</tr>
<tr>
<td>G12F</td>
<td></td>
<td></td>
<td></td>
<td>.81</td>
<td>.69</td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>20.7</td>
<td>17.3</td>
<td>11.5</td>
<td>9.1</td>
<td>n/a</td>
</tr>
</tbody>
</table>

The reliability for each of the four scales was provided in table 17.

Table 17:  
Reliability of four factor scales derived from FA of global identity statements (excluding G04F and G10S)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor label</th>
<th>Number of items</th>
<th>Cronbach's standardised item alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Global Continuity</td>
<td>4</td>
<td>7036</td>
</tr>
<tr>
<td>F2</td>
<td>Global Distinctiveness</td>
<td>4</td>
<td>7034</td>
</tr>
<tr>
<td>F3</td>
<td>Global Self-esteem</td>
<td>4</td>
<td>6374</td>
</tr>
<tr>
<td>F4</td>
<td>Global Self-efficacy</td>
<td>2</td>
<td>7495</td>
</tr>
</tbody>
</table>

Note:  
F1 consisted of four continuity items. F2 had four distinctiveness items in the scale. F3 was composed of three self-esteem and one self-efficacy item. F4 contained two self-efficacy items.

Analysis of variance (ANOVA) was conducted in which score on each of the global identity principle scales was compared between members of cluster A and cluster B. There were no significant differences between the two clusters on the basis of reliable scales for three of the identity principles: distinctiveness, continuity and self-efficacy. However, the two clusters did differ significantly in terms of global self-esteem (F(1, 221))
<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>L01CP</td>
<td>Playing the lottery would not change the sort of person I am</td>
</tr>
<tr>
<td>L02DW</td>
<td>Winning the lottery would make me feel like a different sort of person to those around me</td>
</tr>
<tr>
<td>L03FL</td>
<td>Losing on the lottery would not make me feel a failure</td>
</tr>
<tr>
<td>L04SG</td>
<td>The lottery makes me feel good about myself</td>
</tr>
<tr>
<td>L05CW</td>
<td>Winning the lottery would not change the sort of person I am</td>
</tr>
<tr>
<td>L06DL</td>
<td>I would experience not winning on the national lottery in the same way as other people</td>
</tr>
<tr>
<td>(excluded)</td>
<td></td>
</tr>
<tr>
<td>L07FG</td>
<td>The lottery makes me feel like a competent person</td>
</tr>
<tr>
<td>L08SP</td>
<td>Playing the lottery would give me a sense of pride</td>
</tr>
<tr>
<td>L09CL</td>
<td>Just missing out on a major lottery prize would change the way I feel about myself</td>
</tr>
<tr>
<td>L10DG</td>
<td>The lottery does not make me feel different other to other people</td>
</tr>
<tr>
<td>L11FP</td>
<td>My sense of control over my life would be increased by playing the lottery</td>
</tr>
<tr>
<td>L12SW</td>
<td>Winning the lottery would not make me a better person</td>
</tr>
<tr>
<td>L13CG</td>
<td>The introduction of the lottery did not change the sort of person I am</td>
</tr>
<tr>
<td>L14DP</td>
<td>I am typical of the sort of person who does not play the lottery</td>
</tr>
<tr>
<td>L15FW</td>
<td>Winning on the lottery would make me feel like a failure</td>
</tr>
<tr>
<td>L16SL</td>
<td>I would be a better person if I never won the lottery</td>
</tr>
</tbody>
</table>
Members of cluster A (mean = 12.364, SD = 1.32) were higher on global self-esteem than cluster B (mean = 11.973, SD = 1.36).

Lottery-specific identity principles

Principle components factor analysis was conducted with the lottery-specific identity statements. A four factor solution was adopted on the basis of the scree plot. One of the items (L06DL) ‘I would experience not winning on the national lottery in the same way as other people’, designed to access losing in relation to distinctiveness in a lottery context, did not load on any of the four factors and was excluded from subsequent analysis. The communality for the remaining items was 0.3 (L03FL only) or above. The total variance accounted for by the four factors was 57%. The results of this analysis were presented in table 18.

Table 18: Factor loading, communality and percentage of variance for principal components factor extraction and direct oblimin rotation: lottery-specific identity

<table>
<thead>
<tr>
<th>Item</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>L04SG</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
<td>.46</td>
</tr>
<tr>
<td>L07FG</td>
<td>.87</td>
<td></td>
<td></td>
<td></td>
<td>.72</td>
</tr>
<tr>
<td>L08SP</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
<td>.74</td>
</tr>
<tr>
<td>L09CL</td>
<td>.76</td>
<td>.58</td>
<td></td>
<td></td>
<td>.38</td>
</tr>
<tr>
<td>L11FP</td>
<td>.69</td>
<td>.71</td>
<td></td>
<td></td>
<td>.54</td>
</tr>
<tr>
<td>L10DG</td>
<td></td>
<td>.84</td>
<td></td>
<td></td>
<td>.67</td>
</tr>
<tr>
<td>L12SW</td>
<td>.56</td>
<td></td>
<td></td>
<td></td>
<td>.39</td>
</tr>
<tr>
<td>L13CG</td>
<td></td>
<td>.56</td>
<td></td>
<td></td>
<td>.60</td>
</tr>
<tr>
<td>L14DP</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
<td>.66</td>
</tr>
<tr>
<td>L15FW</td>
<td>.57</td>
<td></td>
<td></td>
<td></td>
<td>.62</td>
</tr>
<tr>
<td>L16SL</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
<td>.52</td>
</tr>
<tr>
<td>L03FL</td>
<td></td>
<td>.57</td>
<td></td>
<td></td>
<td>.52</td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>25.6</td>
<td>12.6</td>
<td>9.8</td>
<td>8.5</td>
<td>n/a</td>
</tr>
</tbody>
</table>
The reliability for each of the four scales was provided in Table 19.

### Table 19: Reliability of four factor scales derived from FA of lottery-specific identity statements (excluding L06DL and L03FL)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor label</th>
<th>Number of items</th>
<th>Cronbach's standardised item alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Specific esteem/efficacy</td>
<td>5</td>
<td>.8328</td>
</tr>
<tr>
<td>F2</td>
<td>Specific continuity/distinctiveness</td>
<td>3</td>
<td>.5644</td>
</tr>
<tr>
<td>F3</td>
<td>Specific various A</td>
<td>3</td>
<td>.5805</td>
</tr>
<tr>
<td>F4</td>
<td>Specific various B</td>
<td>3</td>
<td>.5297</td>
</tr>
</tbody>
</table>

Given the mixture of items that loaded on the third and fourth factors it was not possible to interpret them in a coherent manner. However, the first factor consisted of lottery-specific self-esteem and self-efficacy items and the second factor contained lottery-specific continuity and distinctiveness items. It was likely that the lack of reliable factors corresponding with all four identity principles was a function of measurement error and this may have been compounded by the inclusion of various forms of contextualisation in aspects of the UK NL for each identity principle, for example, losing, winning, playing or general aspects. Given that the first factor was reliable, this was used in subsequent analysis.

A t-test conducted with the ‘specific esteem/efficacy’ scale resulted in a significant difference ($t = -2.08$, $df = 217$, $p < .05$) between the two clusters such that cluster A ($n = 75$, mean = 10.267, $SD = 2.93$) expressed significantly lower lottery-specific esteem/efficacy than cluster B ($n = 144$, mean = 11.125, $SD = 2.88$).

Given the significant difference in terms of level of global self-esteem and lottery-specific self-esteem/efficacy between the two clusters and the earlier finding that the clusters differed significantly in the degree to which they found the possibility of winning on the lottery threatening, a series of bivariate correlations were conducted to investigate how threat might be related to level of self-esteem. The results of this analysis were as follows: there was a significant positive correlation between level of lottery-specific self-esteem/efficacy and agreement that winning on the lottery would be threatening, for cluster A ($r = .35$, $n = 74$, $p < .01$) and cluster B ($r = .17$, $n = 142$, $p < .05$) and a
significant positive correlation between level of global self-esteem and lottery-specific self-esteem/efficacy for cluster B only ($r = .17$, $n = 142$, $p < .05$). There were no significant correlations between level of general self-esteem and perceived threat of winning for either of the two clusters.

7:5:8 Relationship between identity principles and conformation

To this point, conformation in the social representation has been established and two clusters of respondents identified who differed significantly in terms of their position relative to the conformation. Certain factors including behavioural and sociodemographic variables discriminated significantly between membership of these two clusters and furthermore, it was shown that these two clusters differed significantly in terms of response to the global and lottery-specific identity principle scales (although only one of the lottery-specific scales was found to be reliable and this corresponded to self-esteem/self-efficacy).

Given the significant difference found between levels of global self-esteem and lottery-specific self-esteem/efficacy between the two cluster groups further analysis was conducted in order to investigate the extent to which these differences might be related to the relative position of each of these clusters on the three reliable dimensions of the lottery conformation. In this way, it was anticipated that it might be possible to examine the relationship between different levels of analysis, namely the societal and the intra-psychic, the latter in the guise of identity principles.

Although it would have been possible to conduct a multiple regression using the identity principle scales as independent variable, it was considered inappropriate to regard the dimensions of the lottery conformation as dependent variables given that this research was conducted one year after the lottery had been launched. Therefore, a series of correlations were conducted to investigate the relationship between score on each of the three reliable dimensions of the social representation and level of global and lottery-specific self-esteem/efficacy for each cluster.

Interestingly, a significant correlation was found between the social value dimension that had been the most significant discriminator between the two clusters and one of the self
esteem/efficacy scales. These results were summarised in figure 11. There were no significant correlations between global self-esteem or lottery-specific self-esteem/efficacy and either the fiscal aspects dimension or moral objection, for either of the two clusters.

**Figure 11:** Significant correlation scores between social value conformation dimension, global self-esteem and lottery-specific self-esteem by cluster group

<table>
<thead>
<tr>
<th>Cluster A (n = 77)</th>
<th>Higher global self-esteem</th>
<th>ns</th>
<th>Lower lottery-specific self-esteem/efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>SOCIAL VALUE</td>
<td></td>
<td></td>
<td>+.23 p&lt;.05</td>
</tr>
</tbody>
</table>

| Cluster B (n = 150) | Lower global self-esteem | +.16 p<.05 | Higher lottery-specific self-esteem/efficacy |

Although the strength of the significant correlations was low, the results were discussed in terms of their implication for differentiating between global and specific self-esteem and the process of individuation that might accompany social representation.
Discussion

In this study, a systematic analysis was conducted of the relationship between items, conceptualised as 'shards' of a social representation of the UK National Lottery (NL). These shards were derived from the content analysis of previous qualitative studies in which the importance of investigating the particular content of social representations (Moscovici, 1996) was acknowledged. In addition, to corroborating the existence and relevance of similar content elements, this study sought to investigate the patterning between elements that constituted the conformation and the relationship between access to the social representation and individual factors.

It was acknowledged that the items used in this study, that were derived from extensive qualitative research, were not exhaustive. Hence, a perfect relationship between the shards was not anticipated. Nevertheless, the results of multi-dimensional scaling (MDS) suggested the existence of a three-dimensional representational field. Criteria for acceptance, i.e., a stress value less than 0.1 was achieved for a three-dimensional solution, but not a two-dimensional solution. This raised the issue of objectification; namely, the degree to which choosing a particular dimensional solution could influence how a social representation was interpreted. It was understood that a degree of objectification may result from the rendition of the multi-dimensional solution in two dimensions, that is, on the screen or on paper. However, in the present study, this limitation was overcome in two ways: by using the rotation facility provided within the MDS programme and by re-emphasising that the graphical two-dimensional presentation did not reflect the sole or primary relationship between the elements.

Certain statistical or measurement criteria, e.g., acceptable stress values or levels of significance, provided an index of the strength of relationship between the shards of the social representation. When these criteria were met, it was proposed that conformation in the social representation existed. The results of MDS analysis did not preclude a satisfactory solution existing in more than three-dimensions. But given that the three-dimensional solution met existing criteria for acceptance (Doise et al., 1993), with a high enough RSQ value and low stress value, this solution was taken to indicate conformation in the social representation. Thus, subsequent analysis investigated the nature of the relationship between items within the conformation.
Following MDS, factor analysis (FA) was used in a confirmatory manner with the lottery representation items in order to ascertain what underlying factors might account for the conformation suggested by the acceptable stress values and RSQ values established with the MDS. The FA resulted in the identification of four factors from which three reliable scales were derived. The small number of dimensions, in this case four, suggested an acceptable degree of consensus (Doise et al., 1993) associated with the social representation of the UK national lottery. The three reliable scales were described as: estimate of social value, fiscal aspects of the national lottery and degree of moral objection. Social value was essentially an evaluation of the appropriateness of the NL; fiscal aspects concerned the distribution of money from the NL, whilst moral objection was associated with estimates of excess and religious opposition. The fourth, non-reliable scale was composed of NL-specific items, e.g., issues associated with Camelot, the lottery organisers, or OFLOT, the lottery regulator. Given the disparity in terms of specificity between the three reliable scales and the fourth collection of NL-specific items, it was necessary to consider to what extent the former were particular to the target representation or the process of social representation more globally.

In effect, it may be proposed that conformation of the social representation of the UK NL identified in this study, was composed of a particular combination of dimensions that could be considered to be pre-operative in society: social value, fiscal concerns and moral objections. These dimensions may not be exhaustive of all possible dimensions; they would seem to share some similarity with dimensions or aspects of other social representations, e.g., of health and illness (Herzlich, 1973) or madness (Jodelet, 1991). If this were the case, social representation would seem to involve the coalescing of particular societal or cultural dimensions, such that a unique combination was produced that was clearly identifiable as a representation and as pertinent to the target entity by virtue of the inclusion of specific independent elements. In fact, these specific elements may in another research context, constitute the ‘core’ of a social representation.

It should be noted that some items did not load sufficiently highly on any of the dimensions to form part of any of the respective scales, e.g., ‘the lottery encourages laziness’. Two reasons were offered to account for their exclusion on the basis of their low factor loading. The first was that these elements, unlike the lottery-specific items that formed part of the unreliable fourth scale, were peripheral to the representation to the extent that they should
be considered absent from the social representation. However, the categorical nature of this exclusion principle seemed incompatible with the conformation approach adopted in this study. Alternatively these elements, particularly the reference to lassitude or laziness, could be considered as 'potential' rather than 'actual' elements in the representation. It may be proposed that their potentiality derived from their origination in more specialised sources of information, e.g., government or official literature. Furthermore, the fact that they did not load highly on any of the factors was consistent with their apparent absence from the content of social representations of the national lottery identified at different levels, amongst a similar target audience, in the previous studies.

The factor analysis suggested that these particular elements did not 'fit' the three-dimensional conformation, i.e., they were not part of either the social value, fiscal aspects or moral objection dimensions. In this sense, conformation may prescribe what elements constitute 'actual' as opposed to 'potential' elements in a particular representation. By extension, items that loaded highest on each of the three factors may have been interpreted as more central or 'core' to the particular dimension. However, this was not to suggest that these items alone constituted a central core to the social representation: rather a type of representational field was proposed that could include both specific items and those inherent in a particular dimension.

In order to pursue this possibility further, it was necessary to consider what conditions and processes, contributed to the existence of particular dimensions; in particular, how the results of this study may contribute to an understanding of anchoring and objectification. The results indicated that there were three dominant dimensions within the conformation and it was possible to conceive of each of these having antecedents in three different cultural disciplines: social beliefs (social value), economics (fiscal aspects) and ethics (moral objection). It seemed possible that the target social representation, i.e., of the UK NL, was not characterised by a body of singular elements but by dimensions that were themselves anchored (or grounded), in representations of free-market economics that endorsed (through legitimisation) the social value and moral dimension of the lottery in a similar manner to that described by Blakey (1979) about state lotteries in the USA.

Interpretation of conformation in terms of dimensions lent itself to a conceptualisation of anchoring in terms of pre-existing social representations and implied that a social
representation may result from the identifiable coalition of particular dimensions. Having
found particular dimensions it was desirable to investigate individuation, that is, whether
respondents positioned themselves in a similar manner relative to each of the three
dimensions. To this end, MDS of cases on the basis of their response to each of the
lottery representation items was conducted and the results suggested the existence of two
clusters of respondents. Two clusters, subsequently described as cluster A and cluster B
were identified using cluster analysis on the basis of their response to the individual lottery
representation items.

What was required was an analysis of the extent to which these cluster groups differed in
terms of their position relative to the conformation or dimensions of the lottery
representation. Consequently, discriminant function analysis (DFA) was conducted that
revealed significant differences between the two clusters on each of the three dimensions,
with social value as the primary discriminating function. Overall, members of cluster A
regarded the lottery has having less social value, they expressed greater moral objection
toward the lottery and they were less likely to approve of the methods used for the
distribution of lottery money. In essence, members of cluster A found the lottery more
objectionable and less equitable than those ascribed to cluster B. In order to account for
this difference, other factors including identity principles and sociodemographics were
examined.

The results of factor analysis of the respective identity items produced four reliable global
level scales that corresponded to the four identity principles: distinctiveness, continuity,
self-efficacy and self-esteem and one reliable scale at a lottery-specific level that consisted
of self-esteem items and a self-efficacy item. Previous research, e.g., Rosenberg et al.,
(1995), had differentiated between global and specific self-esteem and it had been
anticipated that a similar distinction could be made for distinctiveness, continuity and self-
efficacy respectively. As only one reliable scale was derived at the lottery-specific level, it
was considered more likely that the items developed for use in this survey were inadequate
to operationalise these other principles at the specific level than that these principles would
not have a contextualised format like, for example, self-esteem.

When the clusters were compared in terms of their respective scores on each of the scales
derived for the four identity principles, i.e., self-esteem, self-efficacy, distinctiveness and
continuity at a global level and self-esteem/efficacy at a specific level, global and lottery-specific self-esteem were found to differentiate significantly between the two clusters. Interestingly, cluster A had significantly higher levels of global and lower levels of lottery-specific self-esteem than members constituent of cluster B who showed lower levels of global self-esteem compared to higher levels of lottery-specific self-esteem. In order to investigate this further, comparison was made between the position of the two clusters relative to the three reliable dimensions constituent of the conformation.

The results indicated that cluster B adopted a different position relative to the three dimensions than cluster A, with the principle relationship being between level of self-esteem and estimate of social value attributed to the UK NL. Scores on self-esteem, both global and contextualised, were not correlated with two of the conformation dimensions, fiscal aspects or moral objection for either of the two cluster groups. Furthermore, there was no significant correlation between the social value dimension and either global or lottery-specific self-esteem for cluster A who had higher global and lower lottery-specific self-esteem. Neither were global and lottery-specific self-esteem correlated for this cluster. However, there was a significant positive correlation between the two types of self-esteem for the cluster B. In addition to which both global and lottery-specific self-esteem were positively correlated with score on the social value dimension. This suggested that for cluster A, there was relative autonomy between their score on particular identity principles and their opinions about the UK NL. By contrast, for cluster B, the principle of self-esteem was closely related to a particular dimension of the lottery conformation.

This result was interesting in that despite having established conformation relative to the social representation of the UK NL for the respondent population as a whole, there were clearly sub-groups within the sample whose position relative to the conformation was differentiated on the basis of their identity profile, particularly their level of respective global and lottery-specific self-esteem. In order to clarify this difference between the two cluster groups other factors including sociodemographics were examined. The results indicated that cluster B, for whom there was a significant relationship between self-esteem and the social value dimension also had higher levels of direct and indirect participation in the UK NL. Direct participation included purchase of lottery tickets or lottery scratchcards whilst indirect participation included, for example, watching the lottery draw on television and day dreaming about the consequences of winning the national lottery.
This suggested an empirical link between a particular behaviour, i.e., participation in the UK NL, level of global and lottery-specific self-esteem and position relative to the UK NL social representation.

Since, according to identity process theory (Breakwell, 1986, 1993a), maximisation of self-esteem was a fundamental goal, it was envisaged that people would seek to engage in activities that increased their sense of global or specific self-esteem. One of the interesting findings was that irrespective of cluster membership, there was a significant positive correlation between the level of lottery-specific self-esteem and finding the possibility of winning on the national lottery threatening. This suggested that winning was negatively evaluated for members of both groups and the greater the perception of threat associated with winning, the less self-esteem was contextualised in the national lottery. The results suggested that possibility of winning on the NL did not pose a direct threat to levels of global self-esteem for either cluster. However, the significant positive correlation between level of global self-esteem and lottery-specific self-esteem for cluster B suggested that for these respondents at least, participation in the UK NL was in accordance with the desire to maximise self-esteem.

On the basis of the results, it may be suggested that respondents in one cluster (B) who had relatively lower levels of global self-esteem sought to increase this through participation in direct and indirect lottery-related activities that provided them with contextualised self-esteem. The results favoured making a distinction between global and specific self-esteem that was not characteristic of identity process theory (Breakwell, 1986, 1993a). Furthermore, the finding that lottery-related behaviour was positively related to lottery specific self-esteem rather than global self-esteem supported the notion that behaviour was linked to specific self-esteem (Rosenberg et al., 1995). In this case, it seemed likely that enhancing self-esteem in a particular context, maintained levels of global self-esteem. Although it was not possible given the time frame of this research to corroborate the effect that the introduction of the UK NL had on existing levels of global self-esteem for this population, it was possible given the defined starting point and novelty of the UK NL, to propose that prior to November 1994, self-esteem was not contextualised in the national lottery. It would seem that when threat associated with the consequences of a particular activity was minimal, people engaged in related activities that contextualised self-esteem/efficacy in order to increase, or at least not conflict with or
reduce, levels of global self-esteem. Furthermore, participation and level of self-esteem
was shown to be related to orientation relative to the social representation conformation.
Given that the principal dimension that differentiated between the two clusters was social
value, it would seem as if positive evaluation of the UK NL may act to justify participation
in the lottery and in lottery-related activities independent of a relatively impoverished level
of global self-esteem.

Further analysis of factors that differentiated between cluster groups suggested that cluster
B also differed significantly in terms of an increased likelihood to day dream about the UK
NL and elaboration of possible selves (Markus and Nurius, 1986). It may be suggested
that for those for whom global self-esteem was relatively low (cluster B), day dreaming
may have provided a means of exploring higher self-esteem possible selves. This
suggested that future research might use day dreaming to provide an explicit temporal
dimension for the investigation of identity principles, particularly self-esteem.

It may be the case that those with relatively lower levels of global self-esteem (cluster B),
may have been more susceptible to media advertising that propagated positive images of
winning the lottery associated with promoting personal ‘well-being’ (e.g., Rosenberg et al,
1995) and financial support for socially approved ‘good’ causes. One possible
consequence of this association involved the extent to which ‘happiness’ or ‘feeling good’
associated with winning on the national lottery may be conceptually related to self-esteem
through promotion of fiscal, moral and social well-being.

Overall, this study demonstrated that exploratory MDS combined with confirmatory factor
analysis could be used to ascertain the extent to which conformation was appropriate to a
particular social representation, in this case, the UK NL. This research was essentially
field-based and differed in methods and forms of analysis from research that has
investigated the existence of a central core and periphery (e.g., Abric, 1976, 1989; Abric
Therefore, it was not possible to deny the existence of these structural components even
though this research did not find sufficient evidence of their existence. Given that three
reliable factors were identified within the conformation, this lent support to a dimensional
approach to social representation (e.g. Di Giacomo, 1980, 1981a; Doise, 1993; Doise et
al., 1993). However since emphasising dimensions may perpetuate the reification of
dimensions in psychology (Flament, 1981b), it was considered preferable to discuss the relationship between factors as constitutive of conformation. This permitted discussion of the results in a more independent manner, without being overly prejudiced by the forms of analysis conducted in pursuit of the aims of this research.

It was possible to compare how clusters of respondents differed in terms of their relative positioning on each of the three dimensions. Two clusters were identified using MDS and cluster analysis. Both clusters differed significantly on each of the three dimensions of the conformation and it was proposed that certain factors, particularly level of global and lottery-specific self-esteem and degree of participation and likelihood of day dreaming about the NL, correlated with likelihood of being a member of the two clusters. This supported a relationship between individuation and conformation such that position relative to the conformation was influenced by individual intra-psychic factors and behaviour.

It was not possible on the basis of this study to state the direction of causality between level of self-esteem, participation and position relative to the conformation. Nevertheless, this study did provide some evidence of individuation in relation to social representation in the sense that individual factors predicted membership of a particular cluster that in turn responded in a identifiable way to the social representation of the UK NL. This suggested that opinions held by respondents relative to a particular target entity may be conducive to the maintenance or development of both a position relative to a social representation and particular identity principles, in this case self-esteem.

Overall, given that the results supported both conformation and individuation in social representation, it may be suggested that the assumption that a dualistic distinction between a core and periphery exists, that has characterised the research of advocates and critics of the theory of social representations alike (e.g., Moscovici, 1985; McKinlay and Potter, 1987; Ibáñez, 1994; Philogene, 1994, 1998; Markova, 1996 and Wagner et al., 1996) may be an inappropriate assumption upon which to base subsequent research using TSR. This research supported the notion that using appropriate methods and forms of analysis it was viable to investigate how individuals differed in terms of their position relative to a shared social representation using behavioural and intra-psychic indices.
CHAPTER EIGHT

Overall discussion

8:1 Description of terms and summary of empirical studies

This discussion was concerned with the relationship between conformation, individuation and social representation that formed the basis of this research about the UK National Lottery. In brief, previous chapters suggested that social representation could be operationally defined as an active system of transformation of social knowledge, constrained by socio-cultural affordances, that originated in and facilitated communication between people about unfamiliar phenomena. Social representations that resulted from this process were seen to provide networks of shared meaning that linked symbolic and unconscious realms with experience of particular objects, events or people. These networks of shared meaning were considered constitutive of the 'conformation' of a particular representation. Conformation was the form that a particular social representation might adopt, at a given point in time. Individuation meanwhile, was conceptualised as a micro-level process that involved the modification or adaptation of identity principles. It was found that individual and intra-psychic factors, e.g., behaviour, levels of global and lottery-specific self-esteem and day dreaming, correlated with position relative to the conformation. The results supported a view that it was appropriate to adopt a systematic, empirical approach to the study of a novel, social entity in order to inform how the processes of conformation, individuation and social representation might be related.

Table 20 illustrated what levels of analysis, forms of data collection and types of analysis were used in each of the four empirical studies. This research adopted a field-based, systematic, empirical approach (e.g., Breakwell and Canter, 1993) to the study of social representation, conformation and individuation. A variety of appropriate (Moscovici, 1988) methods of data collection and analysis were used (e.g., Sotirakopoulou and Breakwell, 1992; Doise et al., 1993) at three different levels of analysis (Doise, 1984) that included the intra-psychic or intra-individual level that has been relatively under-researched using TSR (e.g., Joffe, 1996b; Markova, 1996).
Table 20: Summary of the four empirical studies

<table>
<thead>
<tr>
<th>Level of analysis</th>
<th>Empirical study</th>
<th>Form of data collection</th>
<th>Types of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intra-psychic</td>
<td>Study Three</td>
<td>Interviews</td>
<td>Qualitative: Content Analysis (CtA)</td>
</tr>
<tr>
<td>Inter-individual</td>
<td>Study One</td>
<td>Focus groups</td>
<td>Qualitative: CtA</td>
</tr>
<tr>
<td>Inter-individual</td>
<td>Study Four</td>
<td>Questionnaire</td>
<td>Quantitative: MDS, FA, CA, DFA, ANOVA</td>
</tr>
<tr>
<td>Societal</td>
<td>Study Two</td>
<td>Media articles</td>
<td>Qualitative: CtA</td>
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The results of each of the four studies are reviewed briefly after an outline of the context for this research is presented. This is followed by a discussion of the methodological and theoretical implications of this research. Specifically, the outcomes of this research are discussed in relation to seven areas: socio-cultural values and the political context; adoption of a systematic, multi-method and multi-analytic approach to the study of social representations; support for a multi-level mode of enquiry that includes the intra-psychic level of analysis; multi- rather than uni-dimensional approaches to issues of structure; the relevance of the unconscious in studies of social representation; the relationship between action, individual position and use of a social representation and finally, the relationship between issues of identity and social representation. Following this discussion, areas are suggested in which future research could be conducted.

8:2 Context of the research

This research was conducted as a consequence of the launch of a novel, national phenomenon, the UK National Lottery in November 1994. This clearly defined starting point provided a unique opportunity to trace the genesis of opinions about an unfamiliar social entity and to monitor the way in which it became socially represented. The UK NL provided a ‘topical’ (Wagner, 1994b) subject for study using TSR.
8:3 Discussion of results from the empirical studies

In study one, conducted in October and November 1995, some respondents explicitly stated that in their opinion the NL contravened values associated with hard work. The NL was associated with a loss of control implicated in national 'hysteria' and participation in the NL was seen to mitigate against working to earn money in addition to which the NL encouraged lethargy. When the NL was positively evaluated it was on the basis that it provided a form of 'harmless' entertainment, the connotation being that other forms of gambling constituted more 'harmful' forms of entertainment or leisure, e.g., lottery scratchcards. It was clear from study one, that when respondents did not describe the NL in terms of a contravention of values associated with what may be considered the Protestant Work Ethic (PWE), they regarded it as a form of 'harmless entertainment that was fun'. Values typically associated with the PWE included: a positive assessment of hard work, asceticism, holding negative views and being anti-leisure (Mudrack, 1997).

In study two, a negative portrayal of the consequences of a win on the NL, e.g., in terms of suicide or divorce was identified in the mass media. The salience and relationship of content elements within newspaper articles about the UK NL was examined across time, from the launch of the UK NL in November 1994 until the end of December 1995. Given that salient aspects of the NL were similar at a societal and an inter-individual level, this seemed to support the suggestion that the national press fulfilled a significant role in influencing public opinion (e.g., Moscovici, 1961; Rouquette, 1996). Across time the content of media articles about the UK NL changed and on the basis of the media analysis it was suggested that it took approximately three months for a coherent social representation of the UK NL to develop. In the early stages following the launch of the UK NL, reference was made to previous lotteries in the UK. At this time, the main sources of information about the UK NL were official government publications and literature published by the lottery operators, Camelot. Given the desire to maximise participation in order to raise revenue (Home Office, 1992; Kay, 1992), it was understandable that the operators were keen to prevent the latest UK NL being associated with negative consequences such as lassitude, greed and dissipation of wealth, seen to be related to the demise of previous lotteries in the UK. Instead, association was encouraged between the UK NL and reputable, credible, and respectable institutions such as the BBC.
This process of association seemed to facilitate anchoring in dominant, underlying, cultural values that were positively evaluated such as respectability and credibility.

Subsequently, contemporary events in the life of the UK NL contextualised or anchored the emerging social representation. For example, the revelation of the identity of the first major winner in November 1994, a male Muslim, led to certain elements such as religious objection and the size of the lottery jackpot, adopting a pivotal role in the development of particular 'stand points', so to speak, about the NL. It may be argued that this and subsequent events, such as the decision to award a major lottery grant to the Royal Opera House, were instrumental in mobilising public opinion and this facilitated communication that was integral to the process of social representation (Moscovici, 1990a). Thus in order for the social representation to develop it seemed necessary for credibility to be established not only at an institutional level, e.g., the link between the UK NL and the BBC but also at an individual level in the sense that the NL developed 'character' in relation to the projects and people with which it was associated. Therefore, what might be considered veridical, temporal anchoring became less important as more horizontal, personally relevant, contemporary event anchoring occurred that made the NL seem more familiar (Moscovici, 1984b). Furthermore, as 'they' were distinguished from 'us' at both an individual and a societal level, on the basis of socio-economic status, willpower and psychological health, e.g., loss of sanity, people began to draw upon ideas and ways of thinking about the novel social entity in ways that were acceptable to the groups with which they identified (Joffe, 1996b).

Nevertheless, at an intra-psychic level, the distinction between 'them' and 'us' in relation to the UK NL was less pronounced. This may have been a function of the intra-individual level of analysis adopted for study three in which day dreaming was found to be self-oriented, i.e., there was some evidence of day dreaming facilitating the elaboration of possible selves (Markus and Nurius, 1986). Day dreaming was found to be a positive emotional experience that was future-oriented (Singer and Antrobus, 1972). Content of day dreams about the UK NL was similar to elements identified in the NL social representation at an individual and a societal level. In the third study, a relationship was noted between content and frequency of day dreams and levels of self-esteem such that those who did not day dream about the UK NL seemed less likely to attribute great importance to this phenomenon as a source of self-esteem. Some evidence was found of
day dreams consisting of future-oriented, self-relevant images (Markus and Nurius, 1986). When day dreams had a lottery-related content, they were very homogeneous, being primarily about the material consequences of an unlikely but desired win on the UK NL. It seemed that by late 1995, a relatively coherent intra-psychic image of the UK NL had developed that was inter-related with a desire to maximise self-esteem. The results suggested that day dreaming may enhance the image, metaphoric (Moscovici, 1984b) and symbolic components of social representations (Wagner et al., 1995).

The results of study four supported the earlier suggestion that the social representation of the UK NL was at least partially anchored in values enshrined in the PWE. Three reliable factors were identified as constitutive of the NL conformation: social value, fiscal aspects (including the distribution of money from the UK NL) and moral objection. A fourth but unreliable factor contained lottery-specific items. Moral objection seemed to reflect particular religious beliefs enshrined in Protestantism whilst fiscal aspects epitomised the economic activity of work and the social value factor encompassed the ethical issues constitutive of the social structure. In this sense, religious beliefs, economic activity and social structure that could be considered integral to a PWE, were found to be intrinsic to the conformation and social representation of the UK NL. Therefore, it seemed plausible that the PWE that has been found to be central to the social representation of the unemployed (Breakwell, 1986) may also be fundamental to the social representation of novel social entities such as the UK NL. This raised the possibility that anchoring of different social representations may occur in similar combinations of values and would lend support to the notion that anchoring might be a more universal process (e.g., Billig, 1993) than objectification. Specifically, these results suggested that emerging and existing social representations might be influenced by similar socio-cultural affordances or socio-historical contexts (Breakwell, 1994).

It was proposed that what differentiated members of cluster A from cluster B was the relative salience of values associated with a PWE. Explicitly, members of cluster A were less likely to rate the UK NL as important to them personally, they were less likely to day dream about the NL and they did not seek to maximise self-esteem in the context of the national lottery. Given the conflict that day dreaming and participation in the NL presented with values associated with the PWE that were salient in the conformation, it
was not surprising that members of cluster A were less likely to play the NL than members of cluster B.

By contrast, members of cluster B were more likely to day dream about the NL, participate in the NL and to contextualise self-esteem in the NL. It seemed conceivable that despite having suggested that the PWE was central to the conformation of the NL social representation, it was not as salient for members of cluster B and therefore their participation in the NL was less likely to lead to a situation of values conflict. In fact, the significant correlation between level of general and lottery-specific self-esteem and the social value factor seemed to suggest that, whereas non-participation for cluster A was justified on the basis of conflict with the PWE, members of cluster B justified participation on the basis of the NL having a positive social value and personal benefit.

8:4 Socio-cultural values and the political context

This research provided support for the notion that social representations could be defined in terms of being part of culture (Moscovici, 1984a, 1988). By conducting systematic research at a variety of different levels (Doise, 1984), using a variety of suitable methods, it was possible to show that the sociological level of analysis, that was often described as integral to the process of social representation, was also important for conformation and individuation. For instance, it may be argued that social value had been institutionalised in the use of the term ‘good causes’ (Home Office, 1992) to describe the recipients of lottery revenue.

Although the establishment of a large lottery was opposed until recently (Royal Commission on Gambling, 1978), it was somewhat inevitable given the potential of such a lottery to raise substantial amounts of revenue in the form of government tax and contribution to ‘good causes’ (Office of the National Lottery, 1994) that a national lottery would be established in the UK. The successful re-election of a Conservative government in 1992 coincided with the decision to introduce a national lottery into the UK. Given the evidence of lottery-specific self-esteem amongst the participant cluster (B) and the emphasis upon social value, it seemed that the UK NL objectified what has been called the ‘feel-good factor’.
With regard to processes involved in social representation, the results of the combined studies suggested that the mass media was influential in objectifying the NL as both a socially-valued activity that benefited good causes, in line with official government literature and as a gambling phenomenon in conflict with pre-existing social values associated with the PWE. Arguably, the launch of the UK NL constituted a novelty for all since it instigated a reformulating of values and this influenced the development of subsequent opinions and behaviours associated with the NL. Individuation was evident to the extent that some people, evaluated the NL positively, they regarded it as a form of entertainment and justified participation in terms of increasing the salience of the principle of self-esteem at both an individual and societal level. By contrast, other people (a minority in the present sample), objectified the NL in line with existing PWE values and perhaps as a consequence, were less likely to participate in the NL. It may be argued that having established conformation in the social representation across all respondents, disparity between the two clusters did not reflect two different representations but rather different perspectives on facets of a shared, social representation of the UK NL.

8:5 Methodological issues

The results of this research suggested that it would be advisable that future research using TSR adopt a systematic approach to the study of social representations that utilised qualitative methods to establish content elements pertinent to the target entity, prior to quantification of the relationship between content elements. Use of particular methods would seem to be dependent upon the context and aims of each study. Focus groups seemed to provide an appropriate means of simulating inter-individual communication that has been considered fundamental to the generation of social representations (e.g., Moscovici, 1961, 1990b). They were particularly appropriate during the formative stages of a social representation since it was anticipated that at this time, communication between people about aspects of the representation would be greater than when the novelty of a particular entity had subsided. This research re-affirmed that media analysis, albeit time-consuming, was a useful way in which to trace the development of a social representation (e.g., Moscovici, 1961, 1984a; Rouquette, 1996). Use of electronic media, e.g., newspapers on CD ROM or the Internet, that had search and download facilities, reduced the time required for data collection and lessened error rates associated with researcher fatigue. Identifying ‘themes’ using this method had been considered unsubtle (Potter and
Litton, 1985b), however, the results of this research suggested that this form of content analysis could inform a description of the medium of transformation in addition to the content of a particular social representation. It would seem that given the accessibility of electronic sources, future TSR research might utilise these facilities to monitor the effect contemporary events have on the development of a social representation, e.g., the recent (January 1998) bribery case by Richard Branson that was upheld against the head of GTECH, Guy Snowden, that was closely followed by the resignation of the head of OFLOT, Peter Davis.

Given that day dreaming was an intra-psychic process, an unconscious activity that was generally conducted alone and that did not warrant such special status in our culture as night dreams (Singer, 1975b), it was heartening to find that individuals were prepared to discuss their day dreams in an interview situation. The interview seemed to provide a means of accessing the unconscious level that has been relatively neglected in TSR research (Markova, 1996). However, the demands of the interview may have constrained the description provided of day dreams, e.g., admittance of sexual fantasy in day dreams was only obtained when anonymous questionnaires were distributed to respondents.

On basis of this research it was considered appropriate to use a questionnaire when qualitative methods had established possible elements for the social representation conformation. Questionnaires permitted the study of the relationship between individual factors and the position adopted relative to the conformation that was considered constitutive of individuation. It was acknowledged that it would have been preferable for this research to have included an assessment of individual factors, particularly identity principles prior to the genesis of the social representation in a longitudinal design framework. However, it was only as a consequence of this research that the relationship between individuation and conformation became apparent. Therefore, in the event that a similar phenomenon was identified, e.g., the launch of the single European currency, research should consider the assessment of such factors at an earlier stage in the research process.
Multi-levels of analysis

This research was not only multi-method and used a variety of forms of analysis, it was also designed to assess social representation at three different levels of analysis (Doise, 1984): the societal, the inter-individual and the intra-individual. Use of different levels of analysis provided a comprehensive ‘picture’ of the social representation and the results supported a high degree of similarity between the levels in terms of content. It was considered especially important given the discussion of the socio-historical context to include the societal level of analysis in future studies. In addition, it was considered useful to pay more attention to the intra-psychic level, in the form of both identity principles (Breakwell, 1986, 1993a) and day dreaming, as this permitted closer collaboration between theories of identity and TSR. Given considerable research and theorising about TSR at an inter-group level already exists (e.g., Moscovici, 1961, 1984a, 1988; Potter and Litton, 1985a; Doise et al., 1993; Wagner, 1994b), it would seem particularly important for subsequent research using TSR to quantify the relationship between identity principles such as self-esteem and intra-individual forms of communication such as day dreaming. Since communication at various levels, including the intra-individual, inter-individual and societal were intrinsic to the process of social representation (Moscovici, 1990b) it was suggested that future research should address the relationship between the intra-individual and societal levels in more detail.

Conformation: multi-dimensional or uni-dimensional?

There was no empirical evidence from this research to support the existence of a central core and peripheral system (e.g., Abric, 1976, 1989; Flament, 1984, 1994b; Moliner, 1992, 1994; Guimelli, 1996; Wagner et al., 1996). However, this was not to dispute the possible existence of these attributes since the methods used in the present study differed significantly from research that has adopted this distinction, e.g., this research was field-based rather than experimental, monitored the development of a social representation and considered the socio-cultural affordances of the research. Inclusion of the latter may predicate against finding a central core since only the peripheral system was considered to be influenced by the immediate context (e.g., Moliner, 1994). Despite the use of these dualistic components in existing research by advocates and critics of TSR alike (e.g., Moscovici, 1985; McKinlay and Potter, 1987; Ibáñez, 1994; Philogene, 1994, 1998;
Markova, 1996 and Wagner, et al., 1996), a uni-dimensional distinction between a central core and a peripheral system was considered an inappropriate assumption upon which to base future research. It was suggested that the term conformation facilitated a dynamic, multi-dimensional investigation of 'structuration' and individuation associated with social representation. Furthermore, including measures of unconscious processes such as day dreaming permitted the investigation of the relationship of this level of awareness with the conformation that informed the “symbolic construction of reality” (Jovchelovitch, 1995, p.92).

8:8 Role of the unconscious

This research addressed the unconscious level that constituted a relatively ignored area with TSR (Jovchelovitch, 1995, 1996; Joffe, 1996b; Markova, 1996). The results of this research suggested that the unconscious played a significant role in the process of social representation of the UK NL. The emphasis upon day dreaming as an unconscious process countered a tendency toward regarding the intra-individual level as essentially cognitive (e.g., Doise, 1984) in addition to which day dreaming emphasised a future temporal orientation and an explicit figurative (Moscovici, 1985) or imagery component (Moscovici, 1984a, 1988) that was considered integral to the process of objectification. Despite objectification tending to be seen as an external, physical process (e.g., Moscovici, 1988, 1990a), this research suggested that day dreaming might facilitate internal, unconscious objectification. Future research might investigate in more detail the role of communication at the intra-psychic level for processes associated with social representation. However, the extent to which day dreaming constituted a form of intra-individual communication pertinent to the process of social representation more generally would have to be validated since day dreaming or fantasy about winning the UK NL would seem to have been a particularly salient aspect of the context of the current research.

“Extending the conversation” (Moscovici, 1990a, p.164) might be facilitated not only through increasing the links between Piagetian-based developmental psychology and TSR but by returning to the Freudian, unconscious origins of TSR. The latter might be achieved by more emphasis upon unconscious processes like day dreaming. It would seem that future research using TSR might offer the possibility of integrating such apparently disparate disciplines as social or developmental psychology and psychoanalysis.
8:9 Relationship between action, individual position and use of social representation

There were several factors that significantly differentiated between the two clusters in addition to their respective levels of self-esteem and these included their propensity to daydream about the national lottery and their level of participation in lottery-related activities that included buying lottery tickets. Essentially, one of the two clusters denigrated the activity of daydreaming and were more likely to negatively evaluate the NL whilst the other cluster of respondents tended to daydream more about winning the NL, were less likely to object to the NL and were more likely to participate in the NL. This suggested an interaction between degree of participation in an associated activity and position relative to the social representation conformation although it was not possible given the time frame of this research to establish a direction of causality between participation and position relative to the social representation. The results suggested that despite the NL social representation being shared to the extent that conformation was established in the present study, differences would persist between individuals in terms of the relative weight they ascribed to values underlying the conformation and that this weighting would be a function of their degree of involvement with the target entity.

8:10 Issues of identity

With regard to identity, the results of this research suggested that measures of identity processes might be useful additions to the socio-demographic characteristics presently assessed within gambling literature (e.g., Kusyszyn and Rubenstein, 1985; McConkey and Warren, 1987; Griffiths, 1990, 1997; Lorenz, 1990; Babad and Katz, 1991; Evans and White, 1996). The results of study four suggested that one of the main discriminating factors between members of two respective clusters of respondents was the relative level of general and lottery-specific self-esteem expressed by respondents.

Participation (for members of cluster B) could be legitimated since it provided a context for maintaining levels of self-esteem. In fact, self-esteem may have been effectively invoked at an individual and a societal level. The former in terms of contextualised self-esteem and the latter in terms of the positive, social value that funding for the 'good causes' created. Although it was not possible to quantify the extent to which 'good
causes' were directly correlated with self-esteem, it was possible to show that for one cluster at least, participation was not prevented by the conflict between a national gambling phenomenon and socio-cultural values like the PWE. The results of this research suggested that access to, or position adopted relative to, a particular social representation was related to levels of self-esteem and that it would be advisable for future research to investigate the direction of causality. This could be achieved through the systematic use of a combination of methods of data collection and forms of analysis that included measures of identity principles in addition to measures of action and conformation. Given that the present licence to run the UK NL will expire after seven years of operation, i.e., 2001, an opportunity exists to monitor the effect of significant events such as the transition into the next millennium on levels of global and lottery-specific self-esteem and their relationship to the social representation of the UK NL.

8:11 Conclusion

On the basis of this research it was considered appropriate that future research adopt a multi-methodological and multi-level of analysis approach to the study of social representations through the incorporation of qualitative methods to establish the content of the target representation and quantitative methods to investigate conformation and individuation. The results supported the suggestion that more attention be paid to processing at the intra-psychic level in future research. It was advised that measures of identity principles, notably self-esteem be included, in addition to noting the role of unconscious and imaginary processes such as day dreaming about a target entity. A multi-rather than uni-dimensional view of conformation was advocated as this seemed consistent with central tenets of TSR, e.g., an emphasis upon dynamism. Although the results did not preclude the existence of a central core or peripheral system, caution was advised when using these terms since they may reflect a cultural tendency toward static dualism that was not characteristic of the dynamic, multi-dimensional theory of social representations. It was suggested that the term conformation be used to refer to the form adopted by a social representation, at a given point in time; individuation described the relationship between acceptance of a social representation and individual factors whilst social representation could be operationally defined as an active system of transformation of social knowledge, constrained by socio-cultural affordances, that originated in and facilitated communication between people about unfamiliar phenomena.
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Flick, U (1996). In conversation at the 'Social Representations: The State of the Art' conference at London School of Economics, 8 June, 1996.


171


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APPENDIX A

Protocol for study one: exploration of opinions about the UK National Lottery

Introduction:
Good morning/afternoon, my name is Hannah and I am a psychology research student at the University of Surrey. We are going to have a short discussion which, with your permission, I will tape record. [Seek permission]. Please speak loudly and clearly. The recorded information will only be used for my own research and the identity and views of all participants will remain confidential.

[Check that the tape and microphone are switched on, that there is a tape in the machine and that it works]

The topic for discussion today is THE NATIONAL LOTTERY

1] What comes to mind when you think about the national lottery?

[Supplementary questions]

a) should there be a national lottery?
b) who controls the distribution of money from the lottery?
c) who received money from the national lottery?
d) should the lottery money be used in this way?
e) how does the lottery relate to gambling?
f) what are your chances of winning the lottery?

2] How have (recent) events reported in the media affected what you think about the national lottery?

[Can expect reference to, for example, Labour or Conservative party conference speeches; Churchill papers; opera house funding; Plymouth harbour...]

3] How do you feel about scratchcards?

Prompt questions for use throughout the discussion:

TELL ME MORE ABOUT...
WHY DO YOU FEEL THAT WAY?
WHAT ARE YOUR THOUGHTS ABOUT...

Summarise and feedback responses to the participants.

THANK YOU for taking part in the discussion group. Your participation has been much appreciated.
Appendix B

Appointment protocol for study three: arranging interviews

Hello, may I speak to (name) please.

(Answer) Hello, my name is Hannah Wright and I have been given your name and number by the head of Carterton Community College, Roger Jones.

I am asking people who attend classes at the college to help me with a study I am doing as part of my PhD (in social psychology) at the University of Surrey.

Would you be willing to talk to me and fill in a short questionnaire BEFORE/AFTER (delete as appropriate) your class on (specify DAY)?

If YES, make an appointment (provide details of where the interview will be conducted) and thank respondent.

If NO, thank respondent (and make a record of the reason for being unable/unwilling to attend).
APPENDIX C

Interview schedule used in study three

1: Did you daydream yesterday? YN
   If NO, when was the last time you had a daydream (drifted off, let your mind wander)?

2: What did you daydream about? (Prompt for any lottery-related daydreams)

3: Where were you when you were daydreaming?

4: Were you alone? YN
   If NO, who were you with?

5: Has your daydreaming changed since the lottery started, i.e., do you dream more or less than before the lottery started or has what you daydream about changed at all?

6: How important is daydreaming to you?

7: Do you ever dream about the lottery? YN

8: When do you daydream about the lottery?

9: Are there certain days when you are more likely to dream about the lottery? (specify)

10: How do you feel when you dream about the lottery?

11: Why do you daydream about the lottery, (e.g., as a distraction, reduce stress, lets you solve problems, makes you feel good, allows you to avoid doing essential work, helps you make sense of what has been happening to you, be inventive/creative)?
APPENDIX D

Questionnaire used in study three
Please answer the following questions by putting a cross like this [ ] in the box which best describes you.

All your answers will be confidential.

<table>
<thead>
<tr>
<th>Q1</th>
<th>How old are you?</th>
<th>years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>Are you:</td>
<td>Female [ ] Male [ ]</td>
</tr>
<tr>
<td>Q3</td>
<td>Are you British?</td>
<td>Yes [ ] No [ ]</td>
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<tr>
<td>Q4</td>
<td>Which of the following do you think best describes you?</td>
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<td></td>
<td>Working class [ ] Lower-middle class [ ]</td>
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<td></td>
<td>Upper-middle class [ ] Upper class [ ]</td>
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<td></td>
<td>None of these [ ]</td>
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<tr>
<td>Q5</td>
<td>Are you a member of a lottery syndicate?</td>
<td>Yes [ ] No [ ]</td>
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<td>If YES, please indicate who else are in the lottery syndicate that you are a member of:</td>
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<td></td>
<td>People at work [ ] Members of my family [ ]</td>
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<td></td>
<td>People in my local pub [ ] Members of my club or society [ ]</td>
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<td></td>
<td>Other (please describe) [ ]</td>
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<tr>
<td>Q6</td>
<td>How often do you buy lottery tickets?</td>
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<td></td>
<td>Every week [ ] Rollover week only [ ]</td>
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<td>Once a month [ ] Occasionally [ ]</td>
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<td></td>
<td>Never [ ]</td>
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<tr>
<td>Q7</td>
<td>Do you use the lottery 'lucky dip'?</td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td>Q8</td>
<td>Do you use the same numbers each time you do the lottery?</td>
<td>Yes [ ] No [ ]</td>
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<tr>
<td>Q9</td>
<td>How do you rate your chances of winning with the 'lucky dip' compared to choosing your own numbers?</td>
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<td></td>
<td>a) better with the 'lucky dip' [ ]</td>
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<td></td>
<td>b) same for 'lucky dip' as using my own numbers [ ]</td>
<td></td>
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<tr>
<td></td>
<td>c) better with choosing my own numbers [ ]</td>
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<tr>
<td>Q10</td>
<td>Which day of the week do you usually buy your lottery tickets?</td>
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<td></td>
<td>Mon [ ] Tues [ ] Wed [ ] Thurs [ ] Fri [ ] Sat [ ] Sun [ ]</td>
<td></td>
</tr>
</tbody>
</table>
Q11 How confident are you that you will win the lottery this week?
   Not at all ☐ Somewhat ☐ Very ☐

Q12 Would winning the lottery change the sort of person you are?
   Yes ☐ No ☐

Q13 How often do you buy scratchcards?
   Every day ☐
   Every week ☐
   Once a month ☐
   Occasionally ☐
   Never ☐

If you 'Never' buy scratchcards please go to Q15

Q14 Do you feel you are addicted to scratchcards?
   Yes ☐ No ☐

Q15 Has the introduction of the lottery changed the way you think about yourself?
   Not at all ☐ Somewhat ☐ A lot ☐

Q16 Do you usually watch the lottery live draw on TV?
   Yes ☐ No ☐

Q17 Have you benefited from any projects funded by the national lottery?
   Yes ☐ No ☐

Q18 How important is the lottery to you personally?
   Not at all ☐ Somewhat ☐ Very ☐

Q19 Please indicate which of the following activities you do? (Tick more than one if appropriate)
   Football pools ☐
   Bingo ☐
   Bet on horse racing ☐
   Bet on dog racing ☐
   Play cards for money ☐
   Enter free prize draws ☐
   Use fruit machines ☐
   None of these ☐

Q20 On the whole do you think the lottery is:
   Good ☐ Okay ☐ Bad ☐ No opinion ☐

THANK YOU FOR TAKING PART IN THIS STUDY
Instructions for establishing inter-rater reliability in study three

Please read the following transcripts of interviews conducted with 33 participants about their daydreams and the UK national lottery. Using the schedule provided please fill in the responses of each participant according to the following criteria for the eight sections. Leave the relevant area blank if a particular question was inapplicable.

Definition of day dreaming: engaging in undirected (by self or another person) thought during low information processing situations about situations or activities that are not temporally or spatially salient to the person. Exclude meditation, planning or worrying.

Q1: Did the participant report that they had been conscious of daydreaming in the past, i.e., engaging in undirected thought during low information processing situations?

Yes, if participant engaged in daydreaming (general or lottery specific).
No, if participant did not engage in daydreaming (general or lottery specific).
No-Yes, if participant said they did daydream about the lottery after prompting by interviewer.

Q2: Was the participant alone (literally), i.e. not with any other person, when they engaged in daydreaming (if applicable)? This can be inferred from the interview schedule if not asked directly by examining the context/situation in which daydreaming occurred.

Yes, if participant was completely alone or was not engaged in a social activity with another person.
No, if participant was engaged in an activity with at least one other person when daydreaming.

Q3: What type/s of activity was the participant engaged in when daydreaming occurred?

Specify the activity/s in which the participant was engaged when daydreaming occurred.

Q4: Why did or did not, the participant engage in daydreaming?

Reason/s may include any or all of the following reasons: emotional (how it makes the person feel); physiological (the effect that daydreaming has on the person physically); social (the influence of engaging in daydreaming upon interactions of the participant with other people) or psychological (how daydream
Q5: What emotion/s were experienced as an outcome of engaging in day dreaming generally and specifically about the lottery, i.e., how did it make participants feel?

Distinguish between emotions experienced in relation to specific day dreams, e.g., related to a recent event compared to lottery-related content or day dreaming generally.

Q6: What was the content of participants non-lottery day dream/s, i.e., what did they day dream about?

Describe what participant day dreamed about.

Q7: What was the content of the participants lottery-related day dream/s?

Describe what participants day dreamed about.

Q8: Did participants regard themselves as being the same or a different sort of person in their day dreams? Differences may be psychological, (e.g., change in ability, attitude, how they are evaluated by themselves or other people); material, (e.g., change in wealth); social, (e.g., change in lifestyle) or physical, (e.g., change in physique).

If participants were different, specify whether this was psychological, material etc.
APPENDIX F

Description of amendments for development of questionnaire used in study four

It was unnecessary to ascertain whether participants were British for the purpose of this study. Social class was not always a salient identity for respondents although the majority answered this question. It was amended to include the categories; working-class, middle-class, upper class, none of these. Question 7 (and Q9) about use of the lottery lucky dip facility were not required for study IV. They were replaced by asking about how lucky people thought they were. Confidence (Q11) was only relevant if the person had actually bought a ticket that week and required clarification. It was necessary to specify whether Q12 referred to material, lifestyle, psychological or personality changes. It was deemed appropriate to include a question about whether people felt they were addicted (in the sense that they feared ‘not playing’) the lottery as well as scratchcards. Q15 about whether people felt they had changed since the introduction of the lottery was relatively meaningless for respondents and was omitted from study IV. Q16 was modified to ‘always’ or ‘regularly’, ‘never’ and ‘sometimes’ watch the television draw on a Saturday. Q17 was clarified by stressing that for the purpose of the study only ‘personal’ benefit gained through projects funded by the national lottery was required. Q18 tended to be understood in a similar manner to Q11, that is, likelihood of winning the lottery in a particular week influenced how important it was rated. This question was necessary for study IV. Additional categories were added to Q19, specifically, premium bonds and stocks or shares. Respondents were requested to elaborate upon the reasons used to rate the lottery and their reasons for day dreaming. The use of a questionnaire rather than an interview permitted the inclusion of sensitive reasons for day dreaming, e.g., for sexual fantasy.
APPENDIX G

Covering letter for questionnaire used in study four
Dear Participant,

This questionnaire is part of a study about what people think about the UK National Lottery which is being conducted by Hannah Wright at the University of Surrey, Guildford.

I would like you to complete the questionnaire and return it to the adult education centre where your classes are held as soon as possible.

All your answers will be strictly confidential.

Please put the completed questionnaire in the envelope provided and place it in the box marked ‘University of Surrey’ at the adult education centre or give it to your tutor.

If you cannot complete and return the questionnaire TODAY please bring the completed questionnaire back to the centre when you come for your NEXT class and place it in the box provided or give it to your tutor.

Thank you for taking the time to complete this questionnaire about the UK National Lottery, your participation in this study is very much appreciated.

Yours sincerely,

Hannah Wright
Appendix H

Copy of questionnaire used in study four
THE NATIONAL LOTTERY SURVEY

Please answer the following questions by putting a cross like this [ ] in the box which best describes you. All your answers will be strictly confidential.

Q1 Are you:  Female [ ]  Male [ ]

Q2 How old are you? [ ] years

Q3 Which of the following do you think best describes you?  Working class [ ]  Middle class [ ]  Upper class [ ]  None of these [ ]

Q4 How important is 'luck' for you?  Not at all [ ]  Somewhat [ ]  Very [ ]

Q5 Have you ever bought a UK lottery ticket?  Yes [ ]  No [ ]

Q6 Does someone in your immediate family buy lottery ticket(s)?  Yes [ ]  No [ ]

Q7 How often do you currently buy lottery tickets?  Every week [ ]  Rollover week only [ ]  Once a month [ ]  Occasionally [ ]  Never [ ]

If NEVER, please go to Q17

Q8 On average how many lines do you do on the lottery?  1 [ ]  2 [ ]  3 [ ]  4 [ ]  5 [ ]  6 [ ]  7-10 [ ]  11+ [ ]

Q9 Do you use the lottery 'lucky dip' to choose your numbers?  Yes [ ]  No [ ]

Q10 If YES, why do you use the lottery 'lucky dip' to choose your numbers? Please describe why:

Q11 Do you use the same numbers each time you do the lottery?  Yes [ ]  No [ ]

Q12 If YES, why do you use the same numbers each time you do the lottery? Please describe why:

Q13 Which day(s) of the week do you usually buy your lottery tickets? (Cross more than one if appropriate)

Mon [ ]  Tues [ ]  Wed [ ]  Thurs [ ]  Fri [ ]  Sat [ ]  Sun [ ]

Q14 How difficult would you find it to stop doing the national lottery?  Not at all [ ]  Somewhat [ ]  Very [ ]
Q15 How likely do you think it is that you will ever win a major prize on the national lottery?

Not at all likely □  Somewhat likely □  Very likely □

Q16 How hopeful are you that you will ever win a major prize on the national lottery?

Not at all hopeful □  Somewhat hopeful □  Very hopeful □

Q17 Are you a member of a lottery syndicate?

Yes □  No □

Q18 If YES, please indicate who are the other members of your lottery syndicate(s):

People at work □  Members of my family □

People in my local pub □  Members of my club or society □

(Cross more than one as appropriate)

Other (please describe) □

Q19 Have you ever bought a lottery scratchcard?

Yes □  No □

If NO, please go to Q22

Q20 If YES, how often do you currently buy scratchcards?

Every day □  Every week □

Once a month □  Occasionally □

Never □

Q21 Do you feel you are addicted to scratchcards?

Yes □  No □

Q22 How often do you watch the lottery live draw on TV?

Every week □  Sometimes □  Never □

Q23 Have you benefited personally from any projects funded by the national lottery?

Yes □  No □

Q24 How important is the lottery to you personally?

Not at all □  Somewhat □  Very □

Q25 Please indicate which of the following activities you did before the lottery started and/or do now. (Cross more than one as appropriate)

Football pools □

Premium bonds □

Own stocks or shares □

Bet on horses or dogs □

Bingo □

Play cards for money □

Enter free prize draws □

Use fruit machines □

None of these activities □
Please put a cross by the following statements in the box which is closest to how much you personally agree or disagree with each statement. For example, if you strongly agree with the first statement you would put a cross under 'strongly agree' next to this statement. Please respond to all the statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The lottery is a form of entertainment which is fun</td>
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<tr>
<td>On the whole the lottery is a bad thing</td>
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<td>The lottery is not objectionable in principle</td>
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<td>It is right if religious leaders oppose the existence of the national lottery</td>
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<td>There is too much fuss made about the lottery</td>
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<td>The lottery encourages laziness</td>
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<td>Money from the lottery is distributed fairly</td>
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<td>The lottery encourages people to be greedy</td>
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<td>British people should be proud of the UK lottery</td>
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<tr>
<td>It is wrong how much money from the lottery goes to 'the arts'</td>
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<tr>
<td>The lottery is currently a good way of helping under-privileged people</td>
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<tr>
<td>Money from the lottery should be spent on the NHS</td>
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<tr>
<td>The lottery is a good source of hope for a lot of people</td>
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<td>The people who spend most on the lottery are those who can least afford to</td>
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<tr>
<td>Scratchcards provide an instant source of happiness</td>
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<tr>
<td>It would be better if Richard Branson ran the national lottery</td>
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<tr>
<td>Charities are not losing out financially as a result of the lottery</td>
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</tbody>
</table>
Please put a cross by the following statements in the box which is closest to how much you personally agree or disagree with each statement. For example, if you strongly agree with the first statement you would put a cross under 'strongly agree' next to this statement.

Please respond to all the statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The BBC is a highly reputable organisation</td>
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<tr>
<td>The lottery live programme is the type of programme I would expect from the BBC</td>
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<tr>
<td>The amount that can be won by one person on the lottery is obscene</td>
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<tr>
<td>A good job is done by OFLOT, who regulate the national lottery</td>
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<tr>
<td>Chance of winning can be increased by choosing particular numbers on the lottery</td>
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<tr>
<td>The lottery jackpot should be limited to £1 million</td>
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<tr>
<td>Camelot, the company who run the national lottery are trustworthy</td>
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<tr>
<td>Scratchcards are more 'evil' than the lottery</td>
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<td>Most jackpot winners are happy as a result of winning</td>
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<td>The people who benefit most from the lottery are the present government</td>
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</tr>
<tr>
<td>The lottery encourages young people to gamble</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Projects in London or the South of England should get the majority of lottery funding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please put a cross by the following statements in the box which is closest to how much you personally agree or disagree with each statement. For example, if you strongly agree with the first statement you would put a cross under 'strongly agree' next to this statement.

Please respond to all the statements.

<table>
<thead>
<tr>
<th>Statement</th>
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<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I consider myself to be the sort of person who gets worried often</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a lucky sort of person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am the sort of person who would play the lottery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing the lottery makes me think about being someone else</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People who do not win on the lottery would be the same sort of people as me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Losing on the lottery makes me wish I was someone else</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am the sort of person who does not like to change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I think about the lottery I imagine myself as a different sort of person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A typical lottery winner would be the same sort of person as I am</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find the possibility of winning on the lottery threatening</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winning on the lottery would change the sort of person I am</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I imagine winning the lottery would change my lifestyle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am a person of worth, at least equal with other people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Having a positive sense of personal worth is important to me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I am not a very able sort of person</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Being able to do things well is not important to me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I am different from people around me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>It is a good thing if I stand out from people who I consider to be like me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Over time, the sort of person I am changes</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I desire to change as a person when I experience something new</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I am the sort of person who does not have much to be proud about myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Being proud of myself is not necessary for me in order to know who I am</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I am able to achieve personal goals that I set myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>It is good that I achieve goals that I set myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Generally, I am the same sort of person as people around me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>On the whole, I prefer to be similar to people around me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>No matter what happens to me I stay the same sort of person</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I do not want to remain the same no matter what happens in my life</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
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<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing the lottery would not change the sort of person I am</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Winning the lottery would make me feel like a different sort of person to those around me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Losing on the lottery would not make me feel a failure</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The lottery makes me feel good about myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Winning the lottery would not change the sort of person I am</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I would experience not winning on the national lottery in the same way as other people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The lottery makes me feel like a competent person</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Playing the lottery would give me a sense of pride</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Just missing out on a major lottery prize would change the way I feel about myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The lottery does not make me feel different to other people</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>My sense of control over my life would be increased by playing the lottery</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Winning the lottery would not make me a better person</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The introduction of the lottery did not change the sort of person I am</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I am typical of the sort of person who does not play the lottery</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Winning on the lottery would make me feel like a failure</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I would be a better person if I never won the lottery</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Q26 Do you ever daydream?  
Yes ☐ go to Q28  
No ☐

Q27 If NO, which of the following reasons describe why you do not daydream?  
I think daydreaming is a 'waste of time' ☐  
I am too busy to daydream ☐  
Other ☐ Please explain here: .................................................................

Q28 If YES, which of the following describe why you daydream? (cross more than one as appropriate)
- As a form of escapism to another place ☐
- As a means of pretending to be someone else ☐
- To plan what I will do in the immediate future ☐
- To fantasise about sex ☐
- To help me be inventive or creative ☐
- As a way of relaxing ☐
- To increase my skills e.g. at a sport or hobby ☐
- As a way of getting some peace and quiet ☐
- To make chores less boring ☐
- To help me solve problems ☐
- To make me feel good about myself ☐
- To help me go to sleep ☐
- As a form of entertainment when I travel ☐
- To help me make sense of what has been happening to me recently ☐

Q29 Do you daydream about what you would do if you won the lottery?  
Yes ☐  
No ☐

Q30 Did you have similar daydreams before the lottery started?  
Yes ☐  
No ☐

Q31 In the first column put a cross in the 'I DO THIS' box next to activities which you do. 
Now show how you feel when you do each of these activities by putting a cross under the emotions you experience. Put a cross under more than one emotion for each activity if appropriate.

<table>
<thead>
<tr>
<th>I DO THIS</th>
<th>Fearful</th>
<th>Angry</th>
<th>Happy</th>
<th>Excited</th>
<th>Depressed</th>
<th>Disappointed</th>
<th>No emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day dream about the lottery</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Purchase a lottery ticket</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Purchase a scratchcard</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Check the lottery numbers</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Collect a lottery prize</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Realise I have not won the lottery</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Watch the lottery live TV programme</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>
APPENDIX I

Categorisation for open ended questions (Q10 and Q12)

Categories for Q10: Reasons for use of ‘lucky dip’ option for selecting lottery numbers.

1: Expediency: save time or energy in choosing/thinking of numbers, e.g., 30: ‘Because I am too lazy to pick numbers’

2: Luck of the machine, e.g., 105: ‘The computer must have more luck than me’

3: Descriptive of random selection, e.g., 51: ‘Because it is a random sample’

4: For variety as a method, e.g., 26: ‘...you get fed up choosing the numbers sometimes’

5: As a means of choosing numbers specifically during a roll-over week, e.g., 97: ‘When there’s a rollover we have an extra line with ‘lucky dip’ numbers’

6: Practical, e.g., 190: ‘always forget to take my glasses & can’t see numbers!’

99: Missing data

Categories for Q12: Reasons for use of ‘same numbers’ on the lottery.

1: Expediency, e.g., 33: ‘Because it is easier than thinking up new ones each week’

2: Numbers of personal significance, e.g., 117: ‘Dreamt the numbers 17 & 26 so made up multiples thereof...’

3: Recourse to ‘chance’ or probability, e.g., 29: ‘No point in changing numbers as it is a game of chance whichever numbers you have’

4: Membership of a syndicate, e.g., 110: ‘work syndicate using same numbers each week’

5: Descriptive of method, e.g., 32: ‘Only for one set of numbers. The other two lines I chose at random.’

6: Counter-responsive, e.g., 2: ‘Why not’

7: Avoidance of fear or anger resulting from changing known combination, e.g., 138: ‘Probably because we are afraid to change in case the numbers we had chosen first came up!’

99: Missing data