The Affordances of Adolescents' Environments.

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Abstract

This thesis is concerned with identifying the function of the environment for adolescents. In recent years adolescents have been considered illegitimate users of the environment by adults. This thesis examines how the environment supports the developmental needs of adolescents, thus putting forward a more legitimate role for adolescents as users of the environment. The epistemological position of this thesis is one of methodological eclecticism; both quantitative and qualitative methods have been utilised to elicit different kinds of data.

Gibson's theory of affordances (1966, 1979) forms the basis for the examination of the functional significance of four key adolescents' environments; the home, neighbourhood, school and town centre. The affordances of these environments for the key developmental needs of social interaction and retreat were identified using a questionnaire survey and focus group discussions with adolescents aged between 11-16 years (Questionnaire study N=411, Focus group study N=36). These studies resulted in a taxonomy of the social affordances of adolescents' environments, which consisted of 34 affordances.

This taxonomy was then utilised in a questionnaire study (N=539) where adolescents rated the number of places in the home, neighbourhood, school and town centre, for each of the 34 social affordances. Principal components analysis was then used to create scales to measure the function of each environment. These scales were then used to compare the function of the four key environments and to examine group differences in environmental use. The results show that the neighbourhood, school and town centre all afford both social interaction and retreat, whilst the home only affords retreat. There is also a developmental dimension to use of these environments; with age there is a decline in use of the neighbourhood and the town centre switches from being a casual leisure setting to a commercial leisure setting. The results also suggest that a supportive environment has psychological consequences for adolescents.

This thesis also examines the affective aspects of adolescents' use of the four key environments. Experiences in these environments were assessed qualitatively using focus group discussions (N=36). Female adolescents report feelings of fear and vulnerability in the town centre but these fears do not affect their use of the town centre. This suggests that
learning to handle threatening experiences is an important skill that adolescents develop in the town centre. Adolescents express dissatisfaction with the facilities of the town centre and require more places for hanging around, social interaction and meeting new people. The town centre is also the overwhelmingly preferred environment for adolescents, which suggests that any provisions that are made for adolescents’ leisure should be located in the town centre.

This research establishes a greater understanding of adolescents’ use of the environment and the findings have implications for the planning, design and management of adolescents’ environments. This research develops the theoretical and methodological application of Gibson’s theory of affordances in environmental psychology and concludes by proposing a model of the adolescent-environment relationship.
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Chapter One: Contested Spaces: Conflict Over Adolescents’ Use of the Environment.
1.1. Curfew Law: Restricting Liberties?

The 1998 Crime & Disorder Act gave the police and local authorities the power to put blanket curfews in place for children under 10 years of age. A curfew order applies to an area and all children who live in the area are not allowed out between 9pm and 6am. Curfew orders are temporary and only last for 90 days. There are no criminal sanctions for a child refusing to obey a curfew order and as yet, this law has not been enforced within the UK. There was little public opposition to this law; it was felt reasonable to expect children under the age of 10 to be at home by 9pm.

In August 2001, the Criminal Justice and Police Act extended this law, to include all children under 16 years of age. Whilst the Home Office defended the amendment as protecting children from harmful adults and older peers, the media attacked the amendment. For the media the amendment to the law represented a violation of the adolescent's right to use the environment. It was seen to restrict freedom and curtail liberties. The following quotes are just a few of the headlines that appeared in British newspapers the day after the amendment was announced.

"Don't lock the kids up – let them out", The Guardian, August 2nd 2001

"Curfew law impossible to enforce, say campaigners", The Independent, August 2nd 2001

"Innocent children face 9pm curfews", The Daily Telegraph, August 1st 2001.


The media felt that the government would be better off funding alternatives to standing around on the street corner than with enforcing curfew laws. It was also felt that the law would lead to increased tension between adolescents and the police.

In a letter to the Independent (4th August 2001), Madeline Tearse & Phil Barton, from Save the Children and Groundwork ¹ respectively, suggest that the media missed two crucial points in their attacks upon the curfew law. Firstly, the curfew law ignores the fact that use of public spaces is vital for well-being and development in adolescence. For children and adolescents public spaces are an important venue for social interaction and identity. Secondly, the curfew

¹ Groundwork is a federation of local trusts that work to improve the quality of the local environment, the lives of local people and the profitability of local businesses.
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law excludes adolescents from participating in and being members of their community. A similar criticism had been made of the original act by Matthews, Limb & Taylor (1999), who suggested that curfews serve to exclude adolescents from the community by controlling their use of the environment. Tearse & Barton suggest that instead of suppressing adolescents' use of space, it needs to be effectively managed.

"The task at a local level is to negotiate not dictate, providing routes for young people to create their own safe places to gather and play", Tearse & Barton, The Independent, 4th August 2001.

Indeed, the child's right to participate fully in family, cultural and social life is set out in the United Nations Rights of the Child (UNICEF, 1989). Article 31 recognises the child's rights to leisure and play activities, and also the provision of safe and appropriate spaces within their communities for play and recreation.

A further criticism of the curfew law that the media and non-government organisations failed to make was that adolescents were being designed out of the environment, without any consultation. The curfew law is not based upon any understanding of how adolescents' use the environment. It is simply assumed that adolescents have no legitimate reason to use public environments.

The idea of adolescents being subjected to curfews is unpopular with the media and non-government organisations that work with children and adolescents. However, controlling adolescents' use of the environment is not a new conception. Adults have been controlling, dictating and challenging adolescents' use of the environment for many years (Valentine 1996, Eubanks Owens 1999, Matthews, Taylor, Percy-Smith and Limb 2000).

1.2. Controlling Adolescents' Use of Space

Recent years have seen increasing conflict between adults and adolescents concerning the utilisation of public places. Adolescents have stereotypically been associated with using public places in the neighbourhood and town centre for activities such as hanging around, petty vandalism, under-age drinking and taking drugs (Brown 1995, Valentine 1996, Lupton 1999, Matthews 2001). Adults have sought to take measures to prevent adolescents from congregating in such places, as they have been wary of groups of young people or the activities in which they engage, considering them to be undesirable or assuming them to be illegal.
Valentine (1996) found that adults had strategies in place to challenge adolescents' use of public spaces. These strategies included having their movements limited by spatial and temporal curfews, being subject to surveillance, which ranged from suspicious glances to the use of closed-circuit television, and being moved on by the police. Valentine concluded that public space is not a space that adolescents are free to consume or participate in and that adolescents are seen as inappropriate and disruptive users of public places.

"Public space is not a space shared on an equal footing by all generations", Valentine, 1996, p216

Matthews, Limb & Taylor (1999) suggest that curfews reinforce the alienation and powerlessness of children and adolescents, which enables adults to keep children and adolescents in a separate world. In a study of use of shopping malls, Matthews, Taylor, Percy-Smith & Limb (2000) found that adolescents were frequently asked to move on by security guards. Most instances of being asked to move on occurred when groups of adolescents gathered in areas that were perceived to be for movement, even though the design afforded opportunity and space for small groups to gather. Even when they were not being asked to move on, most adolescents felt that they were under constant surveillance in the shopping mall, as they were outsiders in the public realm.

"It is when they are out and about that young people are frequently defined as a problem. Their visibility in public places is often seen as discrepant and undesirable. Young people, here are a polluting presence, because by congregating together they are seen to be challenging the hegemony of adult ownership of public spaces", Matthews, Taylor, Percy-Smith & Limb, 2000, p281.

Further support for the exclusion of adolescents from public spaces comes from Eubanks Owens (1999) and White (1993). Eubanks Owens (1999) cites examples from the United States of how public policies such as curfews, skateboarding restrictions and loitering restrictions control adolescents' use of public places. White (1993) examined conflict that arose from adolescents' use of public places in Australia and found that adolescents were considered illegitimate users of public places by both community members and the police, and were excluded or subjected to heavy surveillance in their use of such places. White concluded that adolescents were treated as criminals, rather than community members when utilising public places.
As well as having strategies in place to restrict adolescents’ use of public places, adolescents are being increasingly ‘designed out’ of public places (Uzzell 1995, Eubanks Owens 1999). Designers are increasingly being asked to discourage the use of public spaces by adolescents, when developing design plans. Eubanks Owens believes that this is detrimental to the social and emotional development of adolescents and she instead proposes that places for hanging out, lingering and gathering in groups should be ‘designed into’ environments. She suggests that areas for loitering could be designed and located slightly away from the major shopping areas, more seating should be provided and it should be clustered together to facilitate talking.

Hall (1994) reports a study of a suburb of San Francisco where adolescents’ use of public places had been basically ‘designed out’. The suburb had no town centre or central public area and any attempts by adolescents to adopt other design features such as planters, for seating or skateboarding usually resulted in police intervention. So not only were the adolescents designed out, any attempt to adapt some public space for their own use was met with intervention. Hall’s study illustrates firstly how adolescents can be excluded from public places by designers and also how adolescents will try and adapt the given environment so that it will support their needs. Hall concludes that the suburb prevented adolescents exploring and participating in the adult world. Instead of excluding adolescents, designers should very much design them into environments.

“Places where teenagers can feel independent while in an adult setting should be located within walking distance of their homes and school, and should be safe. Commercial areas and streets are ideal settings for these objectives”, Hall, 1994, p61.

Whilst the idea of designing adolescents into environments should be applauded, Hall and Eubanks Owens suggestions may be seen as naive. Adolescents cannot simply be designed into public spaces without consultation, just as they should not be designed out without consultation. People who own businesses and premises in the area would have to be consulted; as would other user groups. It is unlikely that the proposal to design places in public spaces where adolescents can gather together in unsupervised groups would be welcomed. Hall and Eubanks Owens proposal is also deterministic; it assumes that adolescents can simply be designed into environments. This disregards the role of motive in adolescents’ use of the environment.

Another method of designing adolescents out of the environment is to charge them money to use settings. Malone & Hasluck (1998) studied the marginalisation of adolescents in a suburb
of Melbourne. The local, council run, sports centre charged an entrance fee which many adolescents could not afford to pay. The management confirmed that this was deliberate, designed to dissuade adolescents from hanging around in the sports centre, causing trouble. Legitimate users of the centre’s facilities would happily pay the fee. Malone & Hasluck concluded that such interventions serve to disadvantage adolescents who do not have access to a disposable income.

Further studies have found that adults perceive young people to be committing crime when hanging around in the environment (Sahlin 1991, as cited in Lieberg 1995, Brown 1995, Lupton 1999). Lupton (1999) found that adults were especially wary of groups of young males hanging out in public places and these groups were perceived as having little to do and engaging in criminal activities such as theft and assault. Brown (1995) found that middle aged and elderly adults were more fearful, than young adults, of adolescents and were much more likely than younger adults to want adolescents moved off of the streets. Similarly, Sahlin (1991, as cited in Lieberg 1995) found that adults cited adolescents’ criminal activities as a reason to regulate their use of public places. He found three principal arguments adults put forward to legitimise regulation. Firstly, adults believed that adolescents develop asocial and antisocial behaviours when they gather together without adult supervision; secondly, adolescents make city centres unpleasant for others through graffiti, vandalism and hooliganism; and thirdly, adolescents become bored and lead empty lives if they are not involved in organised activities. These studies suggest that adolescents face a strong prejudice from adults when they hang around in the environment. As Brown (1995) concluded

“Crime is seen as young people, and vice versa”, Brown 1995, p32.

Brown also examined how adolescents felt about adult attitudes to their use of public places. She found that adolescents felt that they had just as much right to appropriate public places as adults. Adolescents thought that adult perceptions of adolescent behaviours and activities were over-generalised and based upon media portrayals.

These studies suggest that adolescents are a marginalised group within the public realm. They are not seen as members of the community and their visibility is problematic. As a result, adults do not consider adolescents legitimate users of the environment and this is why adults have taken steps to regulate adolescents’ use of the environment.
1.3. Acceptance or Challenge?

Matthews, Taylor, Percy-Smith & Limb (2000) suggest that adolescents have two possible responses to their use of the environment being controlled. Adolescents can either accept their marginalised status and the controls that operate over their use of space or they can struggle against them. Matthews et al (2000) suggest that adolescents respond in both of these ways. Adolescents’ use of public places such as streets\(^2\) at night represent their acceptance of their marginalised status.

“The street affords opportunities away from the adult gaze, where young people, devoid of other meeting places, retain some autonomy over space”, Matthews, Taylor, Percy-Smith & Limb, 2000, p281.

Adolescents’ use of such places represents their lack of choice over environmental use. They are pushed into settings that are abandoned by adults and this further labels them as ‘outsiders’. Such places are won out from the fabric of adult society but are in constant threat of being reclaimed, (Matthews, Limb & Taylor 1999).

However, adolescents do also assert their presence in certain settings, such as shopping malls. This kind of environmental use signifies a challenge to their marginalised status. By using such places, adolescents are trying to be included and not excluded from the public realm. This challenges the established control of adults.

“The shopping mall becomes both a site of defiance and of ‘openness and opportunity’, a radical location where young people can attempt to redefine their position in both cultural and geographical space”, Matthews, Taylor, Percy-Smith & Limb, 2000, p290.

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\(^2\)Matthews, Taylor, Percy-Smith & Limb (2000) use the term ‘street’ as a metaphor for all public outdoor places such as roads, cul-de-sacs, car parks and vacant lots.
1.4. Contesting the Control of Adolescents' Use of Space

In the current climate it is unlikely that adolescents' use of space will be deregulated. Indeed, the extension of the curfew law suggests that adolescents may become subject to even more controls over their use of space. The media suggested that alternatives to standing around on the street need to be found, whilst Tearse & Barton suggested that adolescents' use of space need to be more effectively managed. Both of these suggestions are tenable. However, before adolescents' use of space can be managed a greater understanding of how and why adolescents' use the environment is required.

Studies of the controls that operate over adolescents' use of the environment do not consider the role of the environment for adolescents. The environment affords function. Use of the environment is motivated by the needs of the adolescent and the support offered by the environment for those needs, i.e. the affordances of the environment. Use of the environment also results in meaning for adolescents; they can find a sense of belonging, attachment and identity in the environment. Use of the environment can also be influenced by experiences in and feelings associated with the environment. In short, adolescents do not use environments simply to accept or challenge their marginalised status. Environments are primarily considered in terms of their function and meaning.

Furthermore, whilst recent research has been predominantly concerned with the conflict that results from adolescents' use of public environments, it is important to realise that adolescents also make use of environments other than those in the public realm. Defining adolescents' environments only in terms of public spaces in the neighbourhood and town centre disregards adolescents' use of other environments such as the home and school. Adolescents make use of a network of environments and the function of each of these environments needs to be examined.

Considering adolescents' use of their environment in terms of function is the key to establishing a greater understanding of adolescents' environmental use. By identifying the function of adolescents' environments, informed planning and design for this user group can take place. One of the greatest hurdles that adolescents face in their use of the environment are the negative perceptions that exist of adolescents as a user group. Adults believe that groups of adolescents are trouble makers, who are often engaged in criminal activities. Identifying the function of adolescents' environments is one step towards the fostering of a new conception of adolescents' use of space.
1.5. Thesis Outline

This thesis examines the function of everyday environments for adolescents. It identifies the social affordances of key adolescents' environments, examines the function and use of the key adolescents' environments, and examines the affective aspects associated with use of the key adolescents' environments.

Any transaction between an individual and an environment involves environmental perception. Chapter Two reviews studies of environmental perception and concludes that Gibson's theory of affordances offers environmental psychology a rich theory for studying the functional significance of environments. Chapter Two reviews studies that have endeavored to develop a methodology for identifying and measuring the affordances of the environment. Chapter Two also reviews the research literature which considers adolescents' use of the environment. This chapter brings together research that has considered the function, use and experience of the environment and includes the main research questions operationalised in this thesis. The chapter concludes by identifying the home, neighbourhood, school and town centre as key adolescents' environments, and social interaction and retreat as the key developmental needs in adolescence.

Chapter Three outlines the epistemological position of the thesis. It discusses how the relationship between quantitative and qualitative methods have been conceptualised in psychology. The epistemological position of this thesis shapes the design of the studies. It is one of methodological eclecticism; quantitative methods were used where previous research was available and could be drawn upon and qualitative methods were used where previous research had not been conducted. Adopting the position of methodological eclecticism, also enabled different kinds of data to be collected to answer different research questions; for example, social aspects of environmental use were examined quantitatively but affective aspects of environmental use were examined qualitatively. Chapter Three also describes how the ethical issues associated with conducting research with an adolescent sample were addressed.

Chapters Four presents the development of a methodology that enabled the function of key adolescents' environments to be studied. The main issue addressed in Chapter Four is the creation of a taxonomy of the social affordances of adolescents' environments. Study One examined a list of 38 affordances that were derived from previous research that evaluated use of the neighbourhood and town centre. Principal components analysis reduced this original list to 28 affordances. Study Two employed focus groups to examine the affordances of the
Chapter One

home and the school environments and resulted in a further 6 affordances being identified. Chapter Four concludes with the establishment of a taxonomy of the social affordances of adolescents' environments. This taxonomy comprises 34 affordances that encompass the functions of the home, neighbourhood, school and town centre environments.

Chapter Five presents the results of Study Three which examined the function of the home, neighbourhood, school and town centre environments using the taxonomy developed in Study One and Study Two. Each environment was rated according to the number of places it provides for each of the affordances in the taxonomy. Study Three establishes scales that measure the affordances of the home, neighbourhood, school and town centre environments. It also establishes scale scores that indicate how often each of the environments are used for each affordance scale. Chapter Five compares the affordances of each of the environments and draws conclusions about how the home, neighbourhood, school and town centre function for adolescents.

Chapter Six describes further empirical results from Study Three, where the emphasis is on group differences in use of the home, neighbourhood, school and town centre environments as measured by the affordance scales. More specifically, it studies the relationship between use of the environments and demographic characteristics (age, gender and social class), preference for the environment, psychological attributes (urban-related identification, well-being) and behavioural attributes (peer group structure, perceived parental control).

Chapter Seven presents the results of a study that examined the affective components of adolescents' use of the home, neighbourhood, school and town centre. This chapter elaborates upon the understanding of adolescents' environments established in Study Three. Whereas Study Three focused upon social aspects of environmental use, this chapter considers the affective aspects of environmental use. This chapter considers adolescents' feelings about the environments and how these feelings relate to their use of the environments. Chapter Seven also discusses adolescents dissatisfaction with the school and town centre environments.

Chapter Eight discusses the principal findings of the research. This chapter considers how the home, neighbourhood, school and town centre environments function for adolescents and discusses the implications of the findings for the planning, design and management of adolescents' environments. This chapter also develops the theoretical and methodological application of Gibson's theory of affordances in environmental psychology. This chapter concludes by proposing a model of the adolescent-environment relationship that encompasses the physical, social and affective affordances of the environment and the developmental
needs of the adolescent.
Chapter Two: Adolescents' Environments; Perception, Use, Evaluation and Constraints.
2.1. Introduction

This chapter reviews literature concerning adolescents’ environments. Children’s environments have been comprehensively researched in environmental psychology but adolescents’ environments have received considerably less attention. This review attempts to provide a more comprehensive account of adolescents’ use of the environment and has two main foci. Firstly the review focuses on how environments are evaluated and used by adolescents and secondly the review focuses on how use of the environments can be influenced by factors such as parental restrictions, societal restrictions and fears associated with the environment.

This chapter begins by addressing the issue of how environmental psychologists have theorised environmental perception. The perception of environments lies at the heart of both the evaluation and use of environments. The review of the environmental perception literature outlines Gibson’s theory of affordances, which is the theoretical framework for this thesis. The review also describes how environmental psychologists have begun to develop a methodology that measures the affordances of the environment.

2.2. Environmental Perception

2.2.1. Introduction

Any transaction between an individual and an environment involves environmental perception. In order for an individual to be able to interact with the environment they have to be able to perceive it. The two opposing views of constructivism and nativism have dominated perception research in both cognitive and environmental psychology. Constructivists view perception as an active process where sensory information has to be analysed by an individual before perceptual judgements can be made. Perception is therefore a computational process (Marr, 1982); information in the environment has to be interpreted by the perceiver for perception to take place. Constructivist studies of perception are typically laboratory based and examine the perception of single stimuli in isolation. Nativists view perception as a direct process in which sensory information does not have to be interpreted by the individual in order for perceptual judgements to be made. No interpretation of
information takes place. Perceptual information is gained directly from the environment. Nativists study the perception of environments as a whole rather than single features of the environment.

The perception of complex, everyday environments has been a dominant research question in environmental psychology. Researchers have tried to understand how individuals make environments function for them given the abundance of visual information that is available in the environment. Two types of environmental perception theories have been proposed; those relating to the aesthetic evaluation of environments and those relating to the functional evaluation of environments. Both constructivist and nativist approaches have been employed to research these types of environmental perception.

2.2.2. Aesthetic Assessment of Environments

Theories that consider environmental perception in terms of the aesthetic evaluation of scenes have been prevalent (Berlyne 1972, 1974, Kaplan & Kaplan 1982, Kaplan 1987). Berlyne proposed that environments possess certain stimuli that appeal to the observer. These stimuli, namely novelty, incongruity, complexity and surprise, combine to influence the observer’s aesthetic judgement of the environment. Berlyne’s theory is therefore constructivist; stimuli have to be computed by the observer in order for perceptual judgements to be made. Berlyne also believed that the computation of these stimuli lead to uniform judgements about the beauty of a scene being made. Berlyne found that for two-dimensional displays, such as paintings, images of moderate novelty, incongruity, complexity and surprise were perceived as more beautiful than those that were high or low in respect of all these properties.

Kaplan & Kaplan’s theory of the aesthetic evaluation of scenes (1982, 1989) encompasses both constructivist and nativist views of perception. The theory proposes that humans are attracted to environments that can be directly understood and also to environments that stimulate. Kaplan & Kaplan proposed that the four factors of coherence, legibility, complexity and mystery, predict preferences for various types of environments. Coherence is concerned with the organisation of the scene, legibility with understanding the scene, complexity with the number of elements in the scene and mystery with how the scene draws the observer in. Kaplan & Kaplan proposed that coherence and legibility relate to the extent to which the observer can immediately understand the environment, thus reflecting the
nativist view, whilst complexity and mystery relate to the extent to which the observer has to explore the environment, thus reflecting the constructivist view. They found that the higher the coherence, legibility, complexity and mystery in a scene the greater the preference.

Kaplan (1987) also suggested that the nativist elements of the theory relate to the functional evaluation of the environment and that humans are attracted to environments in which they perceive they can function effectively. This suggests a link between elements of the environment that can be directly perceived and function.

These theories of aesthetic evaluation have been criticised. Some researchers feel that aesthetic evaluations are an example of direct perception; evaluations occur almost instantaneously when shown a scene, thus making any computational components of the theories redundant (see Ulrich, 1983). More problematic is the actual relevance of these theories with regard to the perception of everyday environments. Individuals need to extract more detailed information from the environment than just that which relates to beauty. It would seem plausible that information about function would take precedence over information about beauty. Whilst the Kaplans' theory has elements that relate to the functional significance of a scene, more detailed theories about the perception of function have been proposed.

2.2.3. Functional Assessment of Environments

Theories that consider environmental perception in terms of the functional evaluation of everyday environments have been long established in psychology. The 1950's saw the formulation of two theories of everyday environmental perception; Brunswik's Lens model (1956) and Gibson's theory of ecological perception (1950).

Brunswik (1956) was concerned with the everyday perception of the environment and how individuals learn to function effectively in the environment. Brunswik thought that environments offered cues to the perceiver. To function effectively in the environment the individual must only pay attention to the most important cues and ignore the rest. Thus, individuals seek out cues that will assist their functioning in the environment. Brunswik proposed that cues are probabilistic; each cue has a certain probability of being an accurate cue about the nature of the environment and the perceiver unconsciously assigns each cue a
probabilistic weight. Assigning probabilistic weights to cues is a learnt skill; from utilising environments individuals gradually learn what cues to look for in a given setting. When there is a similar match between the actual probabilities of cues and the probabilistic weights assigned to each cue, the individual has an accurate perception of the environment. So for Brunswik the individual functions effectively in familiar settings by having learnt what the important cues are. Like Kaplan & Kaplan’s theory this theory combines both constructivist and nativist elements. Initially, information from the environment is computed, but with experience perception becomes more direct.

Whilst Brunswik’s model offers a theory that relates the perception of cues to settings it has not been very influential. The unconscious role that Brunswik assigns to the perception of cues have made testing the theory difficult. As a result, Brunswik’s model has been largely overlooked by environmental psychology.

Unlike Brunswik, J.J. Gibson (1950, 1966, 1979) did not believe that cues were used in environmental perception. Gibson saw no role for computational processes in environmental perception. For Gibson perception was direct and individuals respond to meaning that exists in the environment, not meaning that is the result of their interpretative processes. Gibson saw the optic array as the starting point for visual perception and used the event as the unit of analysis in his work. Whilst Gibson’s early work (1950) was concerned with developing an asocial model of perception to challenge computational theories, his later work (1966, 1979) was concerned with developing an ecological approach to perception, which is outlined below.

Gibson’s theory of affordances (1966, 1979) challenges the assumption that meaning resides solely in the mind of the observer and attempts to put meaning back into the environment. Gibson proposed that we attend to the meaning of objects in the environment for action, rather than their shapes, colours and orientations. Gibson proposed that through environmental experience individuals encounter the surfaces and textures of objects in the environment from different perspectives. This enables the invariant functional properties of objects to be identified. Gibson called these properties affordances.

"The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill", Gibson, 1979, p127.
Affordances are the possibility for action afforded to a perceiver by an object in the environment or by the environment itself (Bruce, Green and Georgeson, 1996). To perceive the affordances of the environment is to perceive how one can interact with the environment (Bell, Greene, Fisher & Baum, 2001). Thus, Gibson proposed that the environment contains functional information about objects that can be directly perceived. Objects and environments have instantly detectable functions and are perceived in terms of what they afford, not what properties or qualities they have. Thus, the value and meaning of objects in the environment can be directly perceived.

Gibson gave many examples of the various affordances which can be found in the environment. For example, an object which has a level surface at knee height to the observer affords sitting on, a fire affords warmth, illumination and injury. As well as considering the physical aspects of the environment Gibson also emphasised the affordances of the environment provided by the presence of other people, such as social interaction, fighting and nurturing. In fact Gibson believed that the richest and most intricate affordances of the environment are those provided by other people. Thus, affordances can be either physical features of the environment or social features of the environment. It is unclear if Gibson considered people themselves as objects which possessed their own affordances or if he saw people as a mediator in the perceptual process. If the presence of other people is a mediator in the perceptual process then the affordances available in an environment would alter with the presence or absence of other people. This question is of fundamental concern for environmental psychology and will be examined in further detail in this thesis.

Gibson believed that the affordances of an object or environment are invariant. The values of the object or environment do not change as the needs of the observer change. It is all a matter of whether the observer perceives the affordances according to her/his needs at the time. In declaring the affordances of an object to be invariant Gibson is suggesting that only the needs and not the actual perception of affordances can vary according to the perceiver. Given the complexity of everyday environments, this is a strong proposition. It is unlikely that the perception of any environment occurs in a universal way. Indeed, Wohlwill & Heft (1987) in considering children’s perception of environments suggest that not all children will perceive the same affordances in a single environment and neither will similar environments generate the same perception and evaluations in a single child. Even though Gibson’s theory is transactional, the idea that the perception of affordances will be the same for all observers
would be too deterministic for most environmental psychologists. Therefore, this thesis subscribes to Wohlwill & Heft’s view about the perception of affordances.

It is important to realise that to perceive an affordance is not the same as classifying an object. An object can have many affordances whereas classification traditionally means assigning an object to one fixed class, on the basis of shared common features between the objects in this class. Gibson believes that such classification is redundant as firstly it does not take into account the fact that an object can have many uses and therefore could belong to more than one class and secondly it is not necessary to classify objects in order to be able to perceive what they afford.

Whilst Gibson saw perception as direct, he was not deterministic about the relationship between the environment and the observer. Gibson stressed the reciprocity between the observer and the environment; the observer and the environment have an active, reciprocal, mutually supportive, complementary and equal relationship. As E.J. Gibson later pointed out (1991) perception guides action in the environment and this action provides information for perception; an individual obtains knowledge of their environment and uses their knowledge to guide their actions, which the environment in turn supports.

This emphasis on reciprocity mirrors that of the transactional paradigm in environmental psychology. The transactional perspective see entities such as events as being composed of actors who are engaged in psychological processes in social and physical contexts (Altman & Rogoff, 1987). Like Gibson, the transactional paradigm sees the individual and the environment as coexisting and jointly contributing to the meaning and nature of the event. The individual and the environment are intricately bound together and neither can be understood without the inclusion of the other.

Whilst Gibson’s theory has been accepted by many, it has been criticised. Gibson’s focus on direct perception has lead many to believe that Gibson was concerned only with the physical aspects of the environment (Bruce, Green & Georgeson, 1996). Thus, Gibson’s theory has been considered by many as an asocial model of ecological perception. However, Gibson’s ecological theory does include references to socio-cultural aspects of perception. Costall (1995) recently re-examined Gibson’s later works and highlighted the role Gibson saw for social and cultural meaning in environmental perception.
In considering the event, Gibson saw activity as taking place in a socially structured setting; objects are experienced in relation to the community in which they have meaning. Gibson saw a role for learning in perception and believes that we learn about the social and cultural affordances of objects. Costall further clarified this issue. We do not simply encounter objects in the environment, we are introduced to them by others. Other people play a role in constructing affordances and in defining, explaining and policing their use. In this sense, individuals learn about the social and cultural meaning of objects and are then able to extract this information from the environment.

Bruce, Green & Georgeson (1996) question the proposed relationship between direct perception and social and cultural affordances. Whilst they can accept that information about the physical features of objects can be directly perceived and is therefore available in the optic array, they are uneasy with the idea that social and cultural information is directly perceived in the same way. It has been suggested that some kind of representation would have to play a role in the direct perception of social and cultural affordances (Fodor & Pylyshyn 1981, Bruce, Green & Georgeson 1996). However, whilst Gibson sees a role for learning in his theory, he does not see a role for any type of representation in environmental perception. A representation would mediate between the world and the perceiver, thus breaking the direct fit between perception and action.

Costall (1995) believes that this issue is the result of an unresolvable difference between computational and ecological theorists. Computation theorists doubt the actuality of the social aspects of the environment; they consider them unreal and prefer to concentrate upon physical aspects. The world they examine is untouched by social and cultural factors. Ecological theorists include the social and cultural aspects of the environment squarely within reality.

"It is, after all, living beings which have brought things to life as affordances, and exist in a mutually transformative relation with their material conditions", Costall, 1995, p478.

Ecological theorists argue that there is only one world and that it consists of both the natural and the artificial. The world has been shaped both consciously and unconsciously by social and cultural factors. This thesis subscribes to the ecological view of the world where the physical, social and cultural reside within reality.
Gibson’s theory of affordances offers a comprehensive consideration of the perception of everyday environments. The strength of Gibson’s theory is that it brings together the physical and social environments to account for the functional significance of the environment. The perception of affordances is a conscious process, which means that the affordances of the environment can be identified and evaluated. It is also a rich theory for environmental psychology because the concept of affordances is truly transactional; the individual and the environment coexist and jointly contribute to the meaning of an event.

It is important to realise that whilst Gibson offers a comprehensive theory of affordances, he did not concern himself with developing a methodology that enables the affordances of the environment to be measured. He never empirically tested the 'measurability' of affordances. The following section examines studies that have attempted to develop methodologies that enable the affordances of the environment to be measured.

2.2.4. The Affordances of Children’s and Adolescents’ Environments

Gibson’s theory has been embraced by both cognitive psychologists and environmental psychologists. However, cognitive psychologists have concerned themselves with examining the relationship between the properties of the environment and an observer’s actions rather than with identifying the affordances of the environment *per se*. Cognitive psychologists have found a relationship between the properties of the environment and an observer’s actions (Warren 1984, Mark 1987); even infants can perceive the affordances of the environment and use them to guide action (Gibson & Walk 1960, Gibson, Riccio, Schumuckler, Rosenberg & Taormina 1987).

The first environmental psychologist to attempt to develop a methodology that would enable the affordances of the environment to be identified was Heft (1988). Heft was attracted to Gibson’s theory of affordances as he felt that environmental psychologists were overlooking the function of environments in favour of form. He believed that conceptualising the environment in terms of function would be more informative for environmental design. Heft postulated that to arrive at a functional description of the environment, one needed to know three facts; the characteristics of the person, the characteristics of the environment and the behaviour of the individual in question.
Heft was interested in identifying the affordances of children’s environments. He aimed to develop a taxonomy that would describe the functionally significant properties of children’s environments. Heft compared three books, which are considered to provide the most detailed accounts of children’s outdoor activities; they were “One Boy’s Day” by Roger Barker and Herbert Wright (1951), “Children’s Experience of Place” by Roger Hart (1979) and “Childhood’s Domain” by Robin Moore (1986). In these books Heft found copious examples of the potential affordances of children’s environments, i.e. environmental features that supported an activity. In each book, children named places in their environments in terms of their functional significance. Heft suggests that this shows a primacy of the functional dimension in environmental experience. Heft drew together the affordances mentioned in the three books to create a preliminary functional taxonomy of children’s outdoor environments, as shown in Figure 2.1.

### Figure 2.1. A Preliminary Functional Taxonomy of Children’s Outdoor Environments. (Heft, 1988)

This taxonomy is primarily physical; it encompasses different types of environmental use,
most of which are associated with children’s play. Heft noted that the affordances of the environment were not the same for all children and that affordances were also age specific. For example, whilst a younger child might shelter under a tree, an older child might use it for climbing. Heft also found that not all instances of an object offer the same affordances; whilst some trees can be climbed, others can only be swung from.

In considering Heft’s taxonomy it is important to realise that no taxonomy of affordances could be exhaustive or definitive; new features can be discovered that had not been encountered before or new functions can be found for familiar features. Heft believed that these ‘new’ affordances emerged as the child developed, and therefore needs changed, or through experience with the environment. Heft concluded that conceptualising the environment in terms of it’s function enables the consideration of environmental features in terms of their significance for a particular individual.

Heft’s study represents a first attempt to develop a methodology that examines the affordances of the environment. Heft’s taxonomy identifies the affordances of children’s environments. However, Heft’s taxonomy has some significant shortcomings. Heft considers only the physical affordances of the environment; he does not consider either the social or cultural affordances of the environment. The strength of Gibson’s theory is that it embraces the physical, social and cultural meaning in the environment. Heft’s consideration of only the physical affordances is a significant oversight. Another shortcoming of this study is that Heft does not consider the affordances provided by other people in the environment; for Gibson this was one of the richest types of affordances available in the environment. In considering the three books, Heft fails to comment upon the affordances provided by other people in the environment. This is an error as environments are often shared with others; environments are used for interaction with friends, as well as having to be shared with other children who are unknown. Unfortunately Heft did not further develop his taxonomy. However, the idea of creating a taxonomy of the affordances of the environment remains a significant contribution to environmental psychology.

Kytta (1995) developed Heft’s taxonomy into a measurement tool that enables the affordances of different environments to be compared. Kytta used Heft’s taxonomy to examine the affordances of the neighbourhood for 8 and 9 year old Finnish children. Kytta included two further affordance categories in her taxonomy; nature and social interaction.
Figure 2.2. She also excluded Heft's category of aperture as it was difficult to operationalise. These modifications to Heft's taxonomy resulted in 11 affordance categories, which encompassed 36 affordances.

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<td>affords following/sharing adults business</td>
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Figure 2.2. Kyttä’s Additional Affordances (1995).

Kyttä then used the taxonomy to compare the affordances of three different communities, a city, a small town and a rural village. Children had to indicate if there was a place in their neighbourhood they could use for each of the 36 affordances. The highest number of affordances were perceived in the rural village and the lowest in the city and this difference was significant. The affordance categories that distinguished between the rural village and the city were social affordances, nature, water, moldable material, shelter, non-rigid objects, attached objects and graspable objects; whilst children in the rural village found these affordances readily children in the city did not.

Whilst Kyttä’s study found that neighbourhoods in different types of communities differed in their affordances, she did not examine whether the other settings available to the children also differed in their affordances. If one setting was lacking in a specific affordance it is quite possible that another of the child’s settings, e.g. the home, school or town centre, may be rich in this affordance and therefore compensate. Thus, when considering the functional significance of children’s environments it is important to consider all the settings available to the child. Examining a setting in isolation from the other settings available does not provide a complete picture.

Kyttä’s study uses a taxonomy of children’s environments to measure and compare the affordances of different neighbourhood environments. By using the taxonomy as a rating instrument, children were able to indicate the presence or absence of affordances in their neighbourhood. The methodology developed by Kyttä offers environmental psychology a way of operationalising Gibson’s theory of affordances to examine the functional
significance of the environment. However, one shortcoming of Kytta’s study is that she only asked children to indicate the presence or absence of affordances. It might be more constructive to examine the actual number of places available for each affordance, rather than just examining whether the setting does or does not provide the affordance. Such a measure would enable a greater examination and comparison of the affordances of the settings available.

This thesis develops Kytta’s methodology to examine the affordances of adolescents’ key environments. As yet, no taxonomy of the affordances of adolescents’ environments has been established. This research establishes a taxonomy and utilises it to compare the affordances of key adolescents’ environments. However, in this research the taxonomy is used to quantify the affordances in each of the adolescents’ environments. A measure is taken of the number of places available for each affordance. This measure enables a greater examination and comparison of the affordances of the environment than Kytta’s measure which only examines whether an environment does or does not provide the affordance.

One study that has examined the affordances of the environment for adolescents is Woolley & Johns’ (1999) study of the affordances of Tudor Square in Sheffield. Tudor Square had become very popular with adolescent skateboarders, much to the annoyance of some of the other users of the square. Focus groups with the skateboarders revealed that there were three main categories of affordances that made the square popular with them. Firstly, the physical features of the square such as the kerbs, the steps, the handrails and seats provided opportunities for the skateboarders to perform certain tricks. Secondly, the square was highly accessible to the skateboarders, being located in the centre of the city and also by the railway station. Thirdly, there were always a lot of skateboarders in Tudor Square. This meant that going there was a sociable experience as there would be others like them there and help and advice about improving their skateboarding would be freely available. Woolley & Johns study demonstrates that affordances can be physical and social.

Previous attempts to measure the affordances of the environment ultimately focus upon the physical affordances of the environment. Whilst Kytta (1995) and Woolley & Johns (1999) include social affordances in their studies, they are predominantly concerned with identifying physical features of the environment that support specific activities. Previous studies have underplayed the role of the presence of other people in the environment and do not consider
what affordances other people may provide. Whilst Gibson’s theory encompasses both the physical and the social affordances of the environment, the current research focuses on identifying and measuring the social affordances of adolescents’ environments. Gibson saw social affordances as being the richest type of affordances available in the environment and this thesis develops the concept of social affordances as it’s contribution to environmental psychology.

In summary, Gibson’s theory of affordances brings together the physical and social environment to account for the functional significance of the environment. The perception of affordances is a conscious process which means that the affordances of an environment can be both identified and evaluated. Gibson’s theory has been developed by environmental psychologists into a methodology that enables the affordances of the environment to be identified and measured. Heft’s contribution to methodology was the creation of a taxonomy of the affordances of children’s environments. The development of the taxonomy illustrates how the affordances of an environment can be identified. However, Heft failed to apply his taxonomy to the evaluation of environments. Kytä’s contribution to methodology was to apply Heft’s taxonomy as a measurement tool to evaluate the function of the environment. The taxonomy can be used to rate the presence or absence of affordances in an environment and enables the function of different environments to be compared.

Gibson’s theory of affordances forms the basis for the examination of the functional significance of key adolescents’ environments in this thesis. Examining the function of adolescents’ environments will enable a greater understanding of how adolescents’ use environments to be developed. This is important for both the recognition of adolescents as a user group and also in planning for them as a user group. Whilst Gibson conceptualised affordances as being both physical and social, this thesis focuses upon the social affordances of adolescents’ environments. Previous studies have largely overlooked the study of social affordances and the current research identifies the social affordances of adolescents’ environments. The current research also examines a theoretical issue raised by Gibson’s theory. Whilst Gibson believed that other people provided the richest affordances in the environment, it is unclear if he saw people as objects in their own right or as mediators in the perceptual process. This issue is of fundamental concern to environmental psychology. Does the meaning of an environment alter with the presence or absence of other people?
Methodologically the current research builds upon the previous studies of Heft (1988) and Kytta (1995). The current research creates a taxonomy of the social affordances of adolescents' environments and then utilises the taxonomy as a rating instrument to evaluate the function of the adolescents' key environments. Whereas Kytta only measured the presence or absence of an affordance, the current research quantifies the number of places available in the environment for an affordance. This is an important advance to the existing methodology. It enables greater comparison to be made between environments and scales to be developed to measure the function of the environment. These scales can then be utilised to examine individual or group differences in environmental perception and use. These methodological advances increase the value and applicability of affordance theory in environmental psychology.

2.3. Adolescents' Environments

2.3.1. Introduction

In order to be able to assess the functional significance of adolescents' environments, key adolescents' environments need to be identified. Previous research has focused on different aspects of adolescents' environments, such as environmental preference and use. Research has also been strongly influenced by the conception that environments support development in adolescence. The following sections review the literature from each of these research areas and concludes by considering which environments can be thought of as key adolescents' environments.

2.3.2. Defining Adolescence

The term adolescence has been considered a fuzzy concept by developmental psychologists (Durkin, 1995), with many psychologists simply stating that it is the transitional period between childhood and adulthood (Durkin 1995, Santrock 1998, Berger 2001). Durkin discusses how in the past the age of 13, i.e. the entrance into the teenage years was taken to signify the onset of adolescence, but argues that this fails to take into account the different levels of maturity in young people.
"There is no known psychological criterion that correlates perfectly with age and no psychological state that is universally recognised as the marker of adolescence", Durkin, 1995, p507.

In recent years, developmental psychologists have agreed that adolescence should be more broadly defined in terms of age and there is strong agreement that 11-20 years is an appropriate definition of adolescence (Durkin 1995, Santrock 1998, Beck 2000, Berger 2001). Thus, in this thesis the term adolescence will be used to describe individuals in the 11-20 year age range.

2.3.3. Place Preference

Much research on adolescents' use of environments has focused upon favourite environments. We can hypothesize that for an environment to become a favourite environment it must afford the adolescent activities that are important to them and might also afford activities that other environments do not support. Place preference research has taken two main paths; the study of adult memories of favourite places in childhood and the empirical study of current place preferences.

Several researchers have examined place preference from studying adult memories of favourite places in childhood. (Chawla 1990, Dovey 1990, Francis 1995). Dovey’s (1990) study of environmental autobiographies of adults found that favourite places were essentially those associated with being peaceful, having distance from others and being close to nature. Francis (1995) found similar results in his study of memories of childhood gardens. Chawla (1990) also describes a similar phenomenon in her analysis of memories from middle childhood. In several autobiographies she found ecstatic place memories. Ecstatic places were usually outdoors and were associated with physical and mental freedom and being alone. Ecstatic memories were associated with natural environments such as gardens, seashores, forests and fields.

These studies of the environmental autobiographies of adults find very similar results. They all describe an idealistic if not somewhat stereotypical idea of what childhood environments should be like. Studies of autobiographical memories are problematic as recall may not be accurate or it may be biased. Recall tends to focus on happy and sad events and not on the
everyday reality of childhood. Another problem with these studies is that they focus on natural and rural environments. The relevance of these studies in an ever increasing urban environment is questionable. It is obviously more fruitful to examine current place preference for children than to rely upon adults’ memories of their favourite places as a child.

Studies of current place preferences have focused upon favourite places (Korpela 1992, Lieberg 1997), liked places (van Andel, 1990) and valued places (Schiavo 1987, Eubanks Owens 1988, 1994). Studies of place preference are based on the premise that preference for a place relates to use of the place. If a place is preferred it is likely to be used, if a place is disliked then it is unlikely to be used.

In a study of the favourite places of 17-18 year old Finnish adolescents, Korpela (1992) found that the home, sports facilities, natural settings and commercial places were favourite places. The home was mentioned the most often as the favourite place. Lieberg (1997) examined the favourite places of 13-17 year old Swedish adolescents and found that private spaces such as the home or a friend’s home were named as favourite more often than public places. Other favourite places included outdoors near the home, the shopping mall and green areas.

Both Korpela and Lieberg’s studies suggest that the home and shopping malls are highly favoured places for adolescents. Indeed, Schiavo (1987) found that the home and especially the bedroom was a highly valued environment for both children and adolescents. There is also strong support for the shopping mall being a highly valued environment for adolescents, (Anthony 1985, Lewis 1989, Hopkins 1991, Matthews, Taylor, Percy-Smith & Limb 2000, Vanderbeck & Johnson 2000). Indeed, Vanderbeck & Johnson (2000) found the mall to be a central part of young people’s social worlds. Although Korpela and Lieberg both identify favourite places for adolescents, their studies are limited by the fact that they did not examine the reasons why places were favoured by the adolescents.

van Andel (1990) did make the link between place preferences and reasons for the preference. He compared the place preference of children and adolescents (aged 6-13 years) across three Dutch neighbourhoods and found that the types of places liked were similar across neighbourhoods, as were the reasons given for the preference. The children and adolescents favoured places such as playgrounds and green areas. These places were liked for three main reasons; the place was good for a specific type of activity, e.g. football, the place
included certain environmental features, e.g. open space, and the place offered the company of other children. These are all environmental affordances. Thus, liking a place was associated with use of the place for certain affordances, rather than in terms of the affective characteristics of the place.

These studies of current place preference distinctly contrast with the studies of environmental autobiographies. The autobiographical studies result in the affective characteristics of environments being prominent, such as being peaceful and having distance from others. Studies of current place preferences result in the affordances of the environment being prominent; evaluation reflects the functional characteristics of places, not the affective characteristics.

One of the most detailed considerations of adolescents place preference was carried out by Eubanks Owens (1988). American adolescents, aged 14-18 years, had to indicate two outdoor places in their environment that they valued. Responses were dominated by environments where the adolescents could be with nature such as natural and developed parks and undeveloped agricultural land. In this study the home environment was not given as a valued place, but this is probably because Eubanks Owens was only examining outdoor environments, whereas Korpela and Lieberg examined both indoor and outdoor environments.

Eubanks-Owens also examined the reasons why places were valued. She found four main reasons; they were visual quality, primary intent, supportive intent and unconscious intent. Visual quality is concerned with the beauty and impressiveness of the place; primary intent is concerned with the primary activities/behaviours associated with the place; supportive intent is the extent to which the place provides safety, accessibility and a sense of belonging; unconscious intent is the extent to which place provides for activities that involve putting things in perspective. Although Eubanks-Owens does not explicitly use the word affordances her analysis essentially involves matching the needs of the adolescents with the amount of support available in the environment for those specific needs.

Eubanks Owens also found that places were valued for different reasons. Natural parks were valued for their beauty, recreation, being with other people and putting things in perspective; areas near the home were valued as they gave a sense of belonging and also provided a place
where adolescents felt there was a voice in their decisions; the school was valued as a place to meet people and to be with friends. More frequently valued places supported a greater range of behaviours than the less frequently valued places; this suggests that environments are valued for the range of behaviours they support, rather than for specific behaviours per se.

Eubanks Owens (1994) carried out a similar study with Australian adolescents aged between 13-18 years. The participants had to indicate three valued places. Over one-third of respondents chose developed parks and valued the place as it afforded sporting activities, being with other people and was accessible. One-fifth chose commercial areas and valued the place as it afforded being with others, hanging out and being there made them feel better. Another fifth chose places at home as it afforded being with other people and conversely getting away from others, putting things in perspective and being there made them feel better. Emotionally, valued places were associated with feeling better having been to the place and feeling that the place belonged to them. These results show that it is not simply the case that all adolescents favour the home, parks and commercial areas. There are individual differences in the types of places that adolescents favour and value; an environment that is favoured by some will be unpopular with others.

Eubanks Owens studies of valued places show that there is both a functional and an affective component to preference for an environment. Whilst places were valued for affording being with friends and hanging out, they were also valued for affording affective behaviours such as putting things in perspective and belonging. Eubanks Owens results reflect the affective findings of the environmental autobiographies studies and the functional findings of previous current place preference studies.

Another interesting finding from Eubanks Owens studies is that place preference is affected by the environment in which the adolescent lives. For the American sample, who lived in close proximity to a national park the natural environment was very important. For the Australian sample, drawn from a suburb of Melbourne, the natural environment was not important, but places near the home and commercial areas were. Thus, when studying place preference it is important to consider how the research setting can influence the results. Place preference will vary according to which settings the adolescents has available to them.
Studies of place preference show that adolescents consider and use the environment at both the micro- and the macro-level. Some favourite places were specific places within environments such as the park, but specific settings such as the home and the school were also frequently mentioned. This thesis examines the functional significance of adolescents’ environments at the macro-level. The thesis aims to understand adolescents’ use of key environments; settings that all adolescents will have available to them. The study of place at a micro-level is highly place specific and not all adolescents will have the same places available in their environments.

Studies of place preference illustrate the adolescent’s preference for the home, areas near the home (the neighbourhood), commercial areas and green spaces. This suggests that the environments of the home, neighbourhood and town centre should be considered key adolescents’ environments in this thesis.

Previous studies of place preference have omitted to study how favoured places fit into the everyday environment of the adolescent. Previous studies have assumed that a favoured place is a frequently used place, suggesting a positive relationship between use and preference. This relationship has yet to be studied empirically. This thesis will examine the relationship between preference for an environment and use of the environment; does use of the environment differ according to preference for the environment?

Recently research has become more focused upon adolescents’ use of the environments for particular activities, than with place preference. The identification of which environments adolescents’ use will further inform which environments are key environments.

2.3.4. Adolescents’ Use of the Environment

Recent years have seen a shift from the examination of place preference to the examination of use of environments for particular activities. The examination of how environments are used is more informative than the examination of preference, in terms of planning for adolescents as a user group.

In considering adolescents’ use of the environment a link has consistently been made between environmental use and the developmental needs of the adolescent. Adolescents’ use
of the environment is seen to be driven by developmental needs (Coleman 1979, Noack & Silbereisen 1988, Schiavo 1988, Lieberg 1995, 1997). Use of the environment has therefore been considered in terms of how the environment can support the developmental needs of adolescents.

The ‘development as action in context theory’ (Silbereisen & Eyferth 1986) proposes that adolescents are active in their future development and that development occurs through goal-directed action. Adolescents desired development or personal growth is the reference point for action. If there is a discrepancy between desired development and actual development, adolescents can attempt to change either internal conditions or external contexts to try and achieve their developmental goals.

There are two types of contextual changes that adolescents can make when trying to achieve their developmental needs; they can either select an environment or environments that will support the pursuit of their goal/s or they can try to shape an environment so that it will support the pursuit of their goal/s. These ideas are comparative to those of Gibson. In deciding whether a context will support their goals an adolescent will have to make some evaluation about the function of the environment. The idea of shaping environments so that they will support their goals suggests that adolescents perceive new affordances in the environment, so the environment therefore affords them something that they did not perceive before.

Noack & Silbereisen (1988) used the ‘development as action in context theory’ to examine whether adolescents did use contexts to promote their development. They chose to examine partnership development and contrasted use of the home and public environments over two years for adolescents (aged 13 at the start) in different states of partnership development. Three types of adolescents were identified; Novices – had no partner and no aspiration for a partner, Searchers – had no partner but would like a partner, Fulfilled – had a partner. They found that ‘novices’ tended to spend their leisure time in the home, ‘searchers’ tended to leave the home environment and increasingly use public environments and ‘fulfilled’ adolescents consistently preferred public places. Noack & Silbereisen concluded that adolescents did use contexts to promote their development; seeking out public leisure settings was a strategy that adolescents employed in their goal of finding a partner.
Whereas Noack & Silbereisen studied use of the environment for the one developmental need of partnership development, other researchers have examined development through examining transitions in use of environments. Coleman (1979) believed that there were three main developmental needs in adolescence; to establish relationships with the opposite sex, to be accepted by one’s peers and to gain independence from one’s parents. Adolescents are concerned with gender roles and relationships with the opposite sex and this reaches a peak at about 13 years of age. After this the adolescent becomes concerned about peer relationships, which reach a peak at about 15 years of age and then with gaining independence from their parents, which reach a peak at about 16 years of age. Coleman believed that adolescents focus on heterosexual relationships in organised activity settings, peer-relationships in casual leisure settings and independence in commercial leisure settings. Hendry, Shucksmith, Love & Glendinning (1993) tested Coleman’s theory and found that adolescents did make the transition from organised to casual to commercial leisure settings. This transition started at around 11-12 years and use of casual leisure settings such as the neighbourhood started to decline at around 16 years of age.

Schiavo (1988) examined the transition that occurs in use of the neighbourhood in adolescence. Schiavo compared use of the neighbourhood for three age groups, pre-adolescents (mean age=9.5 years), young adolescents (mean age=12.8 years) and older adolescents (mean age=16.8 years). He found that the neighbourhood was evaluated less positively and utilised less frequently by the older adolescents than the younger and pre-adolescents. The number of adolescents who did not spend any of their leisure time in the neighbourhood increased with age. The two younger groups reported more social relationships in the neighbourhood than the older adolescents. Older adolescents had few ties to the neighbourhood in terms of both activities and social relationships and for this group the main reasons for liking the neighbourhood was it’s location near the highway, which enabled them to get to the movies and shopping malls.

Although Schiavo did not measure the developmental needs of the adolescents per se, he interpreted these findings in terms of the different age groups having different developmental needs. Schiavo postulated that older adolescents have a developmental need to move beyond the pre- and early-adolescent environment of the neighbourhood and concluded that;

“The independence-striving needs of older adolescents may not be satisfied within the local neighbourhood regardless of it’s facilities or design”, Schiavo, 1988, p9.
Both the Hendry et al and the Schiavo studies suggest that if an environment cannot fulfil an adolescent’s need then another environment that can fulfil the need will be utilised instead. These studies suggest that there will be a developmental dimension to use of the environment. This thesis will examine age differences in use of the adolescents’ key environments; does use of the environment differ according to age?

The types of development examined by Noack & Silbereisen (1988), Hendry et al (1993) and Schiavo (1988) ranged from very general to quite specific. What is missing from this research is a consideration of how environments are being used for key developmental needs in adolescence. This question has been comprehensively addressed by Lieberg (1995, 1997) and he proposes that the developmental need for social interaction and retreat are important motives in adolescents’ use of the environment.

2.3.5. The Developmental Need for Social Interaction and Retreat

Lieberg (1995, 1997) examined Swedish adolescents’ use of their local environment and like others saw use of the environment as being driven by developmental needs. He conducted a three year study of adolescents from the same Swedish neighbourhood, who were aged between 13-17 years. Lieberg placed emphasis upon not only studying what activities the adolescents engaged in, but also where these activities took place and with whom.

Lieberg drew upon Goffman’s (1963) work on behaviour in public places to account for adolescents’ use of the neighbourhood and city centre environments. Goffman used the metaphor of public places as theatres where individuals can be seen like actors on the stage. The stage can be divided up into a backstage and frontstage. The neighbourhood acts as a backstage environment for adolescents and the city centre acts as frontstage. In the city, adolescents are in front of an audience and it is here that they want to show themselves off and try out different behaviours.

“The anonymity in relation to adults and other groups in the city allows possibilities for the youths to observe and fantasise about others and to play with identities and behaviours themselves”, Lieberg 1995, p734-735

\[1\] Lieberg uses the terms city centre and town centre interchangeably.
Conversely, the neighbourhood is backstage as it is here that adolescents retreat to when they have had enough of being on show in the city centre. Adolescents can create their own territories in both front and backstage places. Lieberg also points out that unlike adults who can also use the home and the work place and any other environment they utilise, the public domain is often the only place adolescents have for backstage space. Thus, adolescents only have public places to utilise when they wish to be alone.

Lieberg found that there were two main ways in which adolescents appropriated space, which he named places of interaction and places of retreat. Places of interaction had two purposes, firstly they enabled the adolescent to withdraw from the adult world to be with their peers and secondly they enabled the adolescent to encounter the adult world through social involvement in city centres. Adolescents like to be where there are other people. Places of retreat were used for avoiding other teenagers and peers.

Lieberg postulated that these two types of environmental use reflect the developmental needs of adolescents. Thus, Lieberg sees environmental use and developmental needs as being intricately bound together. Lieberg found that the neighbourhood offered good opportunities for places of retreat but not for social interaction; as he saw the neighbourhood as backstage this suggests that backstage places afford retreat but not social interaction. Conversely the town centre and therefore frontstage places, afford social interaction but not retreat. Paradoxically, Lieberg found that adolescents could utilise the city centre to create backstage space; by using public space in an extroverted and uncontrolled way they were able to privatise the space, thus cutting it off from public use. It is this type of usage that can lead to conflict with other users of the space.

As well as identifying social interaction and retreat as main developmental needs in adolescence, Lieberg also considered the types of learning experiences that adolescents received from using the environment for social interaction and retreat. He believed that public spaces allow learning to take place. Through utilising public spaces competence

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2 Appropriation is concerned with making a place one’s own at an individual and group level (Korosec-Serfaty 1976, as cited in Uzzell 1995)
develops and this competence is vital training for adult life. Adolescents learn how to take care of themselves and to deal with new situations and these skills are then transferable to other contexts. The anonymity afforded by public environments also allows the adolescent to learn about being amongst strangers and it is in this public context that lifestyles and collective and personal identities can be developed. Thus, for Lieberg public spaces are an essential learning environment for adolescents.

“For youth themselves, the city and it’s public spaces are environments almost necessary for life: to grow socially, to seek fellowship and to form their social identities”, Lieberg, 1995, p733

Lieberg’s results suggest that different settings afford different actions; the town centre social interaction and the neighbourhood retreat. Lieberg offers no explanation of what the differences are between the two settings that result in them supporting different behaviours. The differences found could simply be a characteristic of the environment that he studied. Eubanks Owens work has illustrated how place preference varied according to the environment studied. It is therefore plausible that environmental use would be affected by the characteristics of the environment being studied. The following sections review studies that examine how other settings are used by adolescents for social interaction and retreat.

2.3.6. Environments for Social Interaction

The Mall as a Social Setting

There is considerable support for social interaction being a strong motive in adolescents’ use of the environment. Social interaction is a strong motivator in adolescents’ use of shopping malls, (Anthony 1985, Lewis 1989, Hopkins 1991, Matthews, Taylor, Percy-Smith & Limb 2000, Vanderbeck & Johnson 2000). For example, Anthony (1985) found that adolescents spent most of their time in the central places of the shopping mall as this afforded them greater opportunities to interact with other people than the peripheral areas of the mall. The adolescents felt that the best aspect of the mall was being with other people. Anthony also found that the mall was a frequently used environment; visits were often, lasted between one to five hours and were mostly spent in the company of two or three friends. Interestingly, only half of respondents spent any of their time in the mall shopping; other activities
mentioned were looking around, eating, playing video games, people watching, relaxing, talking and walking around.

Vanderbeck & Johnson (2000) examined the role of the shopping mall for 12-13 year olds in the UK and found the mall was a central aspect of the adolescent’s social world. Due to the value adolescents place on social life in the mall, researchers (Anthony 1985, Lewis 1989, Matthews et al 2000) have described the shopping mall as a third ground between the home and school.

“Many seems to take pride in their use of the mall, viewing it as what environmental psychologists call a ‘second territory’ or a ‘third place’ - a respite from the treadmill between home and school, a place for enjoying social life”, Anthony 1985, p311.

This develops the role of the shopping mall from that of it being a setting for social interaction for adolescents, to the role of the mall as an adolescent environment in it’s own right. Anthony suggests that the shopping mall may act as an antidote to the regulation that occurs in the adolescent’s home and school environments. The mall is an escape from school and home in that it affords freedom and it is an environment where adolescents can express themselves.

In the UK, shopping malls have tended to be incorporated into already existing town centres. Out of town shopping malls such as Lakeside, Meadowhall and Bluewater have been created but these are not the norm. Studies of shopping malls in the UK also support the notion that shopping malls are an environment in their own right. Uzzell (1995) compared evaluations of the High Street environment and the Friary shopping mall in Guildford for a variety of age groups, including under 20's. He found that the High Street and the shopping mall were perceived and evaluated differently. Whilst the High Street was perceived primarily as a shopping environment, the shopping mall was not. The mall was judged to possess social, psychological and physical attributes and was evaluated primarily on these attributes and not upon it’s provisions for shopping. More importantly, the shopping mall was an important social environment for all age groups. These results suggest that the High Street and shopping mall afford different actions and behaviours.

Woolley, Spencer, Dunn & Rowley (1999a) found that adolescents (aged 10-12 years) valued town and city centres as they afforded social interaction. The town centre afforded the
adolescents places to meet people, be with friends, be with the opposite sex and to be part of a crowd. Woolley et al concluded that town and city centres afford a 'social buzz' for adolescents.

The Leisure Environment as a Social Setting

The importance of social interaction in adolescents' use of the environment has also been highlighted in a unique study by Cotterell (1991). Cotterell examined how adolescents, aged between 13-19 years of age, utilised the Expo 88 exhibition in Brisbane. Although an exhibition is not an everyday adolescent setting, Cotterell found that the visits and favourite places of adolescents were concentrated around large scale places that were associated with being entertained, fun and having social contact. Cotterell interpreted these places as 'adolescent territories', in the sense that adolescents assembled in these places in large numbers and that they also made frequent return visits to these places. As the Expo 88 exhibition was a new environment they experienced over several months, these findings suggest a certain inevitability concerning adolescent territories. It is likely in certain settings e.g. the town centre and the neighbourhood, that adolescents will be attracted to places that are associated with fun and entertainment and it is here that adolescents will congregate and socialise.

Cotterell also suggested that there was a strong link between use of the environment and adolescent developmental needs.

"The concentrations of adolescents in particular sectors of the Expo environment can be understood in terms of some kind of fit between the leisure needs and interests of adolescents and the stimulus characteristics of the places involved. Leisure places appear to 'go with' particular needs and leisure styles, allowing adolescents to establish territories within Expo, based upon their own conceptions of a particular place and how it should function, which they had derived from experiences elsewhere", Cotterell, 1991, p39.

These ideas strongly mirror those of affordance theory and the 'development as action in context theory'. The idea of the environment offering support (i.e. having affordances) that are utilised by adolescents to support their developmental needs runs throughout most research on adolescents' environments. Cotterell's study also emphasizes the importance of
social interaction for adolescents in their environmental use. A new leisure environment was used primarily for social interaction. This reinforces the role of social interaction in adolescent development.

The School as a Social Setting

The school has also been found to be an important setting for social interaction (Eubanks Owens, 1988, Blatchford 1998). Academic experiences are only one aspect of school life and in the average UK secondary school, seventy seven minutes of each day are devoted to breaktime (Blatchford, 1998). Blatchford conducted a longitudinal study that examined breaktime activities at 11 years and 16 years of age. At both ages adolescents saw meeting up with friends as one of the main functions of breaktime. At 11 years of age breaktime was used for active games, such as football and also talking with friends, walking around, hanging around and sitting down. By 16 years of age breaktime was not used for active games and was used more for hanging around and socialising. Blatchford also found a gender difference in use, with males using the school more actively than females at both 11 and 16 years of age. Eubanks Owens (1988) found that the school environment was valued by adolescents as a place to meet people and be with friends. Blatchford and Eubanks Owens studies suggest that the school is an important context for the social life of adolescents.

The Home as a Social Setting

The home has also been found to be an important setting for social interaction. Schiavo (1987) asked children and adolescents aged from 8-18 years to photograph and discuss places in the home that had special meaning for them. He found that over half of the places photographed in the home were used with friends and the bedroom was an environment that afforded entertaining friends and social interaction. Schiavo also found that females shared more of their special places in the home with friends and had more friends visit their home than males.
Chapter Two

The Neighbourhood as a Social Setting

The neighbourhood has been found to be an important setting for social interaction, for some adolescents. Schiavo (1988) found that use of the neighbourhood supported social interaction for younger adolescents (mean age = 12.8 years). Social ties and using the neighbourhood for social interaction were very important to this group of adolescents. In contrast, older adolescents (mean age = 16.8 years) had few social ties in the neighbourhood and did not use the neighbourhood for social interaction. Schiavo’s results suggest that the neighbourhood afforded social interaction for the younger adolescents but not for the older adolescents. Schiavo’s findings differ from those of Lieberg, who found that the neighbourhood did not support social interaction for his sample of adolescents, who were aged between 13-18 years.

In summary, previous research suggests that many environments support social interaction for adolescents. This raises interesting questions about the similarities and differences in the affordances of different settings for social interaction. Whilst Lieberg found that only the town centre and not the neighbourhood afforded social interaction, other research suggests that both the neighbourhood and town centre support social interaction. This thesis will examine the affordances for social interaction in the key adolescents’ environments. A systematic comparison of the affordances of different environments will enable the following research questions to be addressed. Do all environments afford social interaction? How often is each environment used for social interaction?

Previous research has found that many settings support social interaction for adolescents. This supports Lieberg’s suggestion that social interaction is a key developmental need in adolescence. Relationships with peers lie at the heart of adolescents’ social interaction and the following section reviews literatures that has considered how peer-groups support development in adolescence and how peer-group structure can effect use of the environment.

2.3.7. The Peer-Group and Environmental Use

The term peer-group is used in two different ways; firstly it refers to interaction based peer-groups and secondly it refers to reputation based peer-groups (Cotterell, 1996). Interaction based peer-groups refer to actual friendship groups whereas reputation based peer-groups
refer only to groups with whom the individual may identify, i.e. reference and lifestyle groups, such as Skaters, Goths and Grungers.

Three types of interaction-based peer-group structures have been identified; the dyad, the clique and the crowd (Dunphy 1963, 1969, Brown 1989, Cotterell 1996). These structures differ in their size, structure and stability. The dyad is a stable unit that consists of two best friends, usually of the same gender. The clique is a stable, small group of friends usually numbering between 3 and 6 members, who are of a similar age and of the same gender. The crowd is an amalgamation of several cliques of adolescents and is considerably less stable than dyads and cliques.

The clique is the basic adolescent peer-group and it acts as an anchor for social activities. Palmonari, Pombeni & Kirchler (1990) found that the majority of their sample of adolescents belonged to cliques and that being part of a peer-group was an important aspect of their life. The dyad has been less researched than the clique and crowd. There is evidence that the importance of being in a dyad peaks in early adolescence, at around 13 years of age, (Savin-Williams and Berndt 1990, Hendry, Shucksmith, Love & Glendinning 1993). Little is known, however, about how being in a dyad effects use of the environment.

Cotterell found that adolescents often belong to several cliques, with each clique being located and confined to a specific setting, e.g. school, neighbourhood, sports club. Thus, adolescents utilise different environments with different peer-groups. He also found that use of the environment was constrained by the size of the peer-group; crowds were more suited to unstructured activities whereas cliques were more suited to structured activities. This suggests that there should be differences in how each environment is used, according to the type of peer-group structure it is used with. This thesis will examine the relationship between use of the environments and peer-group structure; does use of the environment differ according to the peer-group structure it is used with?

For many years developmental psychologists have been attributing the peer-group with an important supporting role in adolescent development. Both psychoanalytic and social psychologists see the peer-group as an important support system in adolescence (Newman & Newman 1976, Palmonari, Pombeni & Kirchler 1990) and this offers an explanation as to why adolescents are so keen to seek out social interaction.
Psychoanalytic psychologists see adolescence as a stage of development where identity is formed (Marcia 1966, Erikson 1968) and there is a need to sever the emotional ties with parents. Reducing ties with parents is known as disengagement and can result in the adolescent feeling lonely (Blos 1962, as cited in Coleman & Hendry 1990). Newman & Newman (1976) found that the peer-group supported the individual's withdrawal from their parents and was also supportive of an individual's developing sense of identity. Given this, we would expect to see use of the home environment decrease during adolescence, as the individual disengages from family life. This thesis will examine age differences in use of the home environment.

Whereas psychoanalytic psychologists see adolescent development as being driven from internal changes in the individual, social psychologists concentrate upon the external forces that operate on the individual during adolescence. Social psychologists consider socialisation and role acquisition as key developmental changes that occur in adolescence.

Socialisation is the process by which the individual assimilates the values and beliefs of the society. Successful socialisation is a pre-requisite for the transition to adulthood (Coleman & Hendry 1990). Socialisation is more problematic during adolescence than at any other time as the individual is exposed to competing socialisation agencies such as the family, peer-group, teachers and the media. Covington (1982) found that the peer-group was the most important agency in the socialisation of adolescents. This reinforces the importance of social interaction with peers in adolescence. Given the support gained from the peer-group it is no surprise that adolescents' use and value environments which afford social interaction.

Social psychologists also see an individual's life as being characterised by a series of roles. During childhood these roles are ascribed by others whereas in adolescence the individual is faced with not only a greater availability of roles but also the independence to decide how these roles should be interpreted. Involvement in a peer-group contributes to role transition in adolescence, (Durkin, 1995).

Social psychologists have considered both the personal and social identities that result from socialisation and role transition in adolescence. For personal identity they have concerned themselves with the development of self-esteem. Self-esteem is seen to develop predominately from reflected appraisals and social comparisons and adolescents compare
their own abilities with those of their peers and from this derive their own value (Rosenberg, 1979).

Social identity is the part of the individual's identity which results from their knowledge of their group membership/s and the value they attach to these membership/s (Tajfel, 1978). These ideas correspond to Cotterell's (1996) description of reputation based peer-groups. Reputation based peer-groups are concerned the individual feeling affiliated with a social category. Adolescents establish and use social categories in their environments. Social categories have been found to enable peers to locate themselves within the status system of the school, (Cotterell 1996, Brown, Eicher & Petrie 1986) and the clique is used to either accept or reject the social categories to which an individual could affiliate (Power & Cotterell 1979, as cited in Cotterell 1996).

Palmonari, Pombeni & Kirchler (1990) also found that the extent of identification with the social category was important; adolescents who had a strong identification with their social category were more attuned to the attitudes of their own peer-group and this resulted in them being able to obtain greater understanding and support from their peer-group than adolescents who had a weak identification with their social category. Thus, a strong identification with the social category results in greater social support from the peer-group.

Social categories can have a strong influence over adolescents' use of the environment. Simpson (2000) examined adolescents' use of public spaces in Tampa, Florida and found that use of public places was affected by social categories. Simpson noted the contradiction between adolescents' motives for using public places and how they actually utilised public places. Whilst adolescents were attracted to public places as they offered interaction with public life, when they gathered in public places, adolescents congregated into separate lifestyle enclaves and displayed their difference from other groups. They did not interact with members of other groups, despite this being a motive in their use of public places. Social categories appear to influence adolescents' use of the environment. This thesis will examine the role of social categories in adolescents' experiences of the environment.

Research on peer-groups indicates the importance of social interaction with peers during adolescence. As well as having a developmental need to be with their peers during adolescence, environmental use is effected by peer-group dynamics.
2.3.8. Environments for Retreat

2.3.8.1. Theories of Restoration

The idea of using environments for retreat has been the subject of investigation in environmental psychology under the heading of restoration and restorative environments (Kaplan & Kaplan 1982, 1989, Ulrich 1983, Korpela 1992). Restoration is concerned with the use of environments to reduce stress and restorative environments are environments that are sought out to get away from everyday stress. Restorative environments permit the individual to be alone, to organise their thoughts and feelings, and to get away from the constraints of everyday life.

Two theories of restoration dominate the field of environmental psychology, Ulrich's (1983) psychophysiological stress reduction framework and Kaplan & Kaplan's (1989) attention restoration theory (ART). Both of these theories have their origins in landscape preference research.

Ulrich (1983, Ulrich, Simons, Losito, Fiorito, Miles & Zelson 1991) believed that viewing natural scenes reduced the effects of stress. In his theory, restoration, i.e. a return to a pre-stress state, is brought about by a visual encounter with a scene. The attention demanded by a scene brings about a shift to a more positive emotional state and therefore blocks the negative emotions and thoughts associated with stress. Ulrich believed that humans had innate preferences for natural landscapes; humans are biologically programmed to learn and retain positive responses to certain aspects of nature. He proposed that humans had three responses to nature; it either holds their attention, results in physical or psychological restoration, or enhances cognitive performance.

To test his theory Ulrich (1984) compared the post-surgical recovery rates for hospital patients whose rooms overlooked either a brick wall or a row of trees. Ulrich hypothesised that patients who overlooked the natural scene would recover more quickly, as the view of nature would be restorative. Indeed, patients who overlooked the trees had faster recovery times, fewer complications and required fewer painkillers than patients who overlooked the brick wall.
Chapter Two

Ulrich’s theory emphasises the positive relationship between humans and the natural environment. However, this neglects the negative relationship that also exists between humans and the natural environment. Ulrich acknowledges that the natural environment can be dangerous and fearful to humans (Ulrich et al 1991) but fails to elaborate on how this fits with his restoration theory. If the natural environment can be perceived both positively and negatively, how can the only responses it elicits be positive? Ulrich’s theory is simplistic; humans can simply view a scene and feel restored. To propose that this is an innate response neglects the role of the psychological mechanisms and processes that underlie restoration, as well as to neglect the role of the environment. Both the individual and the environment have a passive role in Ulrich’s theory. Ulrich’s theory is an incomplete consideration of restoration processes. Kaplan and Kaplan’s attention restoration theory (1989) offers a more complex consideration of restoration and attempts to identify the psychological processes that operate during restoration.

Kaplan and Kaplan’s attention restoration theory (1989) assumes that stress causes attention fatigue due to the mental effort required to inhibit negative emotions. In this theory restoration occurs when four factors, being away, fascination, extent and compatibility, are present in the person-environment interaction. Being away involves gaining geographical distance from one’s usual context; fascination involves ceasing to inhibit distractions so that they can be managed; coherence involves being in a context that allows exploration and interpretation; compatibility is the extent to which the environment supports the individuals intended activities.

Attention restoration theory is a more complex theory than Ulrich’s for several reasons. It implies a larger, more active role for both the environment and the individual in the restoration process. The environment has to support the individual’s pursuit of restoration. As well as considering the psychological processes that accompany the restoration process, attention restoration theory allows for a much longer restoration process. Ulrich believed it was enough for a scene to be viewed for restoration to occur, whilst attention restoration theory proposes a large role for psychological processes. Overall, the more complex theory of Kaplan and Kaplan has more to offer future studies of restoration.
2.3.8.2. Restorative Environments


"The physical environment, its objects and places can be used to regulate the pleasure/pain balances, one's self-esteem and characteristic sense of self", Korpela 1989, p245.

Korpela proposed that individuals seek out environments for self-regulation when social pressures became too much for the individual and there is a need to maintain the self. The self-regulation theory draws upon Kaplan and Kaplan's attention restoration theory. Korpela also believed that favourite places play a special role in self-regulation and that if possible individuals would seek out favourite places for self-regulation.

Korpela believed that both adolescents and adults used the environment for self-regulation. He hypothesised that adolescence was a time where self-regulation activities would be significant as it is a time where the self is being developed; self-regulation work would therefore be essential. Indeed, self-concept development is a central aspect of adolescence, so it is likely that adolescents would engage in self-regulation work (Erikson 1968, Rosenberg 1979, Coleman & Hendry 1990, Hendry, Shucksmith, Love & Glendinning 1993). Also, the predominance of relationships with peers and the opposite sex during adolescence can be stressful and are likely to result in the need for self-regulation work.

Korpela (1989) found that Finnish adolescents used their favourite places for self-regulation. Descriptions of their favourite places included the themes of privacy, togetherness, clearing one's mind, relaxing, freedom of expression, pleasure, control, belonging and familiarity, which Korpela interpreted in terms of self-regulation behaviours. Clearing one's mind and relaxing were associated with the adolescent's bedroom and the countryside and freedom of expression was found for all the favourite places named.
In a further study Korpela (1992) examined the situational and emotional context that preceded adolescents seeking out their favourite places. Favourite places were sought out after both positive and negative experiences. The reasons given for going to a favourite place were internal feelings and thoughts, threatening or negative experiences, positive or supportive experiences, conflicts or arguments with other people, external stimuli and physically stressful periods. Thus, favourite places were sought out after both positive experiences and negative threatening experiences.

Korpela's work illustrates how adolescents have a need for self regulation and that favourite places support adolescents' self regulation behaviours. The importance of self regulation is supported by developmental research that has found the development of the self to be a central aspect of adolescence.

Later research (Korpela & Hartig 1996) found that for adults favourite places were associated with high levels of being away, fascination, coherence and compatibility; thus linking self-regulation theory with attention restoration theory (Kaplan & Kaplan 1989). Korpela & Hartig concluded that favourite places should be considered as sources of restorative experience. However, this exact relationship has yet to be examined with an adolescent sample.

2.3.8.3. Restoration in the Home, Town Centre and Neighbourhood

Schiavo (1987) found that as well as being an important context for social interaction, the home was an important context for retreat behaviours. Schiavo found that two-thirds of the places photographed in the home were used when alone and the bedroom was used for solitary activities such as being alone, relaxing and being in place they could control. He also found that females used more places around the home for solitary activities than males, who tended to confine solitary activities to one or two places. Schiavo concluded that the territorial control that children and adolescents had over their bedrooms contributed to the central role of the bedroom for solitary activities.

Research on the meaning of home has also found the home to be an important context for retreat. Researchers examining the meaning of home have found that the home affords
centrality, continuity, privacy, self-expression, personal identity and social relationships (Hayward 1977, Tognoli 1987, Smith 1994). Altman (1975) considered centrality to be an essential component of the home environment. Altman defined the home as a primary territory; primary territories are environments in which the owner has exclusive use and control. Sebba & Churchman (1986) examined the function of the home for children (aged 5-13 years) and adolescents (aged 13-18 years). They found that both children and adolescents saw having control as a main function of the home environment. The adolescents also saw the home as a place for self-expression, whereas the children placed more emphasis upon the home as a place where they could feel secure. Thus, the meaning of home is strongly linked to retreat behaviours such as being yourself, being in control and having privacy.

There is also evidence that the town and city centre is used for retreat. Woolley, Spencer, Dunn & Rowley (1999a) found that as well as being used for it's 'social buzz', the town centre was also used for quiet reflection.

"Places for quiet reflection are as important to children as are some of the more obvious attractions of the town", Woolley, Spencer, Dunn & Rowley, 1999a, p185.

Bryant (1985) found that adolescents also made use of places in the neighbourhood if they wanted to be alone. The participants named places such as parks and orchards in their neighbourhood that they used for retreat. Bryant also found that all the adolescents reported using the neighbourhood for retreating activities.

In summary, previous research suggests that many environments support retreat for adolescents. This raises questions about the similarities and differences in the affordances of different settings for retreat. Whilst Lieberg found that only the neighbourhood and not the town centre afforded retreat, other research suggests that both the neighbourhood and town centre support retreat. This thesis will examine the affordances for retreat in the key adolescents' environments. A systematic comparison of the affordances of different environments will enable the following research questions to be addressed. Do all environments afford retreat? How often are each of the environments used for retreat?

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3 Centrality is the personal control and exclusivity of use that an individual has over a setting (Smith, 1994).
2.3.9. Adolescents’ Key Environments

From reviewing the literature relating to adolescents’ preference and use of environments, it is possible to identify four environments that can be considered adolescents’ key environments. These are the home, the neighbourhood, the school and the town centre.

The home and neighbourhood environments were found to be both preferred environments and also important for social interaction and retreat behaviours. The home acts as a base for the adolescent and should therefore definitely be considered a key environment for adolescents. The neighbourhood is used throughout childhood until mid-adolescence and adolescents make use of it’s public places for hanging around. The town centre is a key environment for adolescents. It is the most attractive environment available to adolescents and it’s public places, shopping malls and other leisure areas, afford adolescents social interaction and retreat behaviours. Surprisingly, adolescent use of the school environment has been less researched but the school has been found to be an important setting for social interaction. Adolescents also spend a great deal of their time in the school environment, and for this reason the school was included as a key environment for adolescents.

2.3.10. Constraints upon Adolescents’ Use of the Environment

Whilst, the previous sections have reviewed research that has considered adolescents’ use of the environment, consideration has not yet been given to constraints that operate upon adolescents’ use of the environment. Chapter One outlined the conflict associated with adolescents’ use of space. Adults dislike adolescents hanging around in public places (Brown 1995, Valentine 1996). Interventions such as curfews, surveillance and police intervention are used to control and prevent adolescents congregating in public places. This literature suggests that adolescents are not free to utilise the environments available to them; interventions intrude upon their freedom to use public places. As well as these societal constraints that operate over adolescents’ use of the environment, there are other constraints.
Chapter Two

2.3.10.1. Parental Restrictions Over Use of the Environment

Throughout childhood and most of adolescence, parents maintain control over access to the environment. Access to the environment is governed by rules about where they are allowed to go, with whom and until what time. The distance a child or adolescent is allowed to travel away from their home is their home range and this has typically been examined using cognitive maps or distance estimates, (Hart 1979, Herman, Heins & Cohen, 1987, Spencer, Blades & Morsely 1989). There is strong consensus that the home range of children increases with age as parents relax their constraints upon the child; broadly speaking toddlers are restricted to the home environment, children to the home, garden and the street, pre-adolescents to the neighbourhood and adolescents to the neighbourhood and beyond (Gifford, 1997). There are also gender differences in home range; males have a larger home range than females (Hart, 1979, Cotterell 1993).

Restricting a child’s access to the environment is not solely based upon the parents conception of the competence of their child; parental fears play an influential role in access to the environment. In middle childhood and early adolescence these fears focus on two areas; fears associated with traffic and fears associated with physical assault. Studies have shown that parents have fears associated with traffic in the child’s environment and limit their child’s freedom of movement because of this fear, (Hillman & Adams 1992, Blakeley 1994, Björklid 1994, Lee & Rowe 1994). Parents have also been found to have fears associated with the physical assault of their child and especially sexual assault (Hillman & Adams 1992, Blakeley 1994, Valentine 1996). Blakeley found that parents restricted their child’s freedom of movement because of these fears and held the home as the safest place for them to be. Valentine found that parents used stranger-danger as the main method of controlling their child’s access to public places, despite the low likelihood of it occurring. Thus, access to the environment in both childhood and adolescence is affected by parental concerns about traffic and physical assault.

Studies of home range in adolescence suggest that parental fears affect females leisure activities more than males. Females have a more restricted home range than males (Maudlin & Meeks 1990, Cotterell 1993, Deem 1996) and parents have greater fears about their daughter’s safety and thus operate greater control over their leisure (Maudlin & Meeks 1990). Deem (1996) found that because of their restricted range, females’ leisure was more likely to
occur in the home or neighbourhood. Further evidence for the effect of gender comes from Cotterell’s (1993) study of night-time leisure at Expo 88. He found that males went out more after dark and stayed out longer than females and also that males were more likely to be with their friends at night whereas females were more likely to be with their parents. These studies speculate that females are more geographically restricted than males as they are perceived to be more vulnerable to sexual assault than males.

van Vliet (1983) found that female adolescents did not always have a more restricted home range than males. In comparing the home range of city and suburban adolescents in Canada, van Vliet found that there were gender and age difference for suburban adolescents but not for city adolescents. For suburban adolescents females had a more restricted home range than males and younger adolescents also had a more restricted range. There was also a trend in both the suburb and city for adolescents of higher social class to have a greater home range than adolescents of lower social class. Overall, suburban adolescents had a greater home range than city adolescents.

Whilst van Vliet found social class differences in home range, there is also evidence of social class differences in use of the environment. Hendry, Shucksmith, Love & Glendinning (1993) found that middle class adolescents were less likely to hang around their neighbourhood environment than adolescents of a lower class. This thesis will examine class differences in use of the key adolescents’ environments; does use of the environment differ according to social class?

van Vliet’s study shows that adolescents’ home range can be affected by gender, social class and the type of environment in which they live. van Vliet does not believe that a restricted home range necessarily equates to a restricted activity pattern for the adolescent. Places closer to the home may afford the activity, and this is what those with a restricted home range utilise, but places further away from the home that offer the activity are more attractive and preferred by adolescents.

Support for there being a gender difference in home range is mixed; Whilst Maudlin & Meeks (1990), Cotterell (1993) and Deem (1996) have all found a gender difference, van Vliet found a gender difference only for suburban and not city adolescents. These results suggest that use of the environment might also be effected by gender. This thesis will
examine gender differences in use of the key adolescents’ environments; does use of the environment differ according to gender?

Restrictions on adolescents’ leisure have been considered mainly at the group level, with comparisons being made between gender, social group and types of environment. However, there are also likely to be individual differences in the extent to which parents restrict the adolescents leisure based on parenting style. Studies of parenting styles have tended to converge on two dimensions; emotional responsiveness and control (Durkin, 1995). The most influential model of parenting styles has been that of Baumrind (1967) which incorporates both these dimensions. Baumrind identified three parenting styles; authoritarian, authoritative and permissive. Authoritarian parents are controlling and not emotionally responsive, authoritative parents are emotionally responsive and controlling, but decisions tend to be negotiated with the child, permissive parents are not controlling and tend to vary on emotional responsiveness. These parenting styles maintain themselves throughout the individual’s childhood and adolescence. As the parenting styles vary as to the degree of control they exert over the adolescent, it is suggested that parental style would effect an adolescent’s use of the environment. Previous studies have not considered how parenting styles effect the adolescent’s freedom to use the environment. This thesis will examine the relationship between environmental use and parenting style; does use of the environment differ according to parental control?

2.3.1.0.2. Adolescent Fears Associated with the Environment

Recent research has examined feelings of fear and vulnerability that adolescents’ experience in the neighbourhood and town centre and how this effects use of these environments (Brown 1995, Lupton 1999, Woolley, Spencer, Dunn & Rowley 1999a, Woolley, Dunn, Spencer, Short & Rowley 1999b). It has been established that children and adolescents share their parents’ fears about traffic and physical assault (van Andel 1990, Björklid 1994, Brown 1995, Woolley, Spencer, Dunn & Rowley 1999a, Woolley, Dunn, Spencer, Short & Rowley 1999b). From reviewing this research Spencer & Woolley (2000) conclude that children and adolescents concerns about traffic and physical assault are not simply a repetition of parental concerns. Instead, the adolescent learns these concerns for themselves through their own experiences in the environment.
One of the most comprehensive studies of environmental fears was carried out by Woolley et al (reported in Woolley, Spencer, Dunn & Rowley 1999a, Woolley, Dunn, Spencer, Short & Rowley 1999b). Woolley et al (1999a, 1999b) examined the environmental experiences of adolescents, aged between 10-12 years, in their town or city centre. Over 400 adolescents from 21 towns and cities in the UK took part in the study. The study resulted in several key findings about the relationship between fear and the environment.

Firstly, concerns about safety in the town centre were high and adolescents often felt vulnerable and threatened in the town centre. One-third of participants described the town centre as dangerous and one-fifth as violent. In the smaller towns fears were concerned with traffic, but in larger cities and towns they were concerned with personal safety. These findings are supported by those of Buss (1995) who found that adolescents (aged 10-11 years) in Los Angeles had fears associated with their city centre. They described their city as violent, unpredictable and dangerous and feared for their personal safety. To this group of American adolescents fear of being shot was an everyday reality.

Woolley et al (1999b) also found that in evaluating whether a place is safe that the adolescents considered the type of people who use the place. Two types of people were feared; groups of undesirable adults such as drug users, tramps and drunks and groups of older adolescents. When asked to describe why they feared these groups the adolescents mentioned the possibilities of being mugged, raped, beaten up or robbed by a member of such a group; they feared serious physical assault. The adolescents also felt that these two groups of undesirable adults and adolescents owned places in the town centre. Consequently, these places were places to be wary of and even avoided at certain times of the day. Thus, adolescents regulated their use of these places. Lupton (1999) found that an older sample of adolescents (aged 16-20 years) also used the type of people who appropriated a place to evaluate how safe a place was. This sample also feared groups of adolescents and undesirable adults. Together these studies suggest that fear of a place is formed on the basis of conceptualisations about the types of people who use the place.

Woolley et al (1999b) found that feelings of vulnerability in the town centre resulted in the adolescents feeling positive about the presence of closed circuit television, security guards and the police. The presence of these made them feel safer in the town centre, as did the presence of older adults. Woolley et al proposed that space where children and adolescents
can feel safe in the town centre need to be developed. However, there are problems associated with such a proposal. Firstly, fear is associated with feelings that certain groups own certain places in the town centre; secondly, adolescents have an intrinsic fear of other groups of adolescents. There is a danger that the provision of spaces for children and adolescents would result in perceptions of certain places belonging to certain groups, thus exacerbating feelings of fear. Also, whilst Woolley et al found that 10 to 12 year old’s felt safer because of surveillance by closed circuit television, security guards and the police, it is unlikely that older adolescents would be as willing to trade their freedom in the town centre for increased feelings of safety. Research has found that teenagers and young adults are the least supportive of the installation of closed-circuit television in town centres, (Honess & Charman 1992, Bennett & Gelsthorpe 1996, Margoles 2000). Adolescents and young adults are concerned about the civil liberty implications of closed-circuit television and also dislike to be watched.

Paradoxically, Woolley et al suggest that rather than avoiding feelings of fear in the town centre, adolescents have to learn how to handle threatening experiences in the environment. Woolley et al considered learning to cope with threatening situations an important skill for adolescents to develop. This argument also helps to explain why adolescents continue to use environments in which they feel threatened. In a study in the UK, Brown (1995) found that adolescents were more likely to be the victim of crime in public places than adults. Despite experiencing harassment, victimisation, threats and physical attacks from other adolescents and adults, hanging around was still the predominant activity for this sample of adolescents in Middlesborough. Woolley et al’s results also offer another explanation for such results; they found that negative experiences in the town centre were associated with high levels of stimulation and excitement suggesting that fearful experiences are an exciting part of being in the town centre.

In conclusion, Woolley et al (1999b) summarised the relationship between parental concerns, the adolescent’s own fears and threatening experiences in the town centre. They believed that fears associated with the town centre originated predominantly from the adolescent’s own experience in the environment and that such experiences are part of learning to handle threatening experiences.
"Urban centres harbour considerable perceived dangers; ones’ parents and fellow children have already instilled such concerns prior to personal encounter; direct experience with threatening individuals and places qualified this hearsay; and part of the process of growing up in cities consists of learning to evaluate and handle such threats”, Woolley, Dunn, Spencer, Short & Rowley 1999b, p300.

Overall previous research suggests that adolescents do experience fear in public places and especially in the town centre. Fears are associated with groups of undesirable adults and other adolescents and focuses upon being physically assaulted. This fear can result in adolescents regulating their use of certain places in the town centre but overall fear does not deter adolescents from making use of the town centre.

This thesis will further explore adolescents’ experiences of fear in the neighbourhood and town centre. Woolley et al’s study examined children aged 10 to 12 years old; this thesis will investigate adolescents’ experiences of fear for an older and wider age range (11-16 year olds). Examining adolescent fears builds on Woolley et al’s work with adolescents and will extend our understanding of environmental fear. Previous research has concentrated upon fear as the predominant emotional response to the environment. This thesis will further examine adolescents’ feelings about the home, neighbourhood, school and town centre to further increase the understanding of how these environments are experienced.

2.3.11. The Consequences of the Environment supporting Development

The preceding sections have emphasized the importance of the adolescent’s environment supporting developmental needs. Whilst, these studies imply that support is important for development they fail to explore the possible psychological consequences of the environment for development. Spencer and Woolley (2000) believed that there were two important outcomes. The first was identity formation and the second was well-being.
2.3.11.1. Place Identity

The relationship between place and identity has become an important research area for environmental psychology, (Proshansky, Fabian & Kaminoff, 1983, Proshansky & Fabian 1987, Lalli 1992, Twigger-Ross & Uzzell 1996, Speller 2000). Environmental psychologists have proposed a strong link between the physical environment and an individual's identity.

One of the most prominent theories of place identity has been Proshansky's (Proshansky, Fabian & Kaminoff, 1983, Proshansky & Fabian 1987). Proshansky defined place identity as cognitions about the physical environment that serve to define who the person is (Proshansky & Fabian, 1987). He saw place identity as a sub-structure of the self-identity. Proshansky proposed that place played an important role in identity processes for children; the day to day environments of the child contribute to the child's sense of self. Spaces and places that are owned, familiar and controlled are used by the child to maintain a sense of self. Whilst Proshansky & Fabian discuss place identity for young children, it is probable that a similar relationship would occur between place and self-identity for adolescents. This chapter has already discussed the importance of the development of the self in adolescence and Proshansky's theory suggest that place plays an important role in this development.

Despite being the most prominent theory of place identity, Proshansky's theory has had very little impact upon research. Proshansky never really operationalised the concepts in his theory and the theory is considered by others as extremely difficult to operationalise (Speller, 2000). Moser & Uzzell (2002) criticise Proshansky's theory for proposing that place identity is a sub-structure of the self-identity. Moser & Uzzell propose that rather than being a sub-system of identity, all aspects of identity have place-related implications; no aspect of identity is unaffected by the physical environment.

In recent years, a new direction has been sought in order to examine place identity. Environmental psychologists have operationalised Breakwell's Identity Process theory (1986) to explain place identity (Twigger-Ross & Uzzell 1996, Speller 2000). These studies use Breakwell's four identity principles of continuity, self-esteem, self-efficacy and distinctiveness to examine place identity. Spencer and Woolley suggest that these four principles should be emergent in the child as identity develops. However, studies of place
identity development in childhood and adolescence have not yet been conducted using Breakwell’s four identity principles.

As Moser & Uzzell (2002) note, although not directly drawing upon Breakwell’s theory, both Korpela’s (1989) and Lalli’s (1992) theories of place identity make use of the concepts of distinctiveness and continuity. Whilst Korpela’s theory is predominantly concerned with the use of the environment for identity development, Lalli offers environmental psychology a theory of the relationship between self-identity and place. Lalli proposed that there was a strong relationship between self-identity and identity with the local town. He believed that experiences in the town determined urban-related identification and that identification with the town in turn influences self-identity.

“Urban related identity, as an aspect of an individual’s more comprehensive self-identity, is the result of a complex association between self and urban environment”, Lalli, 1992, p294.

Lalli identified five dimensions that underlie urban-related identification; attachment, continuity, commitment, evaluation and familiarity. Attachment is the sense of belonging associated with the town; continuity is the sense that the town reflects the past experiences of the individual; commitment is the significance of the town for the future of the individual; evaluation is the individual’s evaluation of how distinctive the town is; familiarity is how the town functions in the everyday life of the individual. Lalli’s theory is of value to environmental psychology for two reasons. Firstly it can be operationalised, unlike Proshansky’s theory of place identity. Secondly, it provides a social interpretation of the relationship between place and identity.

These recent social interpretations of place identity have much to offer environmental psychology. Spencer and Woolley hypothesised that identity formation was an important outcome of the environment supporting development. A supportive environment is one that provides affordances that support the adolescent’s needs. This thesis will examine the relationship between the affordances of the environment and urban-related identity. Lalli’s urban-related identity theory measures identification with the local town. This thesis will examine the relationship between the supportiveness of the town centre and urban-related identity. Is use of the town centre related to urban-related identity?
2.3.11.2. Well-Being

Spencer and Woolley also viewed well-being as an important outcome of the environment supporting developmental needs. They saw the environment, and especially the affordances of towns and cities, as important for the well-being of children and adolescents. Evidently, the more support the adolescent receives from the environment for their goals, the more successful they are likely to be in achieving their goals.

Research has considered the relationship between supportiveness of the environment and psychological well-being (Wallenius, 1999). Although this study was conducted with adults, it elucidates clearly the relationship between environmental support and well-being that Spencer and Woolley are suggesting. Wallenius examined the relationship between perceived supportiveness of the environment and psychological well-being, as measured by satisfaction with life and depression. Supportiveness of the environment was measured by examining how individuals used environments to support their personal projects.

A personal project is an interrelated sequence of actions that have to be carried out for an individual to achieve their personal goal (Palys & Little, 1983). Little (1983) proposed that the achievement of a personal project is affected by both the behaviour of the individual and the affordances of the environment that facilitate or inhibit the actions. Wallenius found that the perceived supportiveness of the environment was associated with life satisfaction but not with depression; the greater the supportiveness of the environment for personal projects the higher life satisfaction was. She also found that perceived supportiveness of the environment related to how often environments were used.

Thus, there is support for a relationship between supportiveness of the environment and psychological well-being in adults. This thesis will examine whether there is a relationship between supportiveness of the environment, as measured by affordances and well-being for adolescents. Wallenius proposes that an environment that is used often, is supportive and results in high psychological well-being. This thesis will examine the relationship between the supportiveness of the environment, as measured by use and well-being; is use of the environment related to psychological well-being?
2.4. Chapter Summary

The aim of this research is to develop a greater understanding of adolescents’ use of the environment. This is important for the recognition of adolescents as a user group and also in planning for them as a user group.

The question of how the environment is perceived lies at the heart of this thesis. The literature review of theories of environmental perception suggests that the most comprehensive and useful theory for environmental psychology is Gibson’s theory of affordances (1966, 1979). The strength of Gibson’s theory is that it brings together the physical and social environments to account for the functional significance of the environment. Gibson’s theory raises interesting questions about the role of other people in environmental perception. Whilst Gibson believed that other people provided the richest and most intricate affordances of the environment, previous research has not examined the social affordances of the environment. This thesis is concerned with the social meaning of the environment and focuses upon the social affordances of adolescents’ environments. This thesis draws upon methodological developments by Heft (1988) and Kyttä (1995) and develops a methodology that measures the social affordances of adolescents’ environments for developmental needs.

Previous studies of adolescents’ environments are limited as they only study one or two environments. Measuring the affordances of the environment enables a systematic comparison of the affordances of different environments available to the adolescent to be made. This chapter has identified the home, neighbourhood, school and town centre as adolescents’ key environments. In considering adolescents’ use of environments a link has consistently been made between use of the environment and developmental needs. Previous literature proposes that adolescents seek out environments that support their developmental need for social interaction and retreat (Lieberg 1995, 1997). Whilst previous studies have found that some adolescents’ environments afford social interaction and retreat, no comparison between the key environments available to the adolescent have been made. This thesis will examine the affordances of the home, neighbourhood, school and town centre for social interaction and retreat; do all the key environments afford both social interaction and retreat?
Whilst the affordances of the environment will determine how the environment can be used, previous literature suggests that other factors will also effect adolescents’ use of the environment. The literature suggests that use of the environment is affected by parental restrictions that operate over adolescents’ access to the environment. These parental restrictions result in age, gender and social class differences in adolescents’ access to the environment (Hendry 1983, van Vliet 1983). Previous research also suggests that differing developmental needs result in age differences in use of the environment (Schiavo, 1988). Styles of parenting have also been found to differ according to level of control (Baumrind, 1967).

These findings suggest that adolescents’ use of the home, neighbourhood, school and town centre might differ according to the age, gender and social class of the adolescent and also according to level of parental control. The following research questions are examined in this thesis: Are there differences in use of the home, neighbourhood, school and town centre environments for social interaction and retreat according to the age, gender and social class of the adolescent? Are there differences in use of the environments for social interaction and retreat according to the level of parental control exerted over the adolescents’ access to the environments?

Previous literature also suggests that use of the neighbourhood and town centre will be affected by fear (Lupton 1999, Woolley, Dunn, Spencer, Short & Rowley 1999b). Woolley et al (1999b) found that use of the town centre was regulated on the basis of fears about physical assault and that certain places were avoided at certain times of the day. These findings suggest that adolescents’ use of the neighbourhood and town centre might be effected by feelings of fear associated with these environments. This thesis will further examine adolescents’ feelings of fear associated with the environment and will examine how these feelings effect use of the environment.

The literature also suggests that adolescents’ use of the environment is affected by peer-group structure (Cotterell, 1996) and social categories that operate in the environment (Cotterell 1996, Simpson 2000). The effect of peer-group structure and social categories upon use of the home, neighbourhood, school and town centre environments will be examined: Are different environments utilised with different peer-group structures? Do social categories effect how the environments are used and experienced?
It has been suggested by Spencer and Woolley (2000) that the affordances of town and city centres are important for the well-being of children and adolescents. The more support the adolescent receives from the environment for their goals the more successful they are likely to be in achieving their goals. This suggests that if the environment is used often for the key developmental needs of social interaction and retreat that well-being should be high. The relationship between well-being and use of the key environments for social interaction and retreat will be examined: Is frequent use of the environments for social interaction and retreat related to high well-being?

Spencer and Woolley (2000) also believed that identity formation was an important outcome of the environment supporting development. Lalli (1992) proposed that experiences in the local town determine identification with the town. Lalli’s theory suggests that if the town centre is used often for social interaction and retreat, identification should be high. The relationship between urban identification and use of town centre for social interaction and retreat will be examined: Is frequent use of the town centre related to high urban identification?

Chapter Two has discussed previous research on adolescents’ use of the environments and has identified the main research questions of the thesis. Chapter Three outlines the methodological perspective of this thesis and discusses how methodologies were selected to examine each of the research questions. Chapter Three also discusses the ethical issues that were addressed in conducting this research.
Chapter Three: Choosing a Methodology and Ethical Issues.
3.1. Introduction

This chapter clarifies the epistemological position of this thesis. The research process is strongly influenced by the epistemological position adopted by the researcher, as choice of methodology influences both data collection and data analysis. This thesis utilises both quantitative and qualitative research methodologies: This chapter establishes how the relationship between quantitative and qualitative methods is conceptualised in this thesis and discusses how methodologies were selected to examine each of the research questions. This chapter also discusses how the ethical issues associated with carrying out research with an adolescent sample were addressed in this research.

3.2. Methodological Issues

3.2.1. The Quantitative-Qualitative Distinction

The distinction between quantitative and qualitative methodologies has become the key distinction made between research methodologies in psychology.

"During the past 30 years or so, the distinction between quantitative and qualitative research has become a key axis in methodological discussions within psychology and the social sciences", Hammersley, 1996, p159.

Quantitative and qualitative methods have traditionally been seen as representing opposing epistemological positions. Quantitative methods are based on the philosophy of natural science, whilst qualitative methods are based upon the constructionist philosophy.

Quantitative Methods - The Positivist Scientific Model

At the heart of quantitative methods lies the positivist scientific model which sees the world as existing of objectively defined relationships that exist externally to the individual. As relationships exist externally to the individual, a researcher is able to manipulate and measure the specific relationships between specific variables, in order to test hypotheses about cause and effect. The measurement of variables is made numerically, which results in quantifiable,
data, which can be analysed statistically. Quantitative research is deductive. Theory drives research; hypotheses are formed to test the preconceived theory of the researcher. Quantitative research is therefore based upon a nomothetic, reductionist philosophy. Testing is carried out on a large number of cases in order to eliminate individual variation and the aim of quantitative research is to be able to generalise the results to the general population. The quality of quantitative research is measured by it’s replicability, reliability and validity; researchers have a high level of control over the manipulation and measurement of variables, therefore other researchers should be able to conduct the same study and find similar results.

Quantitative methods have been the dominant methodology utilised by psychology, and have been viewed as an essential part of psychological research.

"Quantification is traditionally seen as the sine qua non of scientific method", Henwood & Pidgeon, 1992, p98.

This domination of quantitative methods has led to the impression that quantitative methods are the best kind of methodology to use and that such methods underpin sound research (Woolgar 1996, Henwood 1996). Indeed, the scientific model remained unquestioned in psychology, for considerably longer than it did in other social sciences. It was not until the 1960’s that criticism of the scientific model gathered strength in psychology and that qualitative methods began to be advanced as an alternative to the widely accepted and used scientific model (see Henwood & Pidgeon 1992, Richardson 1996).

Qualitative Methods - The Constructionist Model

At the heart of qualitative methodologies lies the constructionist epistemology, which proposes that human beings construct their own realities; reality is shaped by the meanings that individuals attribute to their physical and social environment (Henwood & Pidgeon, 1992). Qualitative researchers therefore examine the meaning that individuals attribute to their physical and social environment; they examine how individuals describe their own realities. This approach is idiographic; it is considered important to understand the meanings of experiences, events and actions as they are interpreted by the individual (Henwood, 1996). Qualitative research does not test for predetermined outcomes; the research process is directed by emerging theory and indeed the goals of the research may change as data is collected and theory emerges. Qualitative researchers have developed their own criteria on
which qualitative methods are evaluated (see Henwood & Pidgeon 1992, Smith 1996). These include keeping records of how the interpretation was carried out, negative case sampling, transferability, reflexivity and negotiated realities.

It is not surprising, given the dominance of quantitative methods in psychology, that qualitative methods have been viewed with some scepticism. Henwood believes that qualitative research has not only been viewed as being different from the norm, but also as being research of a lesser order. It is often stated that qualitative research results in ‘rich’ data, as opposed to the ‘hard’ quantifiable data that quantitative methods yield, (Hammersley 1996, Richardson 1996). However, this is an unjustifiable distortion; quantitative data can also be ‘rich’, just as qualitative data can be ‘hard’. It is narrow-minded to consider one method as ‘richer’ or ‘harder’ than the other.

The issue of which methodology to use has been greatly discussed within the debate concerning the relationship between quantitative and qualitative methods. It is through this debate that light has been shed upon the issue of which methods are appropriate for different stages of research and different types of research problems.

3.2.2. Quantitative and Qualitative Methods: Oppositionary or Complimentary?

The discussion over choice of methodology has become intricately bound up with the debate over the relationship between qualitative and quantitative methods and whether the methods are or are not compatible with each other. Hammersley (1996) reviewed the debate surrounding this issue and found that two views of the relationship had been proposed; the competing paradigms view and methodological eclecticism view.

Some researchers have viewed the methods as belonging to competing paradigms (Lincoln & Guba, 1985). The methods were seen as incompatible, and contradictory epistemological positions. Therefore, in designing a methodology a choice had to be made between quantitative and qualitative methods (Lincoln & Guba, 1985). However, in more recent years methodological eclecticism has viewed the relationship between methods more flexibly.

Methodological eclecticism holds that despite the epistemological differences between the methods, they are compatible with one another. Proponents of this view believe that the
methods are complimentary and that research can be conducted using a mixture of quantitative and qualitative methodologies.

"We should avoid viewing quantitative and qualitative methods as deriving from incommensurable paradigms. In practical terms this would deny the possibility of strengthening research through the use of a principled mixture of method", Henwood & Pidgeon, 1992, p100.

Whilst the methodological eclecticism view sees the methods as compatible it does not resolve the epistemological differences between the methods in any way. Instead, the decision becomes based not upon the epistemological distinction but upon the suitability of the research method to yield data that will answer the research question.

"The distinction between quantitative and qualitative research is really a technical matter, whereby the choice between them is to do with their suitability in answering particular research questions", Bryman, 1988, p108.

Indeed, there is strong support for the notion that different methodologies are appropriate for different research purposes and circumstances (Morse 1991, Henwood & Pidgeon 1992, Henwood 1996, Hammersley 1996). There is agreement that quantitative methods are appropriate where previous literature and theory exist, and hypotheses can be identified; qualitative methods are appropriate where there is a lack of previous research and theory, and a topic needs to be explored. Within this framework there are three methodological possibilities for research; the use of only quantitative methods, the use of only qualitative methods and the use of both quantitative and qualitative methods. The use of both methods together is called triangulation and the most popular type of triangulation used in psychology is sequential triangulation. This involves using qualitative research to explore a topic, followed by quantitative methods to test theory and hypotheses that are derived from the qualitative research. Thus, the methodological eclecticism view holds that different types of research questions presuppose different sorts of data.

It is important to realise that as well as being appropriate for different phases of the research process, qualitative and quantitative methods are also appropriate for examining different aspects of people-environment relationships. In environmental psychology, qualitative methods have been employed to examine the affective component of place use (Korpela
Qualitative methods are considered to provide a richer account of the relationship between environment and affect than quantitative methods. Thus, whilst physical and social aspects of place use have been examined using both quantitative and qualitative methods (Heft 1988, Kyttä 1995, Lieberg 1995, 1997), affective aspects of place use have not.

Thus, within the methodological eclecticism view choosing a methodology is actually a matter of matching a research methodology to the needs of the research; different methods elicit different types of data. Choice of methodology is based upon the pragmatic requirements of the research being undertaken. Hammersely (1996) advises that the fact that the two methods are based upon opposing epistemologies should not be forgotten. However, the methodological eclecticism view does not so much ignore the tension between the two methods, it instead reconceptualises the issue in terms of the types of data that each method yields. The methodological eclecticism view offers psychologists methodologies that can be used from exploratory work through to hypothesis and theory testing. By seeing quantitative and qualitative methods as complimentary, research possibilities are significantly enhanced. The epistemological position of this thesis is therefore one of methodological eclecticism.

3.2.3. Methodological Rationale

The aim of this thesis is to study the function of the home, neighbourhood, school and town centre for adolescents. A combination of qualitative and quantitative methods enabled both exploratory research and hypothesis testing to be carried out. In studying the function of the environments, sequential triangulation is used; qualitative research is used to inform later quantitative research. The quantitative research forms the main study of the function of adolescents’ environments. In studying experiences in the environments qualitative research is used. A qualitative methodology enables the feelings associated with the environment to be examined; adolescents can describe their own experiences of the environments and the affective components of using these environments.

The function of the home, neighbourhood, school and town centre is examined in Studies One, Two and Three. Study One is a quantitative study of the affordances of the neighbourhood and town centre. An adolescent sample completed a questionnaire that examined the number of places in the neighbourhood and town centre for 38 affordances. The
data was then statistically analysed. Quantitative methods and analysis were appropriate for this study as the affordances of the neighbourhood and town centre were identified from previous literature.

Study Two is a qualitative study of the affordances of the home and school environments. Focus group discussions were used to identify affordances of the home and school environments. Qualitative methods and analysis were appropriate for this study as the affordances of the home and school could not be identified from previous literature.

Study Three is a quantitative study of the affordances of the home, neighbourhood, school and town centre. An adolescent sample completed a questionnaire that examined the number of places in the home, neighbourhood, school and town centre for the 34 affordances derived from Study One and Study Two. Quantitative methods and analysis were appropriate for this study as the research was driven by the previous research of Study One and Study Two. The study was also driven by a need to quantify the function of adolescents' environments and to generalise the findings to the adolescent population.

Whilst Study Three focused upon the social aspects of place use, Study Four elaborates upon the study of adolescents' environments by examining the affective aspects of place use. Study Four uses focus group discussions to examine experiences in the home, neighbourhood, school and town centre environments and the affective aspects of using these environments. Study Four uses a qualitative method as qualitative methods are considered to provide a richer account of the relationship between environment and affect than quantitative methods. Thus, Study Four extends the understanding of adolescents' environments gained in Study Three, to include the study of the affective components of use of the home, neighbourhood, school and town centre.

3.2.4. Section Summary

This section establishes the epistemological position of this thesis and the rationale behind the research methods utilised. The epistemological position of this thesis is one of methodological eclecticism. Quantitative and qualitative methods are complementary and compatible; each method is appropriate for different research purposes and elicits different kinds of data. This section concluded by outlining the rationale behind the choice of
methodologies for Studies One, Two, Three and Four.

3.3. Ethical Considerations of Conducting Research with Adolescents

3.3.1. Introduction

Good psychological research requires mutual respect and confidence between investigators and participants. To ensure respect and confidence the BPS (British Psychological Society 2000) has laid down guidelines that clarify the conditions under which psychological research is acceptable. As well as outlining aspects of professional conduct, the guidelines also outline ethical standards that must be met when conducting and reporting research. The BPS guidelines are equally applicable to all research, regardless of the age or ability of the participants. Recently, researchers from other social sciences have considered the additional ethical problems associated with social research involving adolescents (Alderson 1995, Valentine 1999). This section discusses the main ethical issues associated with conducting social research as they relate to the studies in this thesis.

3.3.2. Consent

An important ethical issue when conducting research is that of consent. There are two main issues associated with consent. Firstly, consent has to be informed and secondly, it has to be given freely. In any research project participants have to give informed consent. Consent must be based upon the researcher having made a full disclosure of the investigation and its anticipated consequences and the participant having understood this disclosure and having had the opportunity to ask questions of the researcher.

For research with adolescents under 16 years of age the issue of consent is further complicated by the fact that they are legally minors, who are the responsibility of parents and guardians. In the 1980's the power of parents to consent for their child or adolescent in medical decisions was questioned in a landmark legal case (Gillick v. West Norfolk & Wisbeck AHA 1984, as cited in Alderson 1995). Mrs Gillick questioned the legality of a doctor's decision to prescribe the contraceptive pill for her daughter, who was under 16 years of age. Mrs Gillick believed that only she could consent for this medical decision to be taken, not her daughter. The resulting ruling, which became known as the 'Gillick ruling' states that
children under 16 years of age can legally consent to medical treatment and that parental power to consent is transferred to the competent child and is not shared with them. Thus, in the UK competence not biological age determines consent. A competent child is one who can understand the relevant information, can make a voluntary, uncoerced decision and who can make a wise decision that is in its own best interests (Alderson, 1995).

Both Valentine and Alderson believe that the ‘Gillick ruling’ makes it legally acceptable in the UK for children and adolescents to consent to take part in social research. It has also become common practice for parents not to have to consent or even be informed for their child to take part in social and educational research.

For the research in this thesis, several issues arose relating to the issue of consent. One of the main concerns related to asking the adolescents questions pertaining to illicit activities that they used the environment for, such as underage drinking, being intimate with a partner and experimenting with drugs. This issue was discussed with the PhD supervisor. It was agreed that although studying this type of environmental use was relevant to the topic under investigation, ethical approval and parental consent would have to be sought. Given the time constraints upon the research process it was decided to omit to study this aspect of environmental use. It was also important that adolescents gave their own consent to take part in the research. Valentine (1999) suggests that adolescents respond well to being treated like adults in the research process; gaining parental response can therefore be detrimental to the research.

The issue of consent was discussed with the Headmaster of the school from which all participants were drawn. The Headmaster agreed that the participants were all old enough (aged 11-16 years) to give their own consent to take part in the research. Due to the nature of the research the Headmaster felt that it was unnecessary to inform parents that their son or daughter would be taking part in the research or to seek parental consent.

The second major consideration is that consent must be freely given. It must not result from the researcher or another party placing pressure upon the individual to consent. Valentine suggests that as much social research takes place within schools there can be institutional pressures upon adolescents to comply with research. To minimise feelings of coercion adolescents should be asked to opt into research rather than to opt out of research. This ensures that the participant does not feel coerced into complying and also that the participant
is given the opportunity to say that they do not wish to give their consent. It is also important that participants realise that consent can be withdrawn at any stage during the research.

It has been suggested that adolescents might be less willing to withdraw from the research due to the unequal power relationship that exists between the participant and the researcher (Valentine, 1999). Often the researcher has an advantage over the participant in terms of age, bodily size, ability, knowledge and experience and this could lead to some participants being intimidated (Valentine, 1999). Researchers should therefore be aware that adolescents might use other methods to show withdrawal of consent, such as a lack of engagement or interest in the task.

These issues were all carefully considered in gaining consent from the participants in this research. The focus group studies were all carried out by the researcher, which ensured these ethical guidelines were met. The questionnaire studies were administered by the teachers in the school. Teachers were given written instructions by the researcher that outlined how the research was to be conducted (see Appendix 2a and 3a). It was made clear that the questionnaire was voluntary and that pupils were to opt into the research and could withdraw at any time. The teachers were also instructed to give pupils as much time as they required to complete the questionnaire; this ensured that participants of differing abilities had equal opportunity to complete the questionnaire.

3.3.3. Confidentiality

Another important ethical consideration when conducting research is that of confidentiality. Psychologists have to take all reasonable steps to safeguard the confidentiality of the information obtained through the research; the identity and privacy of the participants must be upheld. In this research two types of data were obtained; the quantitative data from the questionnaire surveys (Studies One and Three) and the qualitative data from the focus group studies (Studies Two and Four). All this data were kept safely and only accessed by the researcher. In the focus group studies, permission was sought from the participants to record the discussions. The researcher explained to the participants that the tape recording would be transcribed and that the transcripts would only be viewed by the researcher. It was explained that quotes would be used in publications and all participants gave permission for quotes to be used (see Appendix 4a).
It is important that any publications resulting from research should not enable any of the participants to be identified. For this purpose it is usual practice for pseudonyms to be used in publications. Adolescents are often encouraged to decide upon their own pseudonym, although this can be problematic as many choose the names of famous idols. Other methods of ensuring confidentiality are for the researcher to choose a name that is similar in length and that starts with the same letter as the participant's name, or to just use the gender and age of the participant. In this thesis all participants' names have been changed to a name of similar length that starts with the same letter.

As well as ensuring that any information collected during research is treated confidentially, there is another issue concerning confidentiality. If during the course of an interview or discussion a participant confides in the researcher, or appears to be at risk, then the researcher has a right to breach confidentiality. If an adolescent does confide with the researcher then the researcher should encourage the adolescent to tell another adult who can help or the researcher should obtain the participant's permission to talk to someone on their behalf (Alderson, 1995).

3.3.4. Section Summary

This section has discussed the ethical issues that have to be considered in conducting social research with adolescents. This section has only outlined those ethical standards that are relevant to the current research. Issues such as deception and debriefing that are relevant to experimental research have not been discussed. This section has described how the issues of consent and confidentiality were dealt with in this research so as to ensure the well-being and respect of the adolescents taking part in this research.
3.4. Chapter Summary

Epistemology and ethics play an important role in the research process. This chapter has illustrated how the epistemological position of this thesis shaped the research carried out in this thesis. The epistemological position of this thesis is one of methodological eclecticism and this chapter outlines the rationale behind the choice of methodologies for the studies in this thesis.

This research comprises two quantitative and two qualitative studies. Study One utilises a quantitative methodology to examine the affordances of the neighbourhood and town centre, identified from previous research. Study Two utilises a qualitative methodology to identify the affordances of the home and school environments, which were not identifiable from previous research. Study Three utilises a quantitative methodology to systematically compare the affordances of the home, neighbourhood, school and town centre environments and to examine group differences in use of these environments. Study Four utilises a qualitative methodology to examine adolescents' experiences in the home, neighbourhood, school and town centre environments and to examine what factors affect use of these environments.

This chapter has also described how the ethical issues of consent and confidentiality associated with conducting research with adolescents, were dealt with by the researcher.
Chapter Four: Deriving a Comprehensive List of the Affordances of Adolescents’ Environments.
4.1. Introduction

This chapter describes two studies that identified a comprehensive list of the affordances of the home, neighbourhood, school and town centre environments. Whilst, Heft (1988) had created a taxonomy of the affordances of children’s environments, no comparable taxonomy for adolescents’ environments has been created. A systematic comparison of the function of the home, neighbourhood, school and town centre environments could not be carried out until a taxonomy of the affordances of adolescents’ environments had been created.

4.2. The Research Context

All of the studies in this thesis were carried out in Guildford, Surrey. Guildford is located approximately 30 miles south west of London. Guildford Borough covers 104 square miles and 70% of this land is greenbelt. The town has a population of 130,000 of which one-fifth are aged 16 years or under (Guildford Borough Council, 1995).

Figure 4.1. The High Street, Guildford Town Centre

Guildford is one of the most prosperous towns in the UK and is the county town of Surrey. The central area of Guildford provides one of the main shopping districts for Surrey and consists of two main streets (the High Street & North Street) and three shopping malls, The Friary Centre, White Lion Walk and TunsGate. Other facilities available in Guildford include the Spectrum Leisure Centre which offers ice skating, bowling, swimming pools and other sports facilities, the Lido, various recreation grounds such as Stoke Park and a multiplex cinema. Guildford is the main setting for nightlife in the area and has many restaurants, pubs.
and nightclubs.

Figure 4.2. The Friary Shopping Centre, Guildford Town Centre

The town centre of Guildford is compact and is surrounded by residential areas. Three-quarters of the property in Guildford is privately owned (Guildford Borough Council, 1995) and social housing tends to be concentrated together in certain neighbourhoods in the borough. Neighbourhoods in Guildford vary in size and age but most have green space available.

Figure 4.3. Onslow Village Recreation Ground

4.3. Deriving a Preliminary List of Affordances

The literature reviewed in Chapter Two was the starting point for deriving a comprehensive list of the affordances of adolescents’ environments. Chapter Two suggests that adolescents use the environment for social interaction and retreat. There is support for adolescents using
the neighbourhood and town centre for social interaction (see Schiavo 1988, Cotterell 1991, Lieberg 1995, 1997) and for retreat (see Korpela 1992, Lieberg 1995, 1997, Woolley, Spencer, Dunn & Rowley, 1999). Thus, social interaction and retreat are considered to be the main functions of the neighbourhood and town centre. Affordances were therefore identified that encompassed social interaction and retreat in the neighbourhood and town centre.

Adolescents' use of the home and school environments has been considerably less researched than use of the neighbourhood and town centre environments. For this reason, the list of affordances derived from Chapter Two excluded the home and school environments.

From the previous literature 38 affordances were identified that encompassed affordances of the neighbourhood and town centre for social interaction and retreat. Figure 4.4. shows the 38 affordances. This list of affordances was then used in a preliminary study of the affordances of the neighbourhood and town centre.

<table>
<thead>
<tr>
<th>Avoid adult supervision</th>
<th>Be peaceful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid my peers</td>
<td>Be upset</td>
</tr>
<tr>
<td>Be active</td>
<td>Be with close friends</td>
</tr>
<tr>
<td>Be alone with my boyfriend/girlfriends</td>
<td>Be with friends</td>
</tr>
<tr>
<td>Be alone</td>
<td>Be with similar people</td>
</tr>
<tr>
<td>Be entertained</td>
<td>Be with others amongst strangers</td>
</tr>
<tr>
<td>Be free from the expectations of family</td>
<td>Do something that my parents disapprove of</td>
</tr>
<tr>
<td>Be free from the expectations of friends</td>
<td>Do something that society disapproves of</td>
</tr>
<tr>
<td>Be free from the pressures of my friends</td>
<td>Enjoy myself</td>
</tr>
<tr>
<td>Be free from the pressures of my parents</td>
<td>Feel happy</td>
</tr>
<tr>
<td>Be free to be the real me</td>
<td>Feel comfortable</td>
</tr>
<tr>
<td>Be free to be yourself</td>
<td>Feel secure</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>Have freedom of expression</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>Have privacy to be with my boy/girlfriend</td>
</tr>
<tr>
<td>Be in an area that is predominantly used by teenagers</td>
<td>Have privacy with my best friend</td>
</tr>
<tr>
<td>Be in an attractive place</td>
<td>Have privacy with my group of friends</td>
</tr>
<tr>
<td>Be in control of my environment</td>
<td>Meet new people</td>
</tr>
<tr>
<td>Be noisy</td>
<td>Observe people</td>
</tr>
<tr>
<td>Be on my own to think</td>
<td>Relax</td>
</tr>
</tbody>
</table>

Figure 4.4. The 38 Affordances Derived from the Literature Review
4.4. Study One: A Preliminary Study of the Affordances of the Neighbourhood and Town Centre

4.4.1. Aim and Design

The main aim of this study was to examine the relevance of the 38 affordances for describing the function of the neighbourhood and town centre environments. This study aimed to create scales that would encompass the key affordances of the neighbourhood and town centre. Only affordances which formed part of a reliable scale would be used in later studies. This study used a questionnaire design and required participants to rate the neighbourhood and town centre environments on how many places there were for each of the 38 affordances shown in Figure 4.4.

4.4.2. Questionnaire Design and Piloting

An instrument had to be created that would enable the number of places available in an environment for an affordance to be rated. Kytta (1995) asked children to indicate in a table whether there was or was not a certain affordance in their environment. This study built upon this methodology and constructed a separate table for the town centre and neighbourhood. Within each table were the 38 affordances and participants had to indicate how many places there were in that environment for the affordance (see Appendix 2b for an example).

This instrument was then piloted upon several members of a church youth group, that was based in Guildford. Members were asked to evaluate the instrument in terms of ease of use and understanding of the task. Each member completed a pilot questionnaire and made comments and suggestions about the instrument. Overall, no major changes had to be made to the instrument.

4.4.3. Participants

The participants were sampled from one school in Guildford, Surrey. The school is a grant maintained comprehensive school located in central Guildford. The school has a catchment area of approximately three miles and therefore all participants lived in Guildford and the
surrounding area. The school teaches pupils aged from 11-18 years. The school has a good academic record; in 1999, 74% of the pupils gained GCSE passes in the A*-C range and 42% of pupils gained A-level passes at Grade A or B. Demand for places at the school is high; 1999 saw 264 applications for only 150 places (Governor’s Annual Report, June 1999).

A large sample was required to rate the affordances of the neighbourhood and town centre in order for principal components analysis to be carried out. This also ensured that a wide and varied sample had rated the function of the neighbourhood and town centre. Sampling from the same school also meant that participants were rating the same town centre environment and only their neighbourhood environments differed.

411 adolescents (249 females, 162 males) completed the questionnaire. The participants were sampled from school years 7-10, (Year 7=11-12 years, Year 8=12-13 years, Year 9=13-14 years, Year 10=14-15 years). A similar number of participants were sampled from each school year, as were participants of differing academic abilities.

4.4.4. Procedure

This study was carried out from mid-April to mid-May 1998. The questionnaires were administered by teachers at the school. The teachers received written instructions about how to administer the questionnaire (see Appendix 2a). The instructions explained the purpose of the research and outlined the issue of consent as discussed in Chapter Three. The questionnaire was completed by the participants in their twenty minute registration class every morning. There were no time constraints upon the respondent to complete the questionnaire. The questionnaire was worked on each day in registration until it was completed. The questionnaire would have taken approximately half an hour to complete. This method of implementing the questionnaire ensured that participants of differing academic ability were included in the study. All the questionnaires were completed and returned within one month of being handed out.

All pupils in Years 7, 8, 9 and 10 had the opportunity to take part in the research. There were 150 pupils in each year, which means that the overall response rate was 68.5%. A few of the questionnaires were not fully completed. This was anticipated as work on the questionnaire was unsupervised. All questionnaires whether completed or partially completed were entered
Chapter Four

into the analysis; this ensured that the analysis was not biased by including only participants who had fully completed the questionnaire. Missing data were left as missing; mean or median scores were not entered in place of the missing data.

4.4.5. Analysis

The questionnaire resulted in two sets of data; one for the neighbourhood and one for the town centre. Each data set consisted of a rating of how many places there were in the environment for each of the 38 affordances. Each data set was analysed separately to identify the key affordances of the neighbourhood and the town centre.

Principal components analysis (PCA) with direct oblimin rotation was the main method of analysis. Direct oblimin rotation is an oblique method of rotation that allows for the resulting components to be correlated. Hammond (2000) suggests that there are few research situations where one would assume that components were independent; therefore oblique rotation is most commonly used.

In principal components analysis the traditional method of deciding how many components to extract has been to use the Kaiser-Guttman rule (as cited in Tabachnick & Fidell 1996). However, in recent years this has become less popular and it has become more accepted to carry out a number of principal component analyses, extracting a different number of components each time. The solution which has the best simple structure and accounts for a high proportion of the variance is selected as the best solution (Tabachnick & Fidell, 1996). In the current analysis, items with structural coefficients over .6 were selected as loading on a component. Once a principal component solution had been selected, the reliability of the components was determined using Cronbach’s α.

4.4.6. Results

4.4.6.1. Affordances of the Neighbourhood

The principal components analysis on the 38 affordances of the neighbourhood items resulted in two components being extracted. The two components accounted for 53.7% of the variance, (Component I= 47.9%, Component II= 5.8%). Nineteen affordances correlated
with Component I, six affordances correlated with Component II and fifteen affordances did not correlate with either of the components. The two components were moderately correlated with each other ($r=.57$). Table One shows the structural coefficients for each affordance, on both components.

Component I was composed of the following nineteen affordances.

- Be alone
- Avoid my peers
- Have privacy with my best friend
- Be free from the expectations of my friends
- Be the real me
- Relax
- Be on my own to think
- Be free from the pressures of my parents
- Be free from the pressures of my friends
- Have freedom of expression
- Be in control of my environment
- Enjoy myself
- Be free to be myself
- Be noisy
- Have space to be upset in
- Feel happy
- Feel secure
- Be peaceful
- Be in a place where I feel I belong

Component I was interpreted to be concerned with different types of freedom that the neighbourhood afforded for example the freedom to avoid other people, the freedom to have privacy with your best friend and the freedom to be yourself and enjoy yourself. Component I was labelled the Neighbourhood-Freedom scale ($\alpha = .95$, $N=291$).

Component II was composed of the following six affordances;

- Be in an area that belongs to adolescents
- Be in an area that is predominantly used by adolescents
- Meet up with friends
- Meet new people
- Be with similar people
- Be entertained

The variables in Component II were interpreted to be concerned with social interaction with other adolescents in the neighbourhood. This Component was labelled the Neighbourhood – Social Interaction scale, ($\alpha = .85$, $N=355$).
### Table 4.1. Structural Coefficients for the Affordances of the Neighbourhood

<table>
<thead>
<tr>
<th>Component→ Variable ↓</th>
<th>Neighbourhood – Freedom Component I</th>
<th>Neighbourhood – Social Interaction Component II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be alone</td>
<td>.603</td>
<td>.106</td>
</tr>
<tr>
<td>Avoid adult observation or supervision</td>
<td>.452</td>
<td>.336</td>
</tr>
<tr>
<td>Avoid my peers</td>
<td>.735</td>
<td>.048</td>
</tr>
<tr>
<td>Have privacy with my best friend</td>
<td>.734</td>
<td>.100</td>
</tr>
<tr>
<td>Have privacy with my boyfriend/girlfriend</td>
<td>.419</td>
<td>.000</td>
</tr>
<tr>
<td>Be free from the expectations of my friends</td>
<td>.793</td>
<td>-.104</td>
</tr>
<tr>
<td>Be free from the expectations of my family</td>
<td>.458</td>
<td>.231</td>
</tr>
<tr>
<td>Be the real me</td>
<td>.810</td>
<td>-.143</td>
</tr>
<tr>
<td>Have privacy with my group of friends</td>
<td>.534</td>
<td>.246</td>
</tr>
<tr>
<td>Relax</td>
<td>.937</td>
<td>-.197</td>
</tr>
<tr>
<td>Be on my own to think</td>
<td>.904</td>
<td>-.122</td>
</tr>
<tr>
<td>Be amongst strangers</td>
<td>.566</td>
<td>.190</td>
</tr>
<tr>
<td>Be free from the pressures of my parents</td>
<td>.788</td>
<td>.050</td>
</tr>
<tr>
<td>Be free from the pressures of my friends</td>
<td>.938</td>
<td>-.235</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.775</td>
<td>.000</td>
</tr>
<tr>
<td>Be in control of my environment</td>
<td>.719</td>
<td>.028</td>
</tr>
<tr>
<td>Be in an area that belongs to adolescents</td>
<td>.044</td>
<td>.702</td>
</tr>
<tr>
<td>Be in an area that is predominantly used by teenagers</td>
<td>.043</td>
<td>.604</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.721</td>
<td>.334</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.258</td>
<td>.645</td>
</tr>
<tr>
<td>Meet new people</td>
<td>-.168</td>
<td>.871</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.147</td>
<td>.738</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.512</td>
<td>.377</td>
</tr>
<tr>
<td>Be alone with my boyfriend/girlfriend</td>
<td>.566</td>
<td>.272</td>
</tr>
<tr>
<td>Do something that society disapproves of</td>
<td>.393</td>
<td>.298</td>
</tr>
<tr>
<td>Do something that my parent's disapprove of</td>
<td>.485</td>
<td>.253</td>
</tr>
<tr>
<td>Be active</td>
<td>.397</td>
<td>.467</td>
</tr>
<tr>
<td>Enjoy myself</td>
<td>.648</td>
<td>.262</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.102</td>
<td>.648</td>
</tr>
<tr>
<td>Be in an attractive place</td>
<td>.596</td>
<td>.171</td>
</tr>
<tr>
<td>Feel comfortable</td>
<td>.533</td>
<td>.265</td>
</tr>
<tr>
<td>Be free to be myself</td>
<td>.674</td>
<td>.189</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.614</td>
<td>.197</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.719</td>
<td>.013</td>
</tr>
<tr>
<td>Feel happy</td>
<td>.666</td>
<td>.123</td>
</tr>
<tr>
<td>Feel secure</td>
<td>.791</td>
<td>.038</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.785</td>
<td>.064</td>
</tr>
<tr>
<td>Observe people</td>
<td>.390</td>
<td>.209</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>47.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Cronbach’s α</td>
<td>.95</td>
<td>.85</td>
</tr>
</tbody>
</table>
4.4.6.2. Affordances in the Town Centre

The principal components analysis on the 38 affordances of the town centre items resulted in three components being extracted. The three components accounted for 48.2% of the variance (Component I = 35.2%, Component II = 7.1%, Component III = 5.9%). Nine affordances correlated with Component I, five affordances correlated with Component II, four affordances correlated with Component III. Twenty of the affordances did not correlate with any of the components. The correlations between the components are shown in Table 4.2. Table 4.3. shows the structural coefficients for each affordance for each component.

<table>
<thead>
<tr>
<th>Component</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>.43</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>.36</td>
<td>.29</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Component I was composed of the following nine affordances;

- Be in an area that belongs to adolescents
- Be in an area that is predominantly used by adolescents
- Meet up with friends
- Meet new people
- Be with similar people
- Be with close friends
- Be active
- Enjoy myself
- Be entertained

The variables in Component I were interpreted to be concerned with social interaction with other adolescents. The component reflects the different affordances associated with the presence of adolescents in the town centre. This component was labelled the Town Centre – Social Interaction scale, ($\alpha = .92$, N=338).

This scale is similar to the Neighbourhood – Social Interaction scale. Notably, the town centre scale includes the affordances of enjoyment, being active and being entertained and the neighbourhood does not. Direct comparisons cannot be made between the scales as they are not made up of exactly the same affordances.
Table 4.3. Structural Coefficients for the Affordances of the Town Centre

<table>
<thead>
<tr>
<th>Component Variables</th>
<th>Town Centre - Social Interaction</th>
<th>Town Centre - Restorative</th>
<th>Town Centre - Avoid Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Component I</td>
<td>Component II</td>
<td>Component III</td>
</tr>
<tr>
<td>Be alone</td>
<td>.118</td>
<td>.366</td>
<td>.231</td>
</tr>
<tr>
<td>Avoid adult observation or supervision</td>
<td>.248</td>
<td>.214</td>
<td>.384</td>
</tr>
<tr>
<td>Avoid my peers</td>
<td>.030</td>
<td>.333</td>
<td>.610</td>
</tr>
<tr>
<td>Have privacy to be with my best friend</td>
<td>.234</td>
<td>.215</td>
<td>.485</td>
</tr>
<tr>
<td>Have privacy to be with my boyfriend/girlfriend</td>
<td>.010</td>
<td>.531</td>
<td>.099</td>
</tr>
<tr>
<td>Be free from the expectations of my friends</td>
<td>-.131</td>
<td>.179</td>
<td>.666</td>
</tr>
<tr>
<td>Be free from the expectations of my family</td>
<td>.182</td>
<td>-.235</td>
<td>.666</td>
</tr>
<tr>
<td>Be the real me</td>
<td>.137</td>
<td>.354</td>
<td>.213</td>
</tr>
<tr>
<td>Have privacy with my group of friends</td>
<td>.032</td>
<td>.233</td>
<td>.213</td>
</tr>
<tr>
<td>Relax</td>
<td>-.118</td>
<td>.676</td>
<td>.571</td>
</tr>
<tr>
<td>Be on my own to think</td>
<td>.065</td>
<td>.737</td>
<td>.264</td>
</tr>
<tr>
<td>Be amongst strangers</td>
<td>.381</td>
<td>.054</td>
<td>.379</td>
</tr>
<tr>
<td>Be free from the pressures of my parents</td>
<td>.123</td>
<td>.099</td>
<td>.690</td>
</tr>
<tr>
<td>Be free from the pressures of my friends</td>
<td>-.203</td>
<td>.508</td>
<td>.538</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.016</td>
<td>.682</td>
<td>.114</td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>.114</td>
<td>.458</td>
<td>.226</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>.617</td>
<td>-.103</td>
<td>.362</td>
</tr>
<tr>
<td>Be in an area that is mainly used by teenagers</td>
<td>.612</td>
<td>.044</td>
<td>.358</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.517</td>
<td>.218</td>
<td>-.147</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.662</td>
<td>.044</td>
<td>.264</td>
</tr>
<tr>
<td>Meet new people</td>
<td>.825</td>
<td>.083</td>
<td>.070</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.757</td>
<td>.043</td>
<td>.020</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.749</td>
<td>.027</td>
<td>.020</td>
</tr>
<tr>
<td>Be alone with my boyfriend/girlfriend</td>
<td>.206</td>
<td>.527</td>
<td>.031</td>
</tr>
<tr>
<td>Do something that society disapproves of</td>
<td>.528</td>
<td>.121</td>
<td>.085</td>
</tr>
<tr>
<td>Do something that my parent/s disapprove of</td>
<td>.560</td>
<td>.192</td>
<td>.064</td>
</tr>
<tr>
<td>Be active</td>
<td>.872</td>
<td>-.145</td>
<td>.060</td>
</tr>
<tr>
<td>Enjoy myself</td>
<td>.678</td>
<td>.049</td>
<td>.052</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.739</td>
<td>.009</td>
<td>.067</td>
</tr>
<tr>
<td>Be in an attractive place</td>
<td>.421</td>
<td>.491</td>
<td>-.195</td>
</tr>
<tr>
<td>Feel comfortable</td>
<td>.591</td>
<td>.342</td>
<td>-.103</td>
</tr>
<tr>
<td>Be free to be myself</td>
<td>.419</td>
<td>.356</td>
<td>.047</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.418</td>
<td>.055</td>
<td>.338</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.274</td>
<td>.079</td>
<td>.137</td>
</tr>
<tr>
<td>Feel happy</td>
<td>.574</td>
<td>.075</td>
<td>.023</td>
</tr>
<tr>
<td>Feel secure</td>
<td>.200</td>
<td>.610</td>
<td>-.106</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.066</td>
<td>.792</td>
<td>-.137</td>
</tr>
<tr>
<td>Observe people</td>
<td>.131</td>
<td>-.114</td>
<td>.438</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>35.2</td>
<td>7.1</td>
<td>5.9</td>
</tr>
<tr>
<td>Cronbach's α</td>
<td>.92</td>
<td>.80</td>
<td>.74</td>
</tr>
</tbody>
</table>
Component II was composed of the following five variables;

- Relax
- Have freedom of expression
- Be on my own to think
- Feel secure
- Be peaceful

The variables in Component II were interpreted as being concerned with affordances for relaxing and reflecting. The affordances in this component correspond with Korpela’s ideas about restorative environments. Component II was labelled the TOWN CENTRE-RESTORATIVE scale (α = .80, N=338).

Component III was composed of the following four variables;

- Avoid my peers
- Be free from the expectations of my friends
- Be free from the expectations of my family
- Be free from the pressures of my parents

The variables in Component III were interpreted as being concerned with using the town centre as a place to escape the expectations and pressures of friends, family and peers. This component was labelled the TOWN CENTRE-AVOID OTHERS scale, (α = .74, N=358).

4.4.7. Section Summary

From the original list of 38 affordances, 28 proved to be useful in forming scales for either or both the neighbourhood and town centre. These scales formed the basis for the taxonomy of social affordances of adolescents’ environments utilised in Study Three. Only 10 of the original 38 affordances did not form part of a scale and these were not used in any further studies. The 10 affordances that were excluded at this stage are shown below and mainly related to affordances for privacy and seeking freedom from adults.
Avoid adult observation or supervision
Have privacy with my group of friends
Be amongst strangers
Have privacy to be with my boyfriend/girlfriend
Be alone with my boyfriend/girlfriend
Do something that society disapproves of
Do something that my parents’ disapprove of
Be in an attractive place
Feel comfortable
Observe people

Thus, a quantitative study of the 38 affordances derived from the literature review resulted in a reduced list of 28 affordances that described adolescents’ use of the neighbourhood and town centre environments.

As a comprehensive description of adolescents’ environments the list is limited in two ways. Firstly, the list encompasses only the affordances of the neighbourhood and town centre environments and omits the other two key environments, the home and the school. Secondly, the affordances in the list were identified from previous literature; the affordances on the list will have been limited by the research questions of the previous studies and it is therefore possible that some affordances may not have been previously studied. Thus, a further study was required to identify firstly, what affordances the home and school environments offer and secondly, to investigate if any important affordances of the neighbourhood and town centre environments had been omitted from the original list.

4.5. Study Two: A Qualitative Study of the Affordances of Adolescents’ Environments

4.5.1. Aim and Design

The aim of this study was to identify the affordances of the home and school environments and also to further examine the affordances of the neighbourhood and town centre environments. It was envisaged that the results of Study One and Study Two would combine to provide a comprehensive taxonomy of the social affordances of adolescents’ environments. This taxonomy could then be utilised in a large scale study of the affordances of the home, neighbourhood, school and town centre environments.

It was not possible to identify the affordances of the home and school environments from previous literature as few studies of adolescents’ use of these environments have been conducted. As this study was exploratory a qualitative methodology was used. A qualitative
examination of the affordances of the neighbourhood and town centre would also enable the triangulation of the results of Study One. Study Two used focus group discussions to examine the affordances of the home, neighbourhood, school and town centre.

4.5.2. The Focus Group Methodology

Focus groups are discussion based interviews that use simple, focused, open ended questions to get participants discussing the topic in question. The focus is on the participants to expand the discussion rather than the investigator to lead. Participants should feel that the discussion is permissive and non-judgmental and that they are therefore free to give their own opinion about the topic. Groups are used as it is assumed that the participants will become more aware of their own perspective when confronted with the perspectives of others with whom they may disagree. Focus group discussions have been found to work best with 5 to 7 participants and have recently become popular in applied psychological research (see Krueger 1994, Millward 2000).

Whilst Krueger believes that focus groups have considerable potential in researching the opinions of adolescents, he believes that several alterations to the methodology are necessary. Discussions should be no longer than one-hour long, dichotomous questions should be avoided, no pre-established friendship groups should be used and participants should be of a similar age and the same gender. Krueger also advises that peer-pressure can operate in focus groups with adolescents; whilst selecting participants who are not friends can help avoid this, in reality it is very difficult to control.

4.5.3. Participants

The participants in the focus groups were sampled from the same school as in Study One. This meant that the affordances of the environments had been examined both quantitatively and qualitatively within the same group of adolescents. Six single gender focus groups were held with groups of adolescents from Years 9, 10 and 11 (13-16 years of age). Each focus group consisted of six participants.
4.5.4. Procedure

The focus group discussions were held in February 1999. The focus group discussions took place during school time. At the beginning of a class, the researcher explained that she required six participants to take part in a focus group discussion. It was explained to the class what the focus group would involve and that use of the environment would be discussed. On the basis of this explanation, participants volunteered and the teacher selected the participants. Volunteering to take part was taken to indicate consent. It was requested by the researcher that the individuals selected were not close friends with others in the group, but this was not always achieved.

The focus group discussions took place in an unused classroom in the school and lasted for approximately 45 minutes. Prior to the discussion, the researcher explained to the participants their right to withdraw from the research process at any time. The participants were required to discuss their use of the home, neighbourhood, school and town centre environments and more specifically to discuss which types of behaviours these environments supported. The schedule of questions asked in the focus groups are shown in Appendix 4a. The discussions were tape recorded with the participants permission and later transcribed by the researcher.

4.5.5. Analysis

The transcripts of the focus groups were thematically analysed to identify the potential affordances of the four environments. It was decided not to count how many times an affordance was mentioned by individuals within the focus group discussions. Instead, all the affordances mentioned in the focus groups, regardless of whether one or more the environments supported the affordance were noted. The resulting affordances were then compared to the list of 28 affordances from study one, to ascertain which affordances had already been identified and which were new.
4.5.6. Results

Table 4.4. shows the repeated and new affordances identified for each of the four environments. Overall, few affordances were discussed that were not already included in the list of 28 derived from Study One.

Six new affordances were identified from the focus group discussions:

- Try out new behaviours
- Hang around
- Get away from your parents
- Get away from your friends
- Be in your own space
- Avoid people

Of the new affordances some were associated with use of the home, which had not previously been examined. The home acts as a secure environment for adolescents and was used as a retreat from friends and even from parents through the use of the bedroom. It also afforded being in your own space. Further affordances of the neighbourhood and town centre that were identified were hanging around and trying out new behaviours, which had not been identified or discovered by previous researchers. The affordances of the school were found to be well encompassed by the existing list of 28 affordances and no further affordances of the school were generated in the focus group discussions. Figure 4.5. shows the final 34 affordances identified from Study One and Study Two.

Once a comprehensive taxonomy of the social affordances of adolescents' environments had been derived, an examination of the functional significance of adolescents' environments could be carried out. The next chapter describes a questionnaire study that utilised the 34 affordances to compare the function of the home, neighbourhood, school and town centre environments for adolescents.
Table 4.4. The Affordances Identified from the Thematic Analysis of the Focus Group Transcripts

<table>
<thead>
<tr>
<th>Affordance</th>
<th>Home</th>
<th>Neighbourhood</th>
<th>School</th>
<th>Town Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid people *</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be active</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be alone</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be entertained</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be free from the expectations of family</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be free from pressures of parents</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be free from the expectations of friends</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be free from pressures of friends</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be free to be yourself</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be happy</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be in a place that belongs to teenagers</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be in a place that is used by teenagers</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be in your own space*</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be noisy</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be on your own to think</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be peaceful</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be with similar people</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Be yourself</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Being with close friends</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Enjoy yourself</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Feel secure</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Get away from friends*</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Get away from parents*</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Get away from peers</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Hang Around*</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Have privacy with your best friends</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Meet new people</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Relax</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Try out new behaviours*</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

*=affordance identified from the focus group discussions.
Chapter Four

Avoid people
Be active
Be alone
Be entertained
Be free from the expectations of your family
Be free from the expectations of your friends
Be free from the pressures of your friends
Be free from the pressures of your parents
Be free to be yourself
Be happy
Be in a place where I feel I belong
Be in an area that belongs to teenagers
Be in an area that is mainly used by teenagers
Be in control of the environment
Be in your own space
Be noisy
Be on your own to think

Be peaceful
Be with close friends
Be with similar people
Be yourself
Enjoy yourself
Feel secure
Get away from your friends
Get away from your parents
Get away from your peers
Hang around
Have freedom of expression
Have privacy with your best friends
Have space to be upset in
Meet new people
Meet up with friends
Relax
Try out new behaviours

Figure 4.5. The 34 Social Affordances of Adolescents’ Environments

4.6. Chapter Summary

This chapter has described how a comprehensive taxonomy of the affordances of the home, neighbourhood, school and town centre was derived. As a starting point to identifying affordances, literature relating to adolescents’ use of the neighbourhood and town centre was reviewed. This review resulted in 38 affordances being identified. Study One examined the relevance of these 38 affordances in describing the function of the neighbourhood and town centre. Of the original 38 only 10 affordances did not form part of a scale for either or both the neighbourhood and town centre. These 10 affordances were excluded from further studies, whilst the scales form the basis of Study Three.

Whilst Study One resulted in a list of 28 affordances of the neighbourhood and town centre, it was acknowledged that the list may not be comprehensive; it was possible that some affordances have been omitted from previous study and also Study One did not consider the affordances the home and school environments. Study Two addressed the weaknesses of Study One, through focus group discussions about the affordances of the home, neighbourhood, school and town centre. In the discussions, few affordances were identified that were not already encompassed in the list of affordances derived in Study One. As a result only 6 new affordances were identified Study Two.

Thus, the quantitative results of Study One and the qualitative results of Study Two resulted
in a comprehensive list of 34 affordances that describe the functional significance of the home, neighbourhood, school and town centre environments for adolescents. This list of affordances creates a taxonomy that describes the affordances of adolescents’ environments. Whilst Heft (1988) created a taxonomy of the affordances of children’s environments, he did not use this taxonomy as a tool to evaluate the functional significance of different environments. The next chapter describes research that uses the taxonomy of adolescents’ environments to systematically compare the function of the four key adolescents’ environments.

The use of the taxonomy as a tool to evaluate the function of the environments further develops the application of Gibson’s theory of affordances in environmental psychology. Previous research has not used Gibson’s theory, which he applied only to environmental perception, to systematically compare the affordances of the key environments available to adolescents.
Chapter Five: The Affordances of the Home, Neighbourhood, School and Town Centre Environments.
5.1. Introduction

Chapter Four developed a taxonomy of the affordances of adolescents' environments. This chapter describes research that uses the taxonomy of adolescents' environments to systematically compare the function of the home, neighbourhood, school and town centre environments. This chapter describes how scales were derived for each environment, that enabled the function of the home, neighbourhood, school and town centre to be measured and compared.

5.2. Study Three: The Affordances of the Home, Neighbourhood, School and Town Centre Environments.

5.2.1. Aim and Design

This study had two main aims. The first was to use the taxonomy of adolescents' environments derived from Study One and Study Two to examine the functional significance of the home, neighbourhood, school and town centre environments. The second was to create reliable scales for each of the environments that would describe the function of each of the environments. This study used a questionnaire design and required participants to rate the four environments on how many places there were for each of the 34 affordances.

5.2.2. Questionnaire Design

This study used the same questionnaire design as Study One. For each environment participants were presented with a table. The table contained the 34 affordances and the participants were required to indicate how many places there were in that environment for the affordance. Participants also had to indicate in another table, how often they used that environment for each of the affordances using a three-point Likert scale (1=hardly ever, 2=sometimes, 3=often). Participants also had to provide demographic details about themselves as well as further evaluations of the environments, such as preference and who they used the environment with. An example of the questionnaire can be found in Appendix 3b. As both the affordances and how often the environment was used for the affordances had to be rated for all four environments, the order in which the environments appeared in the questionnaire was counterbalanced. As a similar methodology had been used successfully in Study One, this questionnaire was not piloted.
5.2.3. Participants

The participants were sampled from the same school in Guildford as was used in Study One and Study Two. This provided continuity as the 34 affordances had been derived from studies of this sample. Sampling from the same school meant that the participants were rating the same town centre and school environments and only their neighbourhood and home environments differed. In order to use principal components analysis and also to later be able to examine differences between groups broken down by age, a gender, a large sample was required (see Chapter Six). Whilst some participants would have completed Study One and/or Study Two, this was not a problem; all participants were equally aware that the function of the environment was being examined and no advantage was gained by having participated in the earlier studies.

539 adolescents (323 females, 216 males) from school years 7-11 completed the questionnaire (Year 7=11-12 years, Year 8=12-13 years, Year 9=13-14 years, Year 10=14-15 years, Year 11=15-16 years). A similar number of participants were sampled from each school year and subjects of differing academic abilities were sampled.

5.2.4. Procedure

This study was carried out from March to May 1999. The questionnaires were administered by teachers at the school. The teachers received written instructions about how to administer the questionnaire (see Appendix 3a). The instructions explained the purpose of the research and outlined the issue of consent as discussed in Chapter Three. The questionnaire was completed by the participants in their twenty minute registration class every morning. There were no time constraints upon the respondent to complete the questionnaire; it was worked on each day in registration until it was completed. The questionnaire would have taken approximately 45-50 minutes to complete. This method of implementing the questionnaire ensured that participants of differing academic ability were included in the study. All the questionnaires were completed and returned within one and a half months of being handed out.

All pupils in Years 7, 8, 9, 10 and 11 had the opportunity to take part in the research. There were 150 pupils in each year, which means that the overall response rate was 71.8%. A few of the questionnaires were not fully completed. This was anticipated as work on the
questionnaire was unsupervised. All questionnaires whether completed or partially completed were entered into the analysis; this ensured that the analysis was not biased by including only participants who had fully completed the questionnaire. Missing data were left as missing; mean or median scores were not entered in place of the missing data.

5.3. Descriptive Analysis

5.3.1. Aim

This section presents the descriptive analysis of the affordances of the home, neighbourhood, school and town centre data. The questionnaire resulted in frequency data for each environment, about how many places there were in the environment for each of the 34 affordances. The resulting data were positively skewed; respondents had to indicate how many places there were in the environment for the affordance and responses were characterised by low numbers. In order to examine the function of the home, neighbourhood, school and town descriptive analysis was carried out; the median number of places for each affordance for each environment was calculated.

5.3.2. Home

Figure 5.1. shows the median number of places in the home for each of the 34 affordances. The number of places available for each affordance ranged from two to three. There was little variation in the number of places for each affordance. The results suggest that the home is a versatile environment; it provides places for each of the 34 affordances. The home provides the most affordances for being free to be yourself, being happy, being in a place where I feel I belong, being yourself, enjoying yourself, feeling secure, hanging around and relaxing.
Chapter Five

Be free to be yourself

Be happy

Be in a place where I feel I belong

Be yourself

Enjoy yourself

Feel secure

Hang around

Relax

Avoid people

Be active

Be alone

Be entertained

Be free from the expectations of your family

Be free from the expectations of your friends

Be free from the pressures of your friends

Be free from the pressures of your parents

Be in an area that belongs to teenagers

Be in an area that is mainly used by teenagers

Be in control of the environment

Be in your own space

Be noisy

Be on your own to think

Be peaceful

Be with close friends

Be with similar people

Get away from your friends

Get away from your parents

Get away from your peers

Have freedom of expression

Have privacy with your best friends

Have space to be upset in

Most new friends

Most with friends

Try out new behaviours

Figure 5.1. The Median Number of Places in the Home for Each of the 34 Affordances.
5.3.3. Neighbourhood

Figure 5.2. shows the median number of places in the neighbourhood for each of the 34 affordances. The number of places available for each affordance ranged from one to three. As Figure 5.2. shows there was only a small variation in the number of places available for each affordance.

The neighbourhood provides the most affordances for being active, being free from the pressures of your parents, being happy, being noisy, being with close friends, being yourself, enjoying yourself, getting away from your parents, hanging around, meeting with friends and relaxing. The neighbourhood provides the least affordances for being in control of the environment. Overall, the neighbourhood affords at least two places for 33 of the 34 affordances.

Like the home environment the neighbourhood is versatile; the neighbourhood affords at least two places for 33 of the 34 affordances. The home is a far smaller environment than the neighbourhood yet it offers the same versatility and a similar number of affordances.

5.3.4. School

Figure 5.3. shows the median number of places in the school for each of the 34 affordances. The number of places available for each affordance ranges from one to four. Figure 5.3. shows that there is a large variation in the number of places available for each affordance.

The affordances for which there were three or four places were concerned with friendship and social interaction such as hanging around, being in an area that belongs to teenagers and being with friends. The affordances for which there was only one place were concerned with having privacy such as avoiding people, getting away from your friends and having space to be upset in. The school affords friendship and social interaction but has few places for privacy. The school environment is considerably less versatile than the neighbourhood and home environments.
Chapter Five

Be active
Be free from the pressures of your parents
Be happy
Be noisy
Be with close friends
Be yourself
Enjoy yourself
Get away from your parents
Hang around
Meet with friends
Relax
Avoid people
Be alone
Be entertained
Be free from the expectations of your family
Be free from the expectations of your friends
Be free from the pressures of your friends
Be free to be yourself
Be in a place where I feel I belong
Be in an area that belongs to teenagers
Be in an area that is mainly used by teenagers
Be in your own space
Be on your own to think
Be peaceful
Be with similar people
Feel secure
Get away from your friends
Get away from your peers
Have freedom of expression
Have privacy with your best friends
Have space to be upset in
Meet new friends
Try out new behaviours
Be in control of the environment

<table>
<thead>
<tr>
<th>Median number of places</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be active</td>
</tr>
<tr>
<td>Be free from the pressures of your parents</td>
</tr>
<tr>
<td>Be happy</td>
</tr>
<tr>
<td>Be noisy</td>
</tr>
<tr>
<td>Be with close friends</td>
</tr>
<tr>
<td>Be yourself</td>
</tr>
<tr>
<td>Enjoy yourself</td>
</tr>
<tr>
<td>Get away from your parents</td>
</tr>
<tr>
<td>Hang around</td>
</tr>
<tr>
<td>Meet with friends</td>
</tr>
<tr>
<td>Relax</td>
</tr>
<tr>
<td>Avoid people</td>
</tr>
<tr>
<td>Be alone</td>
</tr>
<tr>
<td>Be entertained</td>
</tr>
<tr>
<td>Be free from the expectations of your family</td>
</tr>
<tr>
<td>Be free from the expectations of your friends</td>
</tr>
<tr>
<td>Be free from the pressures of your friends</td>
</tr>
<tr>
<td>Be free to be yourself</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
</tr>
<tr>
<td>Be in an area that is mainly used by teenagers</td>
</tr>
<tr>
<td>Be in your own space</td>
</tr>
<tr>
<td>Be on your own to think</td>
</tr>
<tr>
<td>Be peaceful</td>
</tr>
<tr>
<td>Be with similar people</td>
</tr>
<tr>
<td>Feel secure</td>
</tr>
<tr>
<td>Get away from your friends</td>
</tr>
<tr>
<td>Get away from your peers</td>
</tr>
<tr>
<td>Have freedom of expression</td>
</tr>
<tr>
<td>Have privacy with your best friends</td>
</tr>
<tr>
<td>Have space to be upset in</td>
</tr>
<tr>
<td>Meet new friends</td>
</tr>
<tr>
<td>Try out new behaviours</td>
</tr>
<tr>
<td>Be in control of the environment</td>
</tr>
</tbody>
</table>

Figure 5.2. The Median Number of Places in the Neighbourhood for Each of the 34 Affordances.
Chapter Five

Get away from your parents
Be free from the expectations of your family
Be active
Be free from the pressures of your parents
Be happy
Be in an area that belongs to teenagers
Be in an area that is mainly used by teenagers
Be with close friends
Be with similar people
Be yourself
Enjoy yourself
Feel secure
Hang around
Meet new friends
Meet with friends
Be entertained
Be free to be yourself
Be in a place where I feel I belong
Be in your own space
Be noisy
Have freedom of expression
Have privacy with your best friends
Relax
Try out new behaviours
Avoid people
Be alone
Be free from the expectations of your friends
Be free from the pressures of your friends
Be in control of the environment
Be on your own to think
Be peaceful
Get away from your friends
Get away from your peers
Have space to be upset in

Figure 5.3. The Median Number of Places in the School for Each of the 34 Affordances.
5.3.5. Town Centre

Figure 5.4. shows the median number of places in the town centre for each of the 34 affordances. The number of places perceived for each affordance in the town centre ranged from one to six. This range was greater than that for the home, neighbourhood and school (Figures 5.1, 5.2 and 5.3 respectively).

Figure 5.4. shows that there was a large variation in the number of places available for each affordance. The town centre provides many places for enjoying yourself, being happy, getting away from your parents and hanging around. Indeed the affordances for which there were three or more places available were concerned with group activities. The town centre provides few places for introspective behaviours such as avoiding people, being alone, being in control of the environment and having space to be upset in. Thus, the town centre has many places that afford group activities and few places that afford privacy and introspection. Like the school environment, the town centre is considerably less versatile than the neighbourhood and home environments.

5.3.6. Section Summary

Both the home and neighbourhood environments afford a similar number of places for each of the 34 affordances. The home and the neighbourhood are versatile; they provide at least two places for each of the affordances. The school and town centre environments are not as versatile as the home and neighbourhood; they both provide places for friendship and group activities, but have few places that afford privacy and introspection. The town centre also affords more places for friendship and group activities than the school environment.

Whilst the descriptive analysis indicates differences in the function of the four environments, it does not enable a systematic comparison of the functions of the home, neighbourhood, school and town centre to be made. In order to systematically compare the functions of the home, neighbourhood, school and town centre statistical analysis has to be carried out.
Chapter Five

Enjoy yourself
Be happy
Get away from your parents
Hang around
Be active
Be entertained
Be free from the expectations of your family
Be free from the pressures of your parents
Be free to be yourself
Be noisy
Be yourself
Meet with friends
Be in a place where I feel I belong
Be in areas that is mainly used by teenagers
Be with close friends
Be with similar people
Meet new friends
Relax
Be free from the expectations of your friends
Be free from the pressures of your friends
Be in areas that belongs to teenagers
Be on your own to think
Be peaceful
Feel secure
Get away from your friends
Get away from your peers
Have freedom of expression
Have privacy with your best friends
Try out new behaviours
Avoid people
Be alone
Be in control of the environment
Be in your own space
Have space to be upset in

Figure 5.4. The Median Number of Places in the Town Centre for Each of the 34 Affordances.
5.4. Creating Scales to Measure the Affordances of the Home, Neighbourhood, School and Town Centre

5.4.1. Aim

Chapter Two reviewed previous literature that examined adolescents' use of the environment. Whilst Lieberg (1995, 1997) saw the neighbourhood and town centre as affording different functions, other research suggests that the neighbourhood and town centre do in fact afford similar functions (Schiavo 1988, Woolley, Spencer, Dunn & Rowley 1999). However, these studies have only examined the use of one environment. The analysis in this section systematically compares the function of different adolescents' environments.

This section presents the statistical analysis of the affordances of the home, neighbourhood, school and town centre data. The aim was to use the frequency data for each environment, about how many places there were for each of the 34 affordances to create reliable scales, that would describe the function of the environment.

5.4.2. Analysis

The frequency data for each environment, about how many places there were for each of the 34 affordances was analysed separately, using principal components analysis. Principal components analysis with direct oblimin rotation was used, as it was expected that the resulting components would be correlated. A number of principal components analyses were carried out and the solution that offered the best simple structure and accounted for a high proportion of the variance was selected (see Section 4.3.5. for further details about principal components analysis). Items with a structural coefficient over .6 were selected as loading on a component. Once a principal component solution had been selected, the reliability of the components was determined using Cronbach's $\alpha$.

5.4.3. Principal Components Analysis for the Home

The principal components analysis on the 33 affordances of the home resulted in two components being extracted, (For the home, the affordance of meet new people was excluded as it was felt that the home was less likely to afford this). The two components accounted for 49.5% of the variance, (Component I = 41.5%, Component II = 8%). Thirteen variables correlated with Component I and eight variables correlated with Component II. Thirteen of
the variables did not correlate with either of the components. Each of the components displayed congruency. The two components correlated with each other \((r=.532)\). Table 5.1. shows the structural coefficients for each variable, on both components.

Component I was composed of the following thirteen variables;

- Be alone
- Be free from family expectations
- Be free from pressures of parents
- Be in an area mainly used by teenagers
- Be in area that belongs to teenagers
- Be in own space
- Be on own to think
- Be with close friends
- Be with similar people
- Get away from parents
- Have privacy with best friends
- Have space to be upset in
- Try out new behaviours

Component I was interpreted to be concerned with retreat behaviours. Associated with retreat was being with close friends and having privacy with best friends. Component I was labelled the Home-Retreat/Friends scale, \((\alpha=.91, N=341)\).

Component II was composed of the following eight variables;

- Get away from peers
- Feel secure
- Enjoy yourself
- Be yourself
- Be in a place where I feel I belong
- Be happy
- Be free to be yourself
- Be free from the expectations of friends

Component II was interpreted to be concerned with security afforded by the home. Security was provided by the home affording a place to get away from peers and the expectations of friends and also as a place to be yourself, be happy and enjoy yourself. Component II was labelled the Home-Secure scale, \((\alpha=.88, N=344)\).

The Home-Retreat/Friends scale accounts for far more variance than the Home-Secure scale. This difference is interpreted as retreating with friends accounting for a greater amount of the function of the home environment than security.
Table 5.1. The Structural Coefficients for the Affordances of the Home.

<table>
<thead>
<tr>
<th>Component → Variable</th>
<th>Home-Retreat/Friends Component I</th>
<th>Home -Secure Component II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid people</td>
<td>.571</td>
<td>.148</td>
</tr>
<tr>
<td>Be active</td>
<td>.307</td>
<td>.430</td>
</tr>
<tr>
<td>Be alone</td>
<td>.658</td>
<td>.056</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.237</td>
<td>.436</td>
</tr>
<tr>
<td>Be free from the expectations of your family</td>
<td>.642</td>
<td>.051</td>
</tr>
<tr>
<td>Be free from the expectations of your friends</td>
<td>.061</td>
<td>.743</td>
</tr>
<tr>
<td>Be free from the pressures of your friends</td>
<td>.136</td>
<td>.582</td>
</tr>
<tr>
<td>Be free from the pressures of your parents</td>
<td>.671</td>
<td>.079</td>
</tr>
<tr>
<td>Be free to be yourself</td>
<td>.107</td>
<td>.687</td>
</tr>
<tr>
<td>Be happy</td>
<td>.016</td>
<td>.758</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.039</td>
<td>.763</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>.722</td>
<td>.044</td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>.576</td>
<td>.219</td>
</tr>
<tr>
<td>Be in your own space</td>
<td>.626</td>
<td>.135</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.315</td>
<td>.469</td>
</tr>
<tr>
<td>Be on your own to think</td>
<td>.649</td>
<td>.109</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.518</td>
<td>.345</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.692</td>
<td>.187</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.600</td>
<td>.196</td>
</tr>
<tr>
<td>Be yourself</td>
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<td>.659</td>
</tr>
<tr>
<td>Enjoy yourself</td>
<td>.253</td>
<td>.633</td>
</tr>
<tr>
<td>Feel secure</td>
<td>-.006</td>
<td>.745</td>
</tr>
<tr>
<td>Get away from your friends</td>
<td>.144</td>
<td>.563</td>
</tr>
<tr>
<td>Get away from your parents</td>
<td>.786</td>
<td>-.141</td>
</tr>
<tr>
<td>Get away from your peers</td>
<td>-.244</td>
<td>.677</td>
</tr>
<tr>
<td>Go to an area that is mainly used by teenagers</td>
<td>.783</td>
<td>-.163</td>
</tr>
<tr>
<td>Hang around</td>
<td>.517</td>
<td>.258</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.436</td>
<td>.333</td>
</tr>
<tr>
<td>Have privacy with your best friend/s</td>
<td>.783</td>
<td>.033</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.700</td>
<td>.046</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.116</td>
<td>.029</td>
</tr>
<tr>
<td>Relax</td>
<td>.206</td>
<td>.537</td>
</tr>
<tr>
<td>Try out new behaviours</td>
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<td>.098</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>41.5</td>
<td>8.0</td>
</tr>
<tr>
<td>Cronbach’s α</td>
<td>.91</td>
<td>.88</td>
</tr>
</tbody>
</table>
5.4.4. Principal Components Analysis for the Neighbourhood

The principal components analysis on the 34 affordances of the neighbourhood resulted in two components being extracted. The two components accounted for 59.2% of the variance (Component I = 53.6%, Component II = 5.6%). Thirteen variables correlated with Component I and five variables correlated with Component II. Sixteen of the variables did not correlate with either of the components. Each of the components displayed congruency. The two components correlated moderately with each other (r=.690). Table 5.2 shows the structural coefficients for each affordance, on both components.

Component I was composed of the following thirteen variables

- Be active
- Be free from family expectations
- Be with close friends
- Be with similar people
- Be yourself
- Enjoy yourself
- Get away from parents
- Go to area mainly used by teenagers
- Hang around
- Have freedom of expression
- Meet new people
- Privacy with best friend/s
- Try out new behaviours

Component I was interpreted as being concerned with social interaction; for example, being with close friends, being with similar people, meeting new people, and hanging around.

Component I was labelled the Neighbourhood-Interact scale, (α=.95, N=341).

Component II was composed of the following five variables

- Avoid people
- Be free from friend’s expectations
- Get away from friends
- Get away from peers
- Relax

Component II was interpreted as being concerned with use of the neighbourhood environment for retreating from friends, such as get away from friends, be free from friend’s expectations. This component was labelled the Neighbourhood-Retreat scale, (α=.90, N=356).
Table 5.2. The Structural Coefficients for the Affordances of the Neighbourhood

<table>
<thead>
<tr>
<th>Component→ Variable↓</th>
<th>Neighbourhood – Interact</th>
<th>Neighbourhood – Retreat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Component I</td>
<td>Component II</td>
</tr>
<tr>
<td>Avoid people</td>
<td>.046</td>
<td>.836</td>
</tr>
<tr>
<td>Be active</td>
<td>.656</td>
<td>.034</td>
</tr>
<tr>
<td>Be alone</td>
<td>.439</td>
<td>.403</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.198</td>
<td>.383</td>
</tr>
<tr>
<td>Be free from the expectations of your family</td>
<td>.754</td>
<td>.097</td>
</tr>
<tr>
<td>Be free from the expectations of your friends</td>
<td>-.155</td>
<td>.878</td>
</tr>
<tr>
<td>Be free from the pressures of your friends</td>
<td>.416</td>
<td>.102</td>
</tr>
<tr>
<td>Be free from the pressures of your parents</td>
<td>.289</td>
<td>.575</td>
</tr>
<tr>
<td>Be free to be yourself</td>
<td>.462</td>
<td>.386</td>
</tr>
<tr>
<td>Be happy</td>
<td>.516</td>
<td>.297</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.358</td>
<td>.473</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>.303</td>
<td>.433</td>
</tr>
<tr>
<td>Be in an area that is mainly used by teenagers</td>
<td>.714</td>
<td>.086</td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>.579</td>
<td>.171</td>
</tr>
<tr>
<td>Be in your own space</td>
<td>.224</td>
<td>.505</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.374</td>
<td>.412</td>
</tr>
<tr>
<td>Be on your own to think</td>
<td>.244</td>
<td>.568</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.194</td>
<td>.590</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.851</td>
<td>.016</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.814</td>
<td>.010</td>
</tr>
<tr>
<td>Be yourself</td>
<td>.714</td>
<td>.090</td>
</tr>
<tr>
<td>Enjoy yourself</td>
<td>.688</td>
<td>.135</td>
</tr>
<tr>
<td>Feel secure</td>
<td>.322</td>
<td>.490</td>
</tr>
<tr>
<td>Get away from your friends</td>
<td>-.150</td>
<td>.941</td>
</tr>
<tr>
<td>Get away from your parents</td>
<td>.751</td>
<td>.032</td>
</tr>
<tr>
<td>Get away from your peers</td>
<td>.025</td>
<td>.817</td>
</tr>
<tr>
<td>Hang around</td>
<td>.852</td>
<td>.044</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.960</td>
<td>.093</td>
</tr>
<tr>
<td>Have privacy with your best friend/s</td>
<td>.743</td>
<td>.096</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.529</td>
<td>.270</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.471</td>
<td>.457</td>
</tr>
<tr>
<td>Meet new people</td>
<td>.882</td>
<td>.086</td>
</tr>
<tr>
<td>Relax</td>
<td>.144</td>
<td>.697</td>
</tr>
<tr>
<td>Try out new behaviours</td>
<td>.853</td>
<td>.098</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>53.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Cronbach’s α</td>
<td>.95</td>
<td>.90</td>
</tr>
</tbody>
</table>
The Neighbourhood-Interact scale accounts for far more variance than the Neighbourhood-Retreat scale. This difference is interpreted as social interaction accounting for a greater amount of the function of the neighbourhood environment than retreat.

At the first glance, the neighbourhood scales derived in Study One and Study Three appear dissimilar. Study One found that the neighbourhood afforded freedom and social interaction, and Study Three found that the neighbourhood afforded interaction and retreat. However, the scales from Study One also included affordances that related to retreat and restoration. It appears that the more comprehensive list of affordances used in Study Three has resulted in a clearer component structure emerging between the affordances for interaction and retreat. Although finding congruence between the scales derived in Study One and Study Three was not an aim of this research, congruence between the findings does strengthen the research.

![Figure 5.5. A Comparison of the Neighbourhood Scales Identified in Study One and Study Three.](image)

5.4.5. Principal Components Analysis for the School

The principal components analysis on the 34 affordances of the school resulted in two components being extracted. The two components accounted for 53.2% of the variance (Component I = 43.5%, Component II = 9.7%). Fifteen variables correlated with Component I and seven variables correlated with Component II. Twelve of the variables did not correlate with either of the components. Each of the components displayed congruency. The two components correlated with each other ($r=.477$). Table 5.3. shows the structural coefficients for each variable, on both components.
Component I was composed of the following fifteen variables;

Be free from family expectations
Be free from the pressures of parents
Be happy
Be in a place where I feel I belong
Be in an area that belongs to teenagers
Be in an area that is mainly used by teenagers
Be with close friends
Be with similar people
Be yourself
Enjoy yourself
Get away from parents
Hang around
Have freedom of expression
Make new people
Meet up with friends

Component I was interpreted as being concerned with social interaction in the school, for example being with friends, meeting up with friends, hanging around and enjoying yourself. Component I was labelled the School-Interact scale, (α=.93, N=262).

Component II was composed of the following seven variables;

Avoid people
Be alone
Be in own space
Be own own to think
Get away from friends
Get away from peers
Have space to be upset in

Component II was interpreted as being concerned with retreating, for example getting away from friends and peers, being in your own space and being alone. Component II was labelled the School-Retreat scale, (α=.88, N=276).

The School-Interact scale accounts for far more variance than the School-Retreat scale. This difference is interpreted as social interaction accounting for a greater amount of the function of the school environment than retreat.
### Table 5.3. The Structural Coefficients for the Affordances of the School.

<table>
<thead>
<tr>
<th>Component→ Variable→</th>
<th>School – Interact Component I</th>
<th>School – Retreat Component II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid people</td>
<td>-.141</td>
<td>.770</td>
</tr>
<tr>
<td>Be active</td>
<td>.223</td>
<td>.571</td>
</tr>
<tr>
<td>Be alone</td>
<td>-.179</td>
<td>.785</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.199</td>
<td>.518</td>
</tr>
<tr>
<td>Be free from the expectations of your family</td>
<td>.802</td>
<td>-.161</td>
</tr>
<tr>
<td>Be free from the expectations of your friends</td>
<td>.010</td>
<td>.562</td>
</tr>
<tr>
<td>Be free from the pressures of your friends</td>
<td>.398</td>
<td>.472</td>
</tr>
<tr>
<td>Be free from the pressures of your parents</td>
<td>.851</td>
<td>-.239</td>
</tr>
<tr>
<td>Be free to be yourself</td>
<td>.593</td>
<td>.107</td>
</tr>
<tr>
<td>Be happy</td>
<td>.663</td>
<td>.133</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.614</td>
<td>.227</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>.739</td>
<td>.027</td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>.151</td>
<td>.563</td>
</tr>
<tr>
<td>Be in your own space</td>
<td>.006</td>
<td>.768</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.506</td>
<td>.184</td>
</tr>
<tr>
<td>Be on your own to think</td>
<td>.028</td>
<td>.788</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.095</td>
<td>.561</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.658</td>
<td>.057</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.789</td>
<td>.037</td>
</tr>
<tr>
<td>Be yourself</td>
<td>.736</td>
<td>.076</td>
</tr>
<tr>
<td>Enjoy yourself</td>
<td>.612</td>
<td>.264</td>
</tr>
<tr>
<td>Feel secure</td>
<td>.581</td>
<td>.238</td>
</tr>
<tr>
<td>Get away from your friends</td>
<td>.103</td>
<td>.692</td>
</tr>
<tr>
<td>Get away from your parents</td>
<td>.834</td>
<td>-.320</td>
</tr>
<tr>
<td>Get away from your peers</td>
<td>.033</td>
<td>.676</td>
</tr>
<tr>
<td>Go to an area that is mainly used by teenagers</td>
<td>.648</td>
<td>.022</td>
</tr>
<tr>
<td>Hang around</td>
<td>.785</td>
<td>.076</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.684</td>
<td>.251</td>
</tr>
<tr>
<td>Have privacy with your best friend/s</td>
<td>.277</td>
<td>.589</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.169</td>
<td>.674</td>
</tr>
<tr>
<td>Meet new people</td>
<td>.674</td>
<td>.206</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.799</td>
<td>.065</td>
</tr>
<tr>
<td>Relax</td>
<td>.474</td>
<td>.388</td>
</tr>
<tr>
<td>Try out new behaviours</td>
<td>.415</td>
<td>.347</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>43.5</td>
<td>9.7</td>
</tr>
<tr>
<td>Cronbach’s α</td>
<td>.93</td>
<td>.88</td>
</tr>
</tbody>
</table>
5.4.6. Principal Components Analysis for the Town Centre

The principal components analysis on the 34 affordances of the town centre resulted in two components being extracted. The two components accounted for 49.9% of the variance, (Component I = 38.8%, Component II = 11.1%). Thirteen variables correlated with Component I and ten variables correlated with Component II. Eleven of the variables did not correlate with either of the components. Each of the components displayed congruency. The two components correlated moderately with each other (r=.469). Table 5.4. shows the structural coefficients for each variable, on both components.

Component I was composed of the following thirteen variables;

- Be active
- Be entertained
- Be free from the expectations of family
- Be free from the pressures of your parents
- Be free to be yourself
- Be happy
- Be noisy
- Be with close friends
- Be yourself
- Enjoy yourself
- Get away from parents
- Hang around
- Meet up with friends

Component I was interpreted as being concerned with social interaction, for example being with close friends, meeting up with friends, being happy, being active and hanging around. Component I was labelled the Town Centre-Interact scale, (α=.94, N=443).

Component II was composed of the following ten variables;

- Avoid people
- Be alone
- Be free from the pressures of your friends
- Be in own space
- Be on own to think
- Be peaceful
- Get away from friends
- Get away from peers
- Have space to be upset in
- Privacy with best friend/s

Component II was interpreted as being concerned with retreating behaviours such as getting away from friends and peers and being alone. Component II was labelled the Town Centre-Retreat scale, (α=.89, N=460).
Table 5.4. The Structural Coefficients for the Affordances of the Town Centre

<table>
<thead>
<tr>
<th>Variable</th>
<th>Town Centre – Interact Component I</th>
<th>Town Centre – Retreat Component II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid people</td>
<td>-.136</td>
<td>.732</td>
</tr>
<tr>
<td>Be active</td>
<td>.702</td>
<td>.051</td>
</tr>
<tr>
<td>Be alone</td>
<td>.078</td>
<td>.838</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.741</td>
<td>.043</td>
</tr>
<tr>
<td>Be free from the expectations of your family</td>
<td>.841</td>
<td>-.106</td>
</tr>
<tr>
<td>Be free from the expectations of your friends</td>
<td>.165</td>
<td>.567</td>
</tr>
<tr>
<td>Be free from the pressures of your friends</td>
<td>.161</td>
<td>.636</td>
</tr>
<tr>
<td>Be free from the pressures of your parents</td>
<td>.801</td>
<td>.026</td>
</tr>
<tr>
<td>Be happy</td>
<td>.773</td>
<td>.064</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.860</td>
<td>-.151</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>.544</td>
<td>.208</td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>.470</td>
<td>.229</td>
</tr>
<tr>
<td>Be in your own space</td>
<td>.071</td>
<td>.583</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.031</td>
<td>.738</td>
</tr>
<tr>
<td>Be on your own to think</td>
<td>-.107</td>
<td>.770</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.041</td>
<td>.650</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.605</td>
<td>.138</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.496</td>
<td>.228</td>
</tr>
<tr>
<td>Be yourself</td>
<td>.866</td>
<td>.094</td>
</tr>
<tr>
<td>Enjoy yourself</td>
<td>.869</td>
<td>-.266</td>
</tr>
<tr>
<td>Feel secure</td>
<td>.309</td>
<td>.446</td>
</tr>
<tr>
<td>Get away from your friends</td>
<td>.020</td>
<td>.780</td>
</tr>
<tr>
<td>Get away from your parents</td>
<td>.720</td>
<td>.001</td>
</tr>
<tr>
<td>Get away from your peers</td>
<td>.092</td>
<td>.714</td>
</tr>
<tr>
<td>Go to an area that is mainly used by teenagers</td>
<td>.512</td>
<td>.152</td>
</tr>
<tr>
<td>Hang around</td>
<td>.805</td>
<td>.069</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.423</td>
<td>.278</td>
</tr>
<tr>
<td>Have privacy with your best friend/s</td>
<td>.084</td>
<td>.618</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.028</td>
<td>.682</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.736</td>
<td>.160</td>
</tr>
<tr>
<td>Meet new people</td>
<td>.535</td>
<td>.225</td>
</tr>
<tr>
<td>Relax</td>
<td>.378</td>
<td>.085</td>
</tr>
<tr>
<td>Try out new behaviours</td>
<td>.244</td>
<td>.240</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>38.8</td>
<td>11.1</td>
</tr>
<tr>
<td>Cronbach's α</td>
<td>.94</td>
<td>.89</td>
</tr>
</tbody>
</table>
The Town Centre-Interact scale accounts for far more variance than the Town Centre-Retreat scale. This difference is interpreted as social interaction accounting for a greater amount of the function of the town centre environment than retreat.

There is congruence between the three town centre scales identified in Study One and the two town centre scales identified in Study Three. The town centre-social interaction scale is similar to the town centre – interact scale; the town centre-restorative scale and the town centre avoid others scale are similar to the town centre-retreat scale. Whilst, congruence between the scales reinforces the findings of Study Three, it was not the aim of these studies. Study One aimed to reduce the number of affordances on the list derived from the literature review. Study Three aimed to identify the function of the town centre, using a comprehensive list of affordances derived from Study One and Study Two.

<table>
<thead>
<tr>
<th>Study One</th>
<th>Study Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Centre – Social interaction</td>
<td>Town Centre - Interact</td>
</tr>
<tr>
<td>Town Centre – Restorative scale</td>
<td>Town Centre - Retreat</td>
</tr>
<tr>
<td>Town Centre – Avoid others</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5.6. A Comparison of the Town Centre Scales Identified in Study One and Study Three.

5.4.7. Section Summary

The aim of Study Three was to identify the function of the four key adolescents’ environments. The results of the principal components analyses show that the neighbourhood, school and town centre have similar functions; all of these environments support both social interaction and retreat. For the neighbourhood, school and town centre social interaction accounts for a greater amount of the variance than retreat. This is interpreted as a greater amount of the function of the environment being accounted for by social interaction. The function of the home is different from the function of the neighbourhood, school and town centre. The home does not support the same kind of social interaction as the neighbourhood, school and town centre; being with friends in the home is associated with retreating activities. The home also supports being secure, which the neighbourhood, school and town centre do.
The current analysis is the first time that the function of the four environments has been systematically compared. The results of this analysis suggest that the neighbourhood, school and town centre have similar functions for adolescents. Each of these environments affords both social interaction and retreat. These results differ from those of Lieberg (1995, 1997), who found that the town centre afforded social interaction and the neighbourhood retreat. Whereas the current study sampled participants from different neighbourhoods, Lieberg sampled participants from only one neighbourhood. The current study therefore provides a more representative study of the affordances of the neighbourhood than that offered by Lieberg. The difference might also be a result of cultural differences in the affordances of a neighbourhood in a city suburb of Sweden and neighbourhoods in Guildford.

5.5. Constructing Comparable Scales to Measure Interaction and Retreat in the Neighbourhood, School and Town Centre.

5.5.1. Aim

The principal components analysis of the affordances of the neighbourhood, school and town centre each resulted in components that related to social interaction and retreat. However, no statistical comparison can be made between the function of these three environments, as the scales for each of these environments are made up of slightly different affordance items. Given the similarities between the results for these environments, it was justifiable to conduct further analyses that would measure the affordances for social interaction and retreat on the same scales for each of these environments. Measuring social interaction and retreat on the same scales would enable statistical comparisons to be made between these three environments.
5.5.2. Principal Components Analysis for the Neighbourhood, School and Town Centre

The number of places available for each of the 34 affordances in the neighbourhood, school and town centre were combined, resulting in one rating for each of the 34 affordances. This rating represented the total number of places in the neighbourhood, school and town centre for the affordance. Principal components analysis was then conducted on these ratings. Rather than carrying out several principal components analyses and selecting the best solution, one analysis was carried out, which requested a two component solution. The rationale behind this decision was that the previous analyses had all resulted in two components being extracted, suggesting that two components would underlie the solution.

Two components were successfully extracted which accounted for 64.5% of the variance (Component I=56% and Component II=8.5%). Component I was concerned with social interaction and named the INTERACT scale (α=.97, N=158) and Component II was concerned with retreat and was named the RETREAT scale (α=.93, N=165). The structural coefficients for these components are shown in Table 5.5. As with the earlier analyses, social interaction accounted for the greatest amount of the variance. This suggests that social interaction accounts for a greater amount of the function of these environment than retreat.
Table 5.5. The Structural Coefficients for the INTERACT and RETREAT Components.

<table>
<thead>
<tr>
<th>Component</th>
<th>INTERACT</th>
<th>RETREAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid people</td>
<td>.160</td>
<td>.911</td>
</tr>
<tr>
<td>Be active</td>
<td>.689</td>
<td>.146</td>
</tr>
<tr>
<td>Be alone</td>
<td>-.066</td>
<td>.911</td>
</tr>
<tr>
<td>Be entertained</td>
<td>.520</td>
<td>.249</td>
</tr>
<tr>
<td>Be free from the expectations of your family</td>
<td>.867</td>
<td>-.158</td>
</tr>
<tr>
<td>Be free from the expectations of your friends</td>
<td>.003</td>
<td>.749</td>
</tr>
<tr>
<td>Be free from the pressures of your friends</td>
<td>.433</td>
<td>.483</td>
</tr>
<tr>
<td>Be free from the pressures of your parents</td>
<td>.875</td>
<td>-.071</td>
</tr>
<tr>
<td>Be free to be yourself</td>
<td>.801</td>
<td>.023</td>
</tr>
<tr>
<td>Be happy</td>
<td>.904</td>
<td>-.078</td>
</tr>
<tr>
<td>Be in a place where I feel I belong</td>
<td>.754</td>
<td>.113</td>
</tr>
<tr>
<td>Be in an area that belongs to teenagers</td>
<td>.572</td>
<td>.248</td>
</tr>
<tr>
<td>Be in an area that is mainly used by teenagers</td>
<td>.639</td>
<td>.123</td>
</tr>
<tr>
<td>Be in control of the environment</td>
<td>-.013</td>
<td>.718</td>
</tr>
<tr>
<td>Be in your own space</td>
<td>.242</td>
<td>.640</td>
</tr>
<tr>
<td>Be noisy</td>
<td>.869</td>
<td>.086</td>
</tr>
<tr>
<td>Be on your own to think</td>
<td>.043</td>
<td>.807</td>
</tr>
<tr>
<td>Be peaceful</td>
<td>.113</td>
<td>.725</td>
</tr>
<tr>
<td>Be with close friends</td>
<td>.604</td>
<td>.311</td>
</tr>
<tr>
<td>Be with similar people</td>
<td>.574</td>
<td>.328</td>
</tr>
<tr>
<td>Be yourself</td>
<td>.896</td>
<td>-.080</td>
</tr>
<tr>
<td>Enjoy yourself</td>
<td>.957</td>
<td>-.201</td>
</tr>
<tr>
<td>Feel secure</td>
<td>.448</td>
<td>.167</td>
</tr>
<tr>
<td>Get away from your friends</td>
<td>.080</td>
<td>.799</td>
</tr>
<tr>
<td>Get away from your parents</td>
<td>.772</td>
<td>-.039</td>
</tr>
<tr>
<td>Get away from your peers</td>
<td>.038</td>
<td>.777</td>
</tr>
<tr>
<td>Hang around</td>
<td>.875</td>
<td>.019</td>
</tr>
<tr>
<td>Have freedom of expression</td>
<td>.736</td>
<td>.190</td>
</tr>
<tr>
<td>Have privacy with your best friend/s</td>
<td>.358</td>
<td>.575</td>
</tr>
<tr>
<td>Have space to be upset in</td>
<td>.426</td>
<td>.510</td>
</tr>
<tr>
<td>Meet new people</td>
<td>.748</td>
<td>.128</td>
</tr>
<tr>
<td>Meet up with friends</td>
<td>.752</td>
<td>.186</td>
</tr>
<tr>
<td>Relax</td>
<td>.425</td>
<td>.445</td>
</tr>
<tr>
<td>Try out new behaviours</td>
<td>.329</td>
<td>.294</td>
</tr>
<tr>
<td>Percent of Variance</td>
<td>56.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Cronbach's $\alpha$</td>
<td>.97</td>
<td>.93</td>
</tr>
</tbody>
</table>
5.5.3. Constructing Scale Scores

To be able to make a statistical comparison of the environments, scale scores were computed. Based upon the INTERACT and RETREAT scales two sets of scale scores were computed for the neighbourhood, school and town centre.

1) The INTERACT and RETREAT scale scores reflect the number of places available in the environment for social interaction and retreat. These scores were computed by adding up the ratings of how many places there were in the environment for each of the affordances that made up the scale.

2) The INTERACT$_{often}$ and RETREAT$_{often}$ scale scores reflect how often the environment was used for social interaction and retreat. These scores were computed by adding up the ratings of how often each environment was used for each of the affordances that made up the scale.

Scale scores were also computed for the Home-Retreat/Friends scale and the Home-Secure scale. Again two sets of scale scores were computed.

1) The Home-Retreat/Friends and the Home-Secure scale scores reflect the number of places available in the home for retreating with friends and security. These scores were computed by adding up the ratings of how many places there were in the home for each of the affordances that made up the scale.

2) The Home-Retreat/Friends$_{often}$ and the Home-Secure$_{often}$ scale scores reflect how often the home was used for retreating with friends and security. These scores were computed by adding up the ratings of how often the home was used for each of the affordances that made up the scale.
5.6. Comparing the Function and Use of the Home, Neighbourhood, School and Town Centre

5.6.1. Introduction

The following section presents analysis that compares both the function and use of the environments. This analysis addresses several research questions. It presents analysis that statistically compares the function and use of the neighbourhood, school and town centre; it examines the relationship between the perception of affordances and use of the environment; and it examines the relationship between use of the home, neighbourhood, school and town centre.

5.6.2. Comparing Social Interaction and Retreat in the Neighbourhood, School and Town Centre

5.6.2.1. Aim

This section presents analysis that statistically compares the function and use of the neighbourhood, school and town centre environments. Whilst all three environments afford social interaction and retreat, comparisons can be made between the number of places in the environment and use of the environment for social interaction and retreat. Does one environment offer more places for the social interaction or retreat? Is one environment used more often for social interaction or retreat? The INTERACT, RETREAT, INTERACT\text{often} AND RETREAT\text{often} scale scores were compared for the neighbourhood, school and town centre environments.

5.6.2.2. Analysis

The scale scores were compared between the three environments using Friedman and Wilcoxon tests. The analysis was non-parametric as the component scores were skewed. The INTERACT and RETREAT scores were positively skewed. This was because participants were asked to indicate how many places there were for each of the affordances and ratings were characterised by low numbers. The RETREAT\text{often} scores were also positively skewed indicating that participants used the environments sometimes or hardly ever for retreat. The INTERACT\text{often} scores were negatively skewed indicating that participants used the environments often or sometimes for social interaction.
5.6.2.3. The Affordances and Use of the Neighbourhood, School and Town Centre for Social Interaction

Table 5.6. shows the median INTERACT scale scores for neighbourhood, school and town centre. There are significant differences between the INTERACT scores ($\chi^2=59.23$, df=2, N=158, p<.0001). The median INTERACT scale score for the town centre is significantly higher than that for the neighbourhood (Z=-10.06, N=298, p<.0001) and the school (Z=-5.58, N=214, p<.0001) and the school score is significantly higher than that for the neighbourhood (Z=-2.81, N=169, p<.01). Thus, the three environments differ significantly in the number of places they provide for the social interaction.

Table 5.6. Median Scores for the INTERACT Component.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Median Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERACT-Town Centre</td>
<td>a 68.0</td>
</tr>
<tr>
<td>INTERACT - School</td>
<td>a 51.0</td>
</tr>
<tr>
<td>INTERACT- Neighbourhood</td>
<td>a 47.5</td>
</tr>
</tbody>
</table>

Figures sharing superscripts are significantly different at p<.001

There was no significant difference in INTERACT0ften scale scores between the three environments, ($\chi^2=4.10$, df=2, N=147, p>.05). Thus, although the environments differed in the number of places they provided for the social interaction, there was no difference in how often they were utilised for social interaction. This suggests that the number of places available for social interaction does not effect how often the environment is used for social interaction.

5.6.2.4. The Affordances and Use of the Neighbourhood, School and Town Centre for Retreat

Table 5.7. shows median RETREAT scale scores for the neighbourhood, school and town centre. There are significant differences between the RETREAT scores ($\chi^2=11.45$, df=2, N=165, p<.01). The median RETREAT scale score for the neighbourhood is significantly higher than that for the town centre (Z=-4.07, N=309, p<.0001) and the school (Z=-3.73, N=179, p<.0001) and the town centre score is significantly higher than the school score (Z=-3.27, N=226, p<.0001). Thus, the three environments differ significantly in the number of places they provide for retreat.
Table 5.7. Median Scores for the RETREAT Component.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Median Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETREAT- Neighbourhood</td>
<td>a 20</td>
</tr>
<tr>
<td>RETREAT-Town Centre</td>
<td>a 18</td>
</tr>
<tr>
<td>RETREAT - School</td>
<td>a 15</td>
</tr>
</tbody>
</table>

Figures sharing a superscript are significantly different at p<.0001.

There was also a significant difference in RETREAT\text{\textit{often}} scale scores between the environments, ($\chi^2=28.35$, df=2, N=153, p<.0001). Table 5.8. shows the median RETREAT\text{\textit{often}} scores for each environment. The town centre score was significantly lower than the neighbourhood ($Z=-9.07$, N=304, p<.0001) and the school scores ($Z=-3.51$, N=218, p<.0001). Thus, although the town centre had significantly fewer places than the neighbourhood and more places than the school for retreat, it was used significantly less often.

Table 5.8. Median Scores for the RETREAT\text{\textit{often}} Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Median Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETREAT\text{\textit{often}}- Neighbourhood</td>
<td>a 18</td>
</tr>
<tr>
<td>RETREAT\text{\textit{often}} - School</td>
<td>b 16</td>
</tr>
<tr>
<td>RETREAT\text{\textit{often}}- Town Centre</td>
<td>ab 14</td>
</tr>
</tbody>
</table>

Figures sharing the same superscript are significantly different at p<.0001.

5.6.2.5. Section Summary

This section compared the scale scores for the neighbourhood, school and town centre. There were significant differences between the environments in the INTERACT scale scores but not for the INTERACT\text{\textit{often}} scale scores. Thus, the three environments differ in the number of places they afford for social interaction, but this does not effect how often the environments are used for social interaction. There were significant differences between the environments in the RETREAT and RETREAT\text{\textit{often}} scale scores, suggesting that the environments differ in both the amount of places they provide for retreat and also how often they are used for retreat.

The results of this analysis suggest that the number of places available for a function only effect how often the environment is used for retreat, not for social interaction. The next
section presents analysis that further considers the relationship between the perception of affordances and how often the environment is used.

5.6.3. The Relationship Between Environmental Perception and Environmental Use

5.6.3.1. Aim

This section examines the relationship between the affordances and use of the environment. Gibson believed that observers obtained knowledge of the environment through affordances and that this knowledge then guided action in the environment, i.e. it is necessary to perceive the affordances for action, before you can use the environment for the action. It was therefore hypothesised that the perception of affordances would be related to use of the environment for the affordances. The following section presents the results of an analysis that examines the relationship between the perception of affordances and use of the neighbourhood, school, town centre and home.

5.6.3.2. Analysis

This analysis examines the relationship between the function scale and the use scale, for each set of scales for example, the neighbourhood INTERACT scale and the neighbourhood INTERACT\textsubscript{often} scale. The relationship between the perception of affordances and use of the environment was analysed using Spearman's Rho correlation (one-tailed). Non-parametric analysis was used as the scale scores were skewed. Correlation analyses are easily influenced by a high sample size and therefore for this analysis a high probability level (p<.001) was set to ensure against making a Type 1 error.

5.6.3.3. Results

For the INTERACT and the INTERACT\textsubscript{often} scale scores positive correlations were found for the town centre (r=.375, N=414, p<.0001) and the neighbourhood (r=.295, N=287, p<.0001). Thus, for both of these environments a high perception of affordances was associated with high use of the environment. For the RETREAT and the RETREAT\textsubscript{often} scale scores positive correlations were found for the neighbourhood, (r=.356, N=300, p<.0001), the school (r=.373, N=.244, p<.0001) and the town centre (r=.371, N=437, p<.0001). For the home there was a positive correlation between Home-Retreat/Friends and Home-Retreat/Friends\textsubscript{often} scale scores (r=.188, N=306, p<.0001).
Thus, there were only two sets of scales for which there was not a positive correlation between the perception of affordances and use of the environment; these were for social interaction in the school \( r=0.095, N=238, p>0.05 \) and security in the home \( r=0.113, N=308, p<0.05 \). For these two scales it is possible that all participants use the environments for these affordances and therefore how often the environment is used does not influence the perception of affordances.

5.6.3.4. Section Summary

There is a moderate relationship between the perception of affordances and use of the environment. It is not possible to postulate whether the perception of affordances guides action, as the direction of causality cannot be determined from this analysis. However, these findings illustrate that there is a relationship between the perception of affordances for action and use of the environment for action, which provides some support for Gibson’s theory that affordances guide action.

5.6.4. Comparing Use of the Home, Neighbourhood, School and Town Centre

5.6.4.1. Aim

The home has a different function to the neighbourhood, school and town centre environments and as yet, very little is known about the relationship between scales for the four environments. This analysis examines how use of the home relates to use of the neighbourhood, school and town centre. Understanding this relationship will be useful as it will enable the relationship between the use of the four environments to be established.

5.6.4.2. Analysis

How often the environments were used each of the scales was compared using multidimensional scaling (Kruskal & Wish, 1978). Multidimensional scaling measures the similarities between variables using Euclidean distance and plots the relationships between them. The closer the variables on the plot the more similar they are.
5.6.4.3. Results

A two-dimensional solution was found for the data (Stress=.0320, RSQ=.996) and Figure 5.7. shows the resulting two-dimensional plot. The plot indicates how often the environment was used for each of the components.

![Multidimensional Scaling Plot](image)

**Figure 5.7. Multidimensional Scaling Plot of How Often the Four Environments Were Used.**

The Home-Retreat/Friends\textsubscript{often} scale is located on it's own and is equidistant between the RETREAT\textsubscript{often} scale for the neighbourhood and town centre and the INTERACT\textsubscript{often} scale for the neighbourhood and town centre. The location of the Home-Retreat/Friends\textsubscript{often} scale on it's own suggests that the home is utilised differently to the neighbourhood, school and town centre.

The Home-Secure\textsubscript{often} scale is located near the RETREAT\textsubscript{often} scale for the neighbourhood and town centre, suggesting that the environments are used similarly for these scales. Use of the neighbourhood and town centre for social interaction are very similar, as are use of the neighbourhood and town centre for retreating.
The school scales are separate from the neighbourhood and town centre scales showing that the school is used differently for social interaction and retreat than the neighbourhood and town centre. This probably reflects the considerably greater amount of time adolescents spend in the school environment.

5.7. Chapter Summary

This chapter has described a questionnaire study that used the taxonomy of adolescents’ environments derived from Study One and Study Two, to examine the functional significance of the home, neighbourhood, school and town centre for adolescents. The results show that the neighbourhood, school and town centre all provide affordances for social interaction and retreat. The home does not support social interaction and instead provides affordances for two different types of retreat; retreat involving close friends and retreat involving seeking security.

One reason for the different function of the home is that the home is a closed and indoor environment whereas the neighbourhood, school and town centre environments are predominately open and outdoor environments. The home is also shared with the family and this could contribute to why it does not afford social interaction; social interaction is associated with freedom and the presence of the family inhibits this.

The results show that the neighbourhood, school and town centre offer the same functions to adolescents; social interaction and retreat. These results differ from Lieberg (1995, 1997) who found that the town centre afforded social interaction and the neighbourhood retreat. The current findings suggest that the neighbourhood and town centre environments are more similar in function than suggested by previous literature.

Whilst the neighbourhood, school and town centre offered the same function to adolescents, there were differences between the environments in terms of how many places afforded social interaction and retreat. However, there was only a difference in how often the environments were used for retreat, not for social interaction. These results suggest that the number of places available for the function affect how often the environment is used for retreat but not for social interaction.
Further analysis revealed that there was a moderate relationship between the perception of affordances and how often the environment was used. This suggests that there is a relationship between affordances and use of the environments. Whilst Gibson believed that the perception of affordances was a prerequisite for action, the current analysis was not able to examine the issue of causality between the perception of affordances and use of the environment.

Chapter Five has examined the function and use of the home, neighbourhood, school and town centre environments. The analysis carried out in this chapter provides sixteen reliable scales; eight scales which describe the affordances of the environments and eight scales which indicate how often the environment is used for the affordances. This chapter builds upon the previous studies of Heft (1988) and Kytta (1995) and has developed the application of Gibson's theory of affordances in environmental psychology. Quantifying the number of places available in an environment for an affordance enables scales to be developed that measure the function and use of different environments. This increases the possible applications of affordance theory in environmental psychology.

Whilst Chapter Five has compared use of the home, neighbourhood, school and town centre it has not examined group differences in use of the four environments. Chapter Six describes further analysis that examines group differences in use of the home, neighbourhood, school and town centre environments.
Chapter Six: Group Differences in Use of the Home, Neighbourhood, School and Town Centre.
6.1. Introduction

Chapter Six further analyses adolescents’ use of the key environments and considers group differences in use of the home, neighbourhood, school and town centre. The literature review in Chapter Two suggests that use of the four environments would differ according to several different characteristics and attributes such as age, gender, social class, preference, perceived parental control and peer-group structure. Chapter Two also suggested that urban-related identity and psychological well-being are the consequences of the environment supporting development in adolescence. This chapter addresses the research questions set out in Chapter Two and examines the relationship between these characteristics and attributes and use of the home, neighbourhood, school and town centre.

The eight ‘often’ scales derived in Chapter Five are used throughout this chapter. Use of the home is measure by the Home-Retreat/Friends\textsubscript{often} and the Home-Secure\textsubscript{often} scales; use of the neighbourhood is measured by the neighbourhood INTERACT\textsubscript{often} and the RETREAT\textsubscript{often} scales; use of the school is measured by the school INTERACT\textsubscript{often} and the RETREAT\textsubscript{often} scales; use of the town centre is measured by the town centre INTERACT\textsubscript{often} and the RETREAT\textsubscript{often} scales.

6.2. Demographic Characteristics and Environmental Use.

6.2.1. Introduction

Chapter Two discussed previous research that has found age, gender and social class differences in use of the environments (Coleman 1979, van Vliet 1983, Schiavo 1988, Maudlin & Meeks 1990, Cotterell 1993, Hendry, Shucksmith, Love & Glendinning 1993, Deem 1996, Blatchford 1998). Age, gender and social class have been considered to be key characteristics in accounting for differences in adolescents’ use of the environment. Hendry (1983) suggested age, gender and social class were the most important influences upon adolescents’ leisure choices. This section describes analyses that examine the relationships between age, gender and social class and use of the home, neighbourhood, school and town centre.
6.2.2. Year Group Differences in Environmental Use

6.2.2.1. Aim

Chapter Two discussed previous research that had found age differences in use of the environment, (Coleman 1979, Schiavo 1988, Hendry, Shucksmith, Love & Glendinning 1993, Blatchford 1998). Previous research makes a strong link between use of the environment and the developmental needs that the environment supports, suggesting that different age groups use different environments because of differing developmental needs. The aim of this analysis was to examine the following research question; Does use of the environment differ according to year group?

6.2.2.2. The Measure

Age was measured according to school year group, which ranged from Year 7 to Year 11. This measure enabled participants from the same peer group to be compared. Age per se was not used as it would have meant that some participants would have been compared with participants from the school year above or below them.

6.2.2.3. Hypotheses and Analysis

The following hypotheses were formed to address the research question, Does use of the environment differ according to year group?

Home

It was hypothesised that use of the home will decrease with increasing year group. Whilst there is little previous literature that has examined adolescents' use of the home, one of the main developmental events in adolescence is displacement. Adolescents need to seek independence from their home and the peer-group supports this process (Coleman & Hendry, 1980). In seeking independence from the family we would expect adolescents to make less use of the home environment. As displacement is a goal of adolescence it was postulated that older adolescents would be more displaced than younger adolescents and therefore make less use of the home environment.
Neighbourhood

It was hypothesised that use of the neighbourhood will decrease with increasing year group. Hendry, Shucksmith, Love & Glendinning (1993) found that use of casual settings such as the neighbourhood increased at around 11-12 years, whilst Schiavo (1988) found that use of the neighbourhood started to decline at 16 years of age.

School

It was hypothesised that use of the school environment will increase with increasing year group. Blatchford (1998) found that younger adolescents’ use of the school was activity based, whilst older adolescents’ use was based on social interaction. This suggests that older adolescents will use the school more for social interaction and retreat than younger adolescents whose use will be more activity based.

Town Centre

It was hypothesised that use of the town centre will increase with year group. Previous research suggests that adolescents increasingly seek out the town centre. Hendry, Shucksmith, Love & Glendinning (1993) found that the transition from organised to casual to commercial settings begins at 11-12 years of age and Schiavo (1988) suggested that older adolescents (16 years +) had a developmental need to move beyond the neighbourhood environment and that this resulted in increased use of the town centre.

The relationship between the scale scores and year group were examined using Kruskal-Wallis tests and Mann-Whitney tests. Non-parametric analyses were used as the scale scores were skewed. The Kruskal-Wallis tests identified if there were differences between the scale scores for the five year groups and the Mann-Whitney tests were used to contrast each year group. The Mann Whitney tests were therefore subject to Bonferroni’s correction, which in this case was .05/10, where 10 is the number of comparisons possible between the year groups. This method of conducting contrasts is appropriate for both planned and unplanned contrasts (Clark-Carter 1997). Thus, for the analysis of year group Bonferroni’s correction was $p<.005$. 

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6.2.2.4. Results

Home

Figure 6.1. shows the median Home-Retreat/Friends<sub>often</sub> and Home-Secure<sub>often</sub> scale scores for each year group.

There were significant differences between the year groups in the Home-Retreat/Friends<sub>often</sub> scale scores ($\chi^2=13.65$, df=4, N=344, p<.01). Adolescents in Year 10 had higher Home-Retreat/Friends<sub>often</sub> score than adolescents in Year 8 (U=2184.5, Z=-3.03, N=156, p<.005) and Year 9 (U=2155.5, Z=-3.36, N=158, p<.005). These results refute the hypothesis that use of the home will decrease with increasing year group.

There were also significant differences between the year groups in the Home-Secure<sub>often</sub> scale scores ($\chi^2=12.10$, df=4, N=345, p<.05). Adolescents in Year 7 had higher Home-Secure<sub>often</sub> scale scores than adolescents in Year 8 (U=1443.5, Z=-3.49, N=134, p<.0001). These results refute the hypothesis that use of the home will decrease with increasing year group.
Neighbourhood

Figure 6.2. shows the median neighbourhood $\text{INTERACT}_{\text{often}}$ and $\text{RETREAT}_{\text{often}}$ scale scores for each year group.

There were significant differences between the year groups in the $\text{INTERACT}_{\text{often}}$ scale scores ($\chi^2=12.62$, df=4, N=316, p<.005). Figure 6.2 shows that the median $\text{INTERACT}_{\text{often}}$ scale scores decline with age; adolescents in Year 11 use the neighbourhood significantly less than adolescents in Year 7 (U=795, Z=-2.99, N=102, p<.005). These results support the hypothesis that use of the neighbourhood will decline with increasing year group.

There were no significant differences between the year groups in the $\text{RETREAT}_{\text{often}}$ scale scores ($\chi^2=9.45$, df=4, N=323, p>.05). These results refute the hypothesis that use of the neighbourhood will decline with increasing year group.

These results indicate that use of the neighbourhood does decline with year group for social interaction but not for retreat. Thus, the hypothesis that use of the neighbourhood will decline with increasing year group is only partially supported.
School

Figure 6.3 shows the median school $\text{INTERACT}_{\text{often}}$ and $\text{RETREAT}_{\text{often}}$ scale scores for each year group.

![Figure 6.3. Median School $\text{INTERACT}_{\text{often}}$ and $\text{RETREAT}_{\text{often}}$ Scale Scores for Each Year Group.](image)

There were no significant differences between the year groups in the $\text{INTERACT}_{\text{often}}$ scale scores ($\chi^2=2.43$, df=4, N=264, $p>.05$). This result refutes the hypothesis that use of the school environment will increase with increasing year group.

There were significant differences between the year groups in the $\text{RETREAT}_{\text{often}}$ scale scores ($\chi^2=26.76$, df=4, N=265, $p<.0001$). Figure 6.3 shows that median $\text{RETREAT}_{\text{often}}$ scale scores were highest for Year 10. Year 10 adolescents had a significantly higher $\text{RETREAT}_{\text{often}}$ scale score than Year 9 ($U=1212.5$, $Z=-3.52$, N=124, $p<.0001$) and Year 11 adolescents ($U=1012$, $Z=-4.88$, N=128, $p<.0001$). These results refute the hypothesis that use of the school environment will increase with increasing year group. Instead of the relationship between year group and use of the school being positive, there is a peak in use of the school for retreat for Year 10 adolescents.

These results indicate that use of the school does not increase with year group. There are no year group differences in use of the school for social interaction. There are year differences in use of the school for retreat, but this relationship is characterised by a peak in use for one year group. Thus, the hypothesis that use of the school will increase with year group was refuted.

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Chapter Six

Town Centre

Figure 6.4. shows the median town centre INTERACT\textsubscript{often} and RETREAT\textsubscript{often} scale scores for each year group.

There were no significant differences between the year groups in the INTERACT\textsubscript{often} scale scores ($\chi^2=6$, df=4, N=475, p>.05), which refutes the hypothesis that use of the town centre will increase with year group.

There were significant differences between the year groups in the RETREAT\textsubscript{often} scale scores ($\chi^2=33.10$, df=4, N=486, p<.0001). Figure 6.4. shows that the median RETREAT\textsubscript{often} scale scores are highest in Year 7 and Year 11. Year 7 had a significantly higher RETREAT\textsubscript{often} scale score than Year 8 (U=3544.5, Z=-2.76, N=196, p<.005) and Year 9 (U=366.5, Z=-2.79, N=200, p<.005) and Year 11 had a significantly higher RETREAT\textsubscript{often} scale score than Year 8 (U=1333, Z=-5.02, N=163, p<.0001), Year 9 (U=1379, Z=-5.14, N=167, p<.0001) and Year 10 (U=1822.5, Z=-3.56, N=169, p<.0001). These results refute the hypothesis that use of the town centre will increase with year group. The relationship between use of the town centre for retreat and year group is U shaped.
These results indicate that use of the town centre does not increase with year group. There are no year group differences in use of the town centre for social interaction. There are year differences in use of the town centre for retreat, but this relationship is U shaped. Thus, the hypothesis that use of the town centre will increase with year group was refuted.

6.2.2.5. Discussion

The results of this analysis indicate that there is a developmental dimension to use of the environments. Thus, use of the environment does differ according to year group. There were year group differences in use of the neighbourhood for social interaction, use of the town centre and school for retreat and use of the home for retreat and security. There were no year group differences in use of the neighbourhood for retreat and use of the town centre and school for social interaction.

As predicted by Schiavo (1988), use of the neighbourhood for social interaction did decrease with year group. However, the other year group differences found were not characterised by a linear relationship. It is more appropriate to describe adolescents use of the town centre and school for retreat and the home for retreat and security in terms of a U shaped curve; one or two year groups use the environment significantly more than the other year groups. Thus, there is a peak in use of specific environments for specific affordances for certain age groups. Hendry (1983) suggested that age was an important influence on adolescents’ leisure. The results of this study show that year group does influence use of the home, neighbourhood, school and town centre but only for certain affordances. Overall, the results suggest a more moderate effect of age on environmental use, than that suggested by previous studies.

6.2.3. Gender Differences in Environmental Use

6.2.3.1. Aim

Chapter Two discussed previous research that found gender differences in adolescents’ use of the environments. Previous research has found different results; Maudlin & Meeks (1990), Cotterell (1993), Deem (1996) all found gender differences in environmental use, suggesting that female adolescents are more geographically restricted than males. However, van Vliet (1983) only found a gender difference for suburban and not city adolescents. The aim of this
analysis is to examine the following research question; Does use of the environment differ according to gender?

6.2.3.2. Hypotheses and Analysis

The following hypotheses were formed to examine the research question.

Home

It was hypothesised that female adolescents will use the home environment more often than male adolescents. Deem (1996) found that females were more restricted to using the home environment than males and that males had greater freedom to use environments away from the home.

Neighbourhood

It was hypothesised that there will be a gender difference in use of the neighbourhood. From previous literature it is unclear in which direction the difference would be. Deem (1996) found that females were restricted to using the home and neighbourhood environments, whilst males had greater freedom to use environments further away. However, Cotterell (1993) suggests that if males are using the neighbourhood, they will be allowed to use it for longer and also after dark unlike females.

School

It was hypothesised that female adolescents will use the school more often than male adolescents. Blatchford (1998) found that male adolescents' use of the school was activity/sport based, whilst females' use was based on social interaction. This suggests that female adolescents will use the school more for social interaction and retreat than male adolescents whose use will be more activity based.

Town Centre

It was hypothesised that male adolescents will use the town centre more often than female adolescents. Deem (1986) found that males had greater freedom than females to use the town
centre and Cotterell (1993) found that males were also allowed to go out after dark and to stay out for longer.

The relationship between the scale scores and gender were examined using Mann-Whitney tests. Non-parametric analyses were used as the scale scores were skewed.

6.2.3.3. Results

Figure 6.5. shows the median scale score for each scale for males and females.

![Bar chart showing the median scale scores for males and females for different scales](image)

**Figure 6.5. The Median Scale Scores for Males and Females**

**Home**

There were significant differences between the genders in the Home-Retreat/Friends\textsubscript{often} scale scores, (U=11038.5, Z=−2.50, N=334, p<.01). Male adolescents had a significantly higher Home-Retreat/Friends\textsubscript{often} scale score than females, indicating that they used the home more for retreat than females. This result refutes the hypothesis that female adolescents will use the home environment more than male adolescents.

There were no significant differences between the genders in the Home-Secure\textsubscript{often} scale scores (U=13163, Z=−.099, N=335, p>.05). Female adolescents do not use the home more for security than male adolescents. This result refutes the hypothesis that female adolescents will use the home environment more than male adolescents.
These results indicate that female adolescents do not use the home environment more than male adolescents; in fact male adolescents use the home for retreating with friends more than female adolescents. These results refute the hypothesis that female adolescents will use the home environment more than male adolescents.

Neighbourhood

There were no significant differences between the genders in the INTERACT\textsubscript{often} scale scores ($U=10733.5$, $Z=-.306$, $N=305$, $p>.05$) or the RETREAT\textsubscript{often} scale scores ($U=10253$, $Z=-1.79$, $N=313$, $p>.05$). These results refute the hypothesis that there will be gender differences in use of the neighbourhood. Male and female adolescents do not differ in how often they use the neighbourhood for social interaction or retreat.

School

There were no significant differences between the genders in the INTERACT\textsubscript{often} scale scores ($U=7108$, $Z=-1.42$, $N=254$, $p>.05$). Female adolescents do not use the school environment for social interaction more than male adolescents. This result refutes the hypothesis that female adolescents will use the school more often than male adolescents.

There were significant differences between the genders in the RETREAT\textsubscript{often} scale scores ($U=6365$, $Z=-2.71$, $N=254$, $p<.01$). Male adolescents had a significantly higher RETREAT\textsubscript{often} scale score than female adolescents, indicating that they used the school for retreat more than females. This result refutes the hypothesis that female adolescents will use the school more than male adolescents.

These results refute the hypothesis that female adolescents will use the school more often than male adolescents. There is no gender difference in how often the school is used for social interaction and male adolescents use the school more often for retreat than female adolescents.
There were no significant differences between the genders in the \text{INTERACT}_{\text{often}} scale scores \((U=21520, Z=-1.68, N=444, p>.05)\). This result refutes the hypothesis that male adolescents will use the town centre more than female adolescents.

There were significant differences between the genders in the \text{RETREAT}_{\text{often}} scale scores \((U=19852, Z=-3.49, N=454, p<.0001)\). Male adolescents had a significantly higher \text{RETREAT}_{\text{often}} scale score than female adolescents, indicating that they used the town centre for retreat more than females. This result supports the hypothesis that male adolescents will use the town centre more than female adolescents.

The hypothesis that male adolescents will use the town centre more than female adolescents is partially supported; male adolescents use the town centre for retreat more than females. However, there was no gender difference in use of the town centre for social interaction.

6.2.3.4. Discussion

Gender can effect the use of the environments for certain types of affordances. There were gender differences in use of the town centre, school and home for retreat but no gender differences in use of the neighbourhood, school and town centre for social interaction, the neighbourhood for retreat or the home for security. Thus, gender does not influence use of the neighbourhood environment or use of the environment for social interaction. Overall, the results suggest a more moderate effect of gender on environmental use, than that suggested by previous studies.

Males use the home, town centre and school environments more often for retreat than females. As there were no other gender differences in the use of these environments, it is suggested that both female and male adolescents have equal access to these environments. This gender difference in the use of the environment for retreat therefore suggests that males may have a greater developmental need for places of retreat than females. Future research should be carried out that examines whether males do have a greater developmental need to engage in retreat.
6.2.4. Social Class Differences in Use of the Environments

6.2.4.1. Aim

Chapter Two discussed previous research that found social class differences in use of the environment. van Vliet (1983) found that adolescents of higher social class had a greater home range than adolescents of a lower social class and Hendry, Shucksmith, Love & Glendinning (1993) found that middle class adolescents were less likely to hang around their neighbourhood than lower class adolescents. Previous studies have not examined social class differences comprehensively; studies have been limited to one setting or one aspect of environmental use and it is also unclear how social class has been measured in these studies. The aim of this analysis was to examine the following research question; Does use of the environment differ according to social class?

6.2.4.2. The Measure

Each participant gave a description of their parent/s’ occupation/s in the questionnaire. Social Class was then derived from the occupational information using the Standard Occupational Classification (Standard Occupational Classification, 1991a, b, c). The Standard Occupational Classification (SOC) is a standardised system for the classification of occupation that enables social class to be derived. The measure of social class obtained from the SOC is the Social Class based on Occupation (also known as the Registrar General’s Social Class).

Since the 1911 Census occupations have been classified into broad categories referred to as Social Classes. The categories are designed to group together occupations that have a similar level of occupational skills. The categories currently used are shown in Figure 6.6.

<table>
<thead>
<tr>
<th>I</th>
<th>Professional occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>Managerial and technical occupations</td>
</tr>
<tr>
<td>III</td>
<td>Skilled occupations</td>
</tr>
<tr>
<td></td>
<td>(N) non-manual</td>
</tr>
<tr>
<td></td>
<td>(M) manual</td>
</tr>
<tr>
<td>IV</td>
<td>Partly skilled occupations</td>
</tr>
<tr>
<td>V</td>
<td>Unskilled occupations</td>
</tr>
</tbody>
</table>

Figure 6.6. Social Class based on Occupation (Standard Occupational Classification, 1991a).
Obviously occupation is only one indicator of socio-economic status. However, there is consensus in the UK that occupation has proved to be “a robust marker of socio-economic position”, (p.11, SOC, 1991a). Overall there are few indicators of a person’s position in society and occupation is considered to be one of the most effectual.

For participants who gave both of their parents’ occupations, the occupation which resulted in the highest social class was used. This analysis relied upon the participants’ description of their parent/s occupation/s and some of the descriptions were too vague to be used to derive social class. In these cases the participant was excluded from the analysis. Overall, over one-quarter of participants had missing values on this variable and thus, the following analysis is carried out on only a sub-sample of the participants.

6.2.4.3. Hypotheses and Analysis

The following hypotheses were formed to address the research question, Does use of the environment differ according to social class?

Home

It was hypothesised that use of the home will not be effected by social class. Previous studies have not examined social class differences in use of the home. Therefore, there was no prior reason to expect social class differences in use of the home.

Neighbourhood

It was hypothesised that use of the neighbourhood will be effected by social class. Hendry, Shucksmith, Love & Glendinning (1993) found that middle class adolescents’ use the neighbourhood less than adolescents of a lower social class. Given, that it is unclear how social class was measured by Hendry et al, (high, middle and low class are undefined), the direction of the difference was not predicted.

School

It was hypothesised that use of the school will not be effected by social class. Previous studies have not examined social class differences in use of the school. Therefore, there was no prior reason to expect social class differences in use of the school.
Town Centre

It was hypothesised that use of the town centre will be effected by social class. van Vliet (1983) found that adolescents of higher social class had greater freedom to use environments away from the home. Given, that it is unclear how social class was measured by van Vliet, the direction of the difference was not predicted.

The relationship between the scale scores and social class were examined using Kruskal-Wallis tests and Mann-Whitney tests. Non-parametric analysis was used as the scale scores were skewed. The Kruskal-Wallis tests identified if there were differences between the social classes and the Mann-Whitney tests were used to contrast each social class group. The Mann Whitney tests were therefore subject to Bonferroni's correction, which in this case was .05/6, where 6 is the number of comparisons possible between the social class groups. This method of conducting contrasts is appropriate for both planned and unplanned contrasts (Clark-Carter 1997). Thus, for the analysis of social class Bonferroni's correction was \( p = <.008 \).

6.2.4.4. Results

Figure 6.7. shows the frequency of the social class groups for the sample. The sample did not encompass all five social classes and over one-quarter of respondents (29%) had missing data for this variable. No respondents were sampled from social class V and few were sampled from social class IV (2.5%). Social class IV was excluded from further analysis due to it's low frequency.
There were no significant differences between the social class groups in the Home-Retreat/Friends\textsubscript{often} scale scores ($\chi^2=.246$, df=3, N=275, p>.05) or the Home-Secure\textsubscript{often} scale scores ($\chi^2=2.49$, df=3, N=277, p>.05). There are no social class differences in use of the home. These results support the hypothesis that use of the home will not be effected by social class.

**Neighbourhood**

There were no significant differences between the social class groups in the INTERACT\textsubscript{often} scale scores ($\chi^2=3.65$, df=3, N=244, p>.05) or the RETREAT\textsubscript{often} scale scores ($\chi^2=3.62$, df=3, N=252, p>.05). There are no social class differences in use of the neighbourhood. These findings refute the hypothesis that use of the neighbourhood will be effected by social class.

**School**

There were no significant differences between the social class groups in the INTERACT\textsubscript{often} scale scores ($\chi^2=2.05$, df=3, N=205, p>.05) or the RETREAT\textsubscript{often} scale scores ($\chi^2=2.88$, df=3, N=204, p>.05). There are no social class differences in use of the school. These results support the hypothesis that use of the school will not be effected by social class.
Chapter Six

Town Centre

There were significant differences between the social class groups in the \( \text{INTERACT}_{\text{often}} \) scale scores, \( (\chi^2=14.17, \text{df}=3, N=339, p<.005) \). Figure 6.8. shows the median \( \text{INTERACT}_{\text{often}} \) scale score for each social class. Adolescents from social class I had a significantly lower scale score than respondents from social class II (\( U=4846, Z=-3.49, N=230, p<.0001 \)), indicating that adolescents from social class I used the town centre less for social interaction than adolescents from social class II. These results support the hypothesis that use of the town centre will be effected by social class.

![Figure 6.8. Median town centre \( \text{INTERACT}_{\text{often}} \) scale score for each social class.](image)

There were no significant differences between the social class groups in the \( \text{RETREAT}_{\text{often}} \) scale scores (\( \chi^2=2.83, \text{df}=3, N=346, p>.05 \)). There was no difference between the social classes in use of the town centre for retreat. These results refute the hypothesis that use of the town centre will be effected by social class.

There is only partial support for the hypothesis that use of the town centre will be effected by social class. Social class only effected use of the town centre for social interaction and not for retreat.
6.2.4.5. Discussion

Social class has little effect upon use of the environments. Social class did not effect use of the home, neighbourhood, or school and only effected use of the town centre for social interaction and not retreat. van Vliet (1983) and Hendry et al (1993) found a moderate effect of social class upon environmental use, but the current study does not.

The current study is limited as the full range of social classes was not sampled; no participants from the two lowest social classes (IV and V) were included in this analysis. Also the analysis was only conducted on a sub-sample, as one-quarter of participants had missing data on this variable. It is possible that these measurement issues have influenced the findings of this section.

6.2.5. Section Summary: Demographic Characteristics and Environmental Use.

This section has examined the influence of age, gender and social class on adolescents' use of the home, neighbourhood, school and town centre. Hendry (1983) saw age, gender and social class as being the main influences on adolescents' leisure choices. The results of the current study indicate that age and gender do effect adolescents' use of the environment but social class has little effect.

The findings of the current study suggest that age and gender have a more moderate effect on environmental use than suggested by previous studies. The current study has examined use of specific environments, the home, neighbourhood, school and town centre, for the specific behaviours of social interaction and retreat. Previous research has examined adolescents' use of the environment at a more general level. The current analysis provides a more detailed, systematic comparison of adolescents' environmental use.
6.3. Preference and Environmental Use

6.3.1. Aim

Chapter Two reviewed previous research that examined adolescents' place preference, favourite places and valued places. These studies have found that adolescents have a preference for commercial areas, the home and areas near the home (Korpela 1992, Eubanks-Owens 1994, Lieberg 1997). Studies of environmental preference assume that there is a positive relationship between preference for an environment and use; if a place is preferred it is likely to be used. However, previous studies have not explicitly examined the relationship between preference for an environment and environmental use. This analysis addressed this question; Does use of the environment differ according to preference for the environment?

6.3.2. The Measure

In the questionnaire the adolescents had to rank the home, neighbourhood, school and town centre environments according to which was their preferred environment in which to spend their leisure time, (1=most preferred, 4=least preferred). This resulted in four groupings for each environment; those for whom the environment was most preferred, second preferred, third preferred and least preferred.

6.3.3. Hypotheses and Analysis

It was hypothesised that use of the home, neighbourhood, school and town centre will increase with preference for the environment; high use of the environment would be associated with high preference for the environment.

The relationship between the preference groups and scale scores for each environment were examined using Kruskal-Wallis tests and Mann-Whitney tests. Non-parametric analysis was used as the scale scores were skewed. The Kruskal-Wallis tests identified if there were differences between the scale scores for the preference groups and the Mann-Whitney tests were used to contrast each preference group. The Mann Whitney tests were therefore subject
Bonferroni’s correction, which in this case was \(0.05/6\), where 6 is the number of comparisons possible between the preference groups. This method of conducting contrasts is appropriate for both planned and unplanned contrasts (Clark-Carter 1997). Thus, for the analysis of preference Bonferroni’s correction was \(p=.008\).

6.3.4. Results

Figure 6.9. shows that half of the participants (52%) rated the town centre as their most preferred environment and a quarter (23%) rated it as their second preferred environment. This indicates the overwhelming popularity of the town centre as an adolescent environment. In contrast, the school is the least preferred of the four environments for nearly two-thirds of respondents (62%). Preferences for the home and neighbourhood environments are more evenly distributed with preference varying fairly equally across the four ranks of preference.

![Figure 6.9. Preference Ranking for the Four Environments.](image)

Home

There were no significant differences between the preference groups and the Home-Retreat/Friends\_often scale scores \((\chi^2=.715, \text{df}=3, N=249, p>.05)\) or the Home-Secure\_often scale scores \((\chi^2=3.41, \text{df}=3, N=250, p>.05)\). These findings refute the hypothesis that use of the home will increase with preference for the environment.
Neighbourhood

There were significant differences between the preference groups and the neighbourhood \( \text{INTERACT}_{\text{often}} \) scale scores, \( (\chi^2=23.49, \text{df}=3, N=210, p<.0001) \). Figure 6.10 shows that use of the environment increases with preference. Adolescents who rated the neighbourhood as their least favourite environment used the neighbourhood significantly less for social interaction than adolescents who rated the neighbourhood as their most preferred (\( U=359, Z=-4.57, N=83, p<.0001 \)), their second preferred (\( U=778, Z=-3.52, N=104, p<.0001 \)) and their third preferred environment (\( U=933, Z=-3.01, N=109, p<.001 \)). These results support the hypothesis that use of the neighbourhood will increase with preference for the environment.

![Figure 6.10. The Median Neighbourhood \( \text{INTERACT}_{\text{often}} \) Scale Scores for Each Preference Group.](image)

There were no significant differences between the preference groups and the neighbourhood \( \text{RETREAT}_{\text{often}} \) scale scores, \( (\chi^2=4.51, \text{df}=3, N=215, p>.05) \). These findings refute the hypothesis that use of the neighbourhood will increase with preference for the environment.

There is only partial support for the hypothesis that use of the neighbourhood will increase with preference for the environment. Preference only influences use of the neighbourhood for social interaction, not retreat.
Chapter Six

School

There were no significant differences between the preference groups and the school INTERACT often scale scores, \( \chi^2 = 5.61, \text{df}=3, N=191, p>.05 \). These findings refute the hypothesis that use of the school will increase with preference for the environment.

There were significant differences between the preference groups and the school RETREAT often scale scores, \( \chi^2 = 8.47, \text{df}=3, N=190, p<.01 \). Figure 6.11 shows the median RETREAT often scale scores for each preference group. Adolescents who rated the school as their second preferred environment used the school more often for retreating than adolescents who rated the school as their third preferred environment (\( U=274.5, Z=-3.07, N=66, p<.01 \)). These results support the hypothesis that use of the school will increase with preference for the environment.

![Figure 6.11. The Median School RETREAT often Scale Scores for Each Preference Group.](image)

There is only partial support for the hypothesis that use of the school will increase with preference for the environment. Preference only influences use of the school for retreat, not social interaction.
Town Centre

There were significant differences between the preference groups and the town centre INTERACT<sub>often</sub> scale scores, ($\chi^2=13.09$, df=3, N=268, $p<.01$). Figure 6.12. shows that use of the town centre increases with preference. Adolescents who rated the town centre as their most preferred environment used the town centre significantly more often for social interaction than adolescents who rated the town centre as their least preferred environment ($U=908$, $Z=-2.80$, N=168, $p<.01$). These results support the hypothesis that use of the town centre will increase with preference for the environment.

![Figure 6.12. The Median Town Centre INTERACT<sub>often</sub> Scale Scores for Each Preference Group.](image)

There were no significant differences between the preference groups and the town centre RETREAT<sub>often</sub> scale scores, ($\chi^2=3.24$, df=3, N=273, $p>.05$). These results refute the hypothesis that use of the town centre will increase with preference for the environment.

There is only partial support for the hypothesis that use of the town centre will increase with preference for the environment. Preference only influences use of the town centre for social interaction, not retreat.
6.3.5. Discussion

Previous research has assumed that preference and use of an environment are related but have not empirically studied this relationship (Korpela 1992, Eubanks Owens 1994, Lieberg 1997). The current analyses indicates that preference for an environment does relate to use of the environment in some settings for certain types of affordances. There was a significant relationship between preference and use of the neighbourhood and town centre for social interaction and use of the school for retreat. Use of the neighbourhood and town centre for retreat, the school for social interaction and use of the home were not related to preference. Therefore, when considering adolescents’ preference for environments it should not be assumed that high preference for an environment will always relate to high use of the environment.

6.4. Behavioural Attributes and Environmental Use

6.4.1. Introduction

Chapter Two discussed how use of the environment was influenced by both peer-group structure and perceived parental control (Maudlin & Meeks 1990, Cotterell 1993, Deem 1996, Cotterell 1996). This section addresses the research questions that resulted from these discussion and describes analyses that examine the relationship between peer-group structure and perceived parental control and use of the environment.

6.4.2. Peer-Group Structure and Environmental Use

6.4.2.1. Aim

Chapter Two discussed previous literature that examined the relationship between peer-group structure and environmental use. Cotterell (1993) suggests that adolescents not only belonged to different peer-groups in different settings, but also that peer-groups differed in size. Cotterell believed that the size of the peer-group consequently effected the type of activities it could engage in. Cotterell’s findings are the result of a general examination of adolescents’
environments. The aim of this analysis is to systematically compare the influences of peer-
group structure upon use of the home, neighbourhood, school and town centre for social interaction and retreat. Does use of the environment differ according to the peer-group structure it is used with?

6.4.2.2. The Measure

There are three types of peer-group structure; the dyad (2 members), the clique (3-6 members) and the crowd (7+ members), (Dunphy 1963, Cotterell 1996). However, environments are not exclusively utilised in peer-groups. Environments can also be used alone or with family members such as parents or siblings. This measure incorporated all of these types of environmental use. In the questionnaire adolescents had to indicate who they spent the majority of their time with in the home, neighbourhood, school and town centre. For the home, neighbourhood and town centre possible answers were with family (parents and or/siblings), alone, with one friend, with a clique (3-6 friends) or with a crowd (7+ friends). For the school possible answers were alone, with one friend, with a clique or with a crowd.

6.4.2.3. Hypotheses and Analysis

The following hypotheses were formed to address the research question, Does use of the environment differ according to peer-group structure? It was hypothesised that the presence or absence of other people, both family and peers would effect how often the environments were used for social interaction and retreat; for example the presence of a clique would hinder use of the environment for retreat. As both social interaction and retreat are strongly influenced by the presence or absence of other people, two hypotheses per environment were formed; one which predicted the relationship for social interaction and one which predicted the relationship for retreat. (NB. The hypotheses given below differ between the environments as not all of the peer-group structures were present in each of the four environments.)

Home

It was hypothesised that use of the home for retreating with friends will be higher for adolescents who are using the environment with one friend or a clique than for adolescents
who are alone, with a crowd or with family. It was also hypothesised that use of the home for security will be higher for adolescents who are alone or with family than for adolescents who are utilising the environment with one friend, a clique or a crowd.

Neighbourhood

It was hypothesised that use of the neighbourhood for social interaction will be higher for adolescents who are using the neighbourhood with a clique or crowd than for adolescents who are alone or with family. It was also hypothesised that use of the neighbourhood for retreat will be higher for adolescents who are using the neighbourhood alone than for adolescents who are with family, a clique or a crowd.

School

It was hypothesised that use of the school for social interaction will be higher for adolescents who are using the school with a clique or crowd than for adolescents who are with one friend or alone. It was also hypothesised that use of the school for retreat will be higher for adolescents who are using the school alone or with one friend than for adolescents who are with a clique or a crowd.

Town Centre

It was hypothesised that use of the town centre for social interaction will be higher for adolescents who are using the town centre with a clique or crowd than for adolescents who are alone or with family. It was also hypothesised that use of the town centre for retreat will be higher for adolescents who are using the town centre alone than for adolescents who are with family, a clique or a crowd.

The relationship between the scale scores and peer-group structure were examined using Kruskal-Wallis tests and Mann-Whitney tests. Non-parametric analysis was used as the scale scores were skewed. The Kruskal-Wallis tests identified if there were differences between the peer-group structure groups and the Mann-Whitney tests were used to contrast each peer-group structure group. The Mann Whitney tests were therefore subject to Bonferroni’s correction, which in this case was .05/8, where 8 is the number of comparisons possible.
between the peer-group structure groups. This method of conducting contrasts is appropriate for both planned and unplanned contrasts (Clark-Carter 1997). Thus, for the analysis of peer-group structure Bonferroni's correction was p<.006.

6.4.2.4. Results

Figure 6.13. shows the frequencies for each peer-group structure group in the home, neighbourhood, school and town centre. As expected the environments were utilised with different peer-groups. The majority of participants used the home with family (58.8%), but it was also used alone (15.9%) or with a clique (10.7%). In contrast the town centre and school environments were used by the majority to be with a clique or a crowd. The neighbourhood was used less frequently than the town centre and school to be with a clique (41.2%) or a crowd (19.5%) and was instead used more frequently to be with family (23.5%) or alone (14.1%). Overall the environments were hardly ever used when alone or with one friend and were used with family and friends. Due to low frequencies the category of one friend for the neighbourhood and town centre were excluded from further analysis.

![Figure 6.13. Peer Group Structure in the Home, Neighbourhood, School and Town Centre.](image)

Figure 6.13. Peer Group Structure in the Home, Neighbourhood, School and Town Centre.

There were no significant differences between the peer-group structure groups and the Home-Retreat/Friendsoften ($\chi^2=1.68$, df=4, N=338, p=.05) or the Home-Secureoften scale scores ($\chi^2=4.88$, df=4, N=339, p>.05). These results refute the hypotheses that use of the home for retreating with friends will be higher for adolescents who are using the environment with one
friend or a clique than for adolescents who are alone, with a crowd or with family and that use of the home for security will be higher for adolescents who are alone or with family than for adolescents who are utilising the environment with one friend, a clique or a crowd.

Neighbourhood

There were significant differences between the peer-group structure groups and the neighbourhood INTERACT\textsubscript{often} scale scores ($\chi^2=27.40$, df=3, N=288, p<.0001). Figure 6.14. shows the median scale score for each peer-group structure group. Adolescents who used the neighbourhood alone had significantly lower INTERACT\textsubscript{often} scale scores than adolescents who used the neighbourhood with family (U=620, Z=-2.76, N=94, p<.005), with a clique (U=961, Z=-4.50, N=165, p<.0001) or with a crowd (U=369.5, Z=-4.24, N=89, p<.0001). These results support the hypothesis that use of the environment for social interaction will be higher for adolescents who are using the environment with a clique or crowd than for adolescents who are alone or with family.

![Figure 6.14. The Median Neighbourhood INTERACT\textsubscript{often} and RETREAT\textsubscript{often} Scale Scores for Each Peer Group Structure Group.](image)

There were no significant differences between the peer-group structure groups and the neighbourhood RETREAT\textsubscript{often} scale scores ($\chi^2=3.39$, df=3, N=294, p>.05). This refutes the hypothesis that use of the neighbourhood for retreat will be higher for adolescents who are using the neighbourhood alone than for adolescents who are with family, a clique or a crowd.
School

There were significant differences between the peer-group structure groups and the school INTERACT\textsubscript{often} scale scores ($\chi^2=13.65$, df=3, N=233, p<.005). Figure 6.15 shows the median scale score for each peer-group structure group. Adolescents who used the school alone had a significantly lower INTERACT\textsubscript{often} scale score than adolescents who used the school in a clique (U=449.5, Z=-2.54, N=162, p<.005) or in a crowd (U=143.5, Z=-3.16, N=76, p<.005). These results support the hypothesis that use of the school for social interaction will be higher for adolescents who are using the school with a clique or crowd than for adolescents who are with one friend or alone.

![Figure 6.15. The Median School INTERACT\textsubscript{often} and RETREAT\textsubscript{often} Scale Score for Each Peer Group Structure Group.]

There were no significant differences between the peer-group structure groups and the school RETREAT\textsubscript{often} scale scores ($\chi^2=.900$, df=3, N=234, p>.05). This refutes the hypothesis that use of the school for retreat will be higher for adolescents who are using the school alone or with one friend than for adolescents who are with a clique or crowd.

Town Centre

There were significant differences between the peer-group structure groups and the town centre INTERACT\textsubscript{often} scale scores ($\chi^2=26.08$, df=3, N=405, p<.0001). Figure 6.16 shows the median scale score for each peer-group structure group. Adolescents who used the town
centre with family had a significantly lower \( \text{INTERACT}_{\text{often}} \) scale score than adolescents who used the town centre with a clique (\( U=3626, Z=-3.40, N=282, p<.001 \)) or a crowd (\( U=1380, Z=-3.72, N=145, p<.0001 \)). Adolescents who used the town centre alone had a significantly lower \( \text{INTERACT}_{\text{often}} \) scale score than adolescents who used the town centre with a clique (\( U=1622.5, Z=-3.20, N=260, p<.001 \)) or a crowd (\( U=595, Z=-3.60, N=123, p<.0001 \)). These results support the hypothesis that use of the town centre for social interaction will be higher for adolescents who are using the town centre with a clique or crowd than for adolescents who are alone or with family.

![Figure 6.16.](image)

Figure 6.16. The Median Town Centre \( \text{INTERACT}_{\text{often}} \) and \( \text{RETREAT}_{\text{often}} \) Scale Score for Each Peer Group Structure Group.

There were no significant differences between the peer-group structure groups and the town centre \( \text{RETREAT}_{\text{often}} \) scale scores (\( \chi^2=7.34, \text{df}=3, N=414, p>.05 \)). This refutes the hypothesis that use of the town centre for retreat will be higher for adolescents who are using the town centre alone than for adolescents who are with family, a clique or a crowd.

6.4.2.5. Discussion

There is variation in the peer-group structure in each of the environments. The town centre and school are utilised with friends, the neighbourhood with friends, family and alone, and the home with family and alone. There was strong support for the hypotheses that use of the school, neighbourhood and town centre for social interaction would be higher for those in cliques and crowds than those who were alone, with one friend or with family. These results
suggest that an increase in peer-group size is associated with greater use of the environments for social interaction. It is possible that being with more peers results in an increase in knowledge about the affordances of the environment, as in a group situation individuals can share their knowledge about affordances with each other. The presence of other peers can also mediate the perceptual process and result in more affordances for social interaction being available in the environment.

There was no support for the hypotheses that use of the school, neighbourhood and town centre for retreat would be higher for those who were alone or with one friend than for those who were with family, a clique or a crowd. Use of the environment for retreat is associated with being away from other people so we would therefore expect to have observed a difference in use of the environments between the different peer groups. These results suggest that it is not enough just to be alone in an environment that affords retreat for retreat to take place. Instead, it is likely that a stressful situation has to occur that gives the individual motive to seek out an environment that will support retreat.

6.4.3. Perceived Parental Control and Use of the Environment.

6.4.3.1. Aim

Chapter Two reviewed previous studies that have illustrated how parents restrict access to the environment (van Vliet 1983, Maudlin & Meeks 1990, Cotterell 1993). Adolescents’ use of the environment often has to be negotiated with their parents and parents exert different levels of control over the adolescent (Baumrind, 1967). Previous studies have not considered how different parenting styles effect the adolescent’s freedom to use the environments available. The aim of this analysis was to examine the effect of parental control on use of the environment; Does use of the environment differ according to parental control?

6.4.3.2. The Measure

It was beyond the limits of this thesis to study actual parental control. Instead, a measure of perceived parental control was obtained from the participants. In the questionnaire participants had to indicate on a three point scale whether they thought their parents exerted a high, medium or low level of control over their use of environments for leisure. This measure
resulted in three groups of perceived parental control, high, medium and low. It was surmised that a high level of control would relate to authoritarian parenting style, medium level of control would relate to authoritative parenting style and a low level of control would relate to permissive parenting style.

6.4.3.3. Hypotheses and Analysis

It was postulated that the level of perceived parental control would effect use of the home, neighbourhood and town centre environments; access to the school environment would not be restricted by the parents. The following hypotheses were formed to address the research question, Does use of the environment differ according to parental control?

Home

It was hypothesised that a high level of perceived parental control will be related to high use of the home environment. A high level of parental control will result in access to the neighbourhood and town centre being restricted, thus resulting in greater utilisation of the home environment.

Neighbourhood

It was hypothesised that a high level of perceived parental control will be related to low use of the neighbourhood environment. Access to the neighbourhood will have to be negotiated with parents and a high level of parental control will relate to low access and use of the neighbourhood.

Town Centre

It was hypothesised that high perceived parental control will be related to low use of the town centre. Access to the town centre will have to be negotiated with parents and a high level of parental control will relate to low access and use of the town centre.

The relationship between the scale scores and perceived parental control were examined using Kruskal-Wallis tests and Mann-Whitney tests. Non-parametric analysis was used as the
scale scores were skewed. The Kruskal-Wallis tests identified if there were differences between the perceived parental control groups and the Mann-Whitney tests were used to contrast each group. The Mann Whitney tests were therefore subject to Bonferroni’s correction, which in this case was .05/3, where 3 is the number of comparisons possible between the groups. This method of conducting contrasts is appropriate for both planned and unplanned contrasts (Clark-Carter 1997). Thus, for the analysis of peer group structure Bonferroni’s correction was p<.0016.

6.4.3.4. Results

Figure 6.17. shows the frequencies for each perceived parental control group. One-third of the adolescents perceived a high level of parental control, half perceived a medium level of parental control and one-fifth perceived a low level of parental control.

![Figure 6.17. Frequency of Each Perceived Parental Control Group.](image)

Home

There were no significant differences between the perceived parental control groups and the Home-Retreat/Friendsoften ($\chi^2=.197, df=2, N=329, p>.05$) or the Home-Secureoften scale scores ($\chi^2=1.14, df=2, N=330, p>.05$). This refutes the hypothesis that a high level of perceived parental control will be related to high use of the home environment.
Neighbourhood

There were no significant differences between the perceived parental control groups and the neighbourhood INTERACT\_often ($\chi^2=5.141$, df=2, N=297, p>.05) or the RETREAT\_often scale scores ($\chi^2=0.969$, df=2, N=304, p>.05). This refutes the hypothesis that a high level of perceived parental control will be related to low use of the neighbourhood environment.

Town Centre

There were no significant differences between the perceived parental control groups and the town centre INTERACT\_often ($\chi^2=5.75$, df=2, N=415, p>.05) or the RETREAT\_often scale scores ($\chi^2=3.37$, df=2, N=422, p>.05). This refutes the hypothesis that a high level of perceived parental control will be related to low use of the town centre.

6.4.3.5. Discussion

There was no relationship between perceived parental control and use of the home, neighbourhood or town centre. It is surprising that parental control does not effect use of the environments as previous studies have found that parents' operate restrictions over adolescents' access to the environment (Maudlin & Meeks 1990, Cotterell 1993, Deem 1996). There are several possible explanations for these results. Firstly, it is possible that the measure of perceived parental control used in this study does not reflect the actual level of parental control. This study used a very simplistic measure of perceived parental control and this may not have encapsulated the complexity of the relationship between parental control and use of the environment.

It is also possible that parental control over use of the environment is only sought for use of certain environments at certain times. For example, many of the participants travel through the town centre everyday to get to school. Therefore, the town centre could be used for activities during these times and parental permission would not have to be sought. It is also possible that parental permission only has to be sought in exceptional circumstances and that use of the neighbourhood and town centre in the day time does not require permission. It might also be the case that parental control over adolescents' use of the environment is more subtle and less direct.
Further research is required that examines both perceived and actual parental control. It would be fruitful to examine in which circumstances parental control is exerted over adolescents' use of the environment. Such knowledge would further the understanding of adolescents' use of the environment.

6.4.4. Section Summary: Behavioural Attributes and Environmental Use

This section has described analyses that have examined the relationship between behavioural attributes and use of the environment. Peer-group structure has a very strong influence upon use of the environments for social interaction but not for retreat; an increase in peer-group size is associated with greater use of the environment for social interaction. For use of the environment for retreat, it is not enough to simply be alone in an environment that affords retreat, for retreat to take place. It is suggested that some impetus has to motivate the individual to seek out an environment that will support retreat. Surprisingly, perceived level of parental control had little influence upon use of the environments.

6.5. The Consequences of Environmental Use

6.5.1. Introduction

Chapter Two reviews literature that suggests that there are psychological consequences of the environment supporting development in adolescence. Spencer & Woolley (2000) believed that identity formation and well-being were two important outcomes of the environment supporting development. Chapter Two proposed that if the environment is supportive then identity and well-being will be high; a supportive environment is an environment that is used often (Wallenius, 1999). The aim of the following analyses is to examine the relationship between use of the environments and identity formation and well-being.
6.5.2. Urban-Related Identification and Use of the Town Centre

6.5.2.1. Aim

Chapter Two discussed theories of place identity and outlined Lalli’s theory of urban-related identification (Lalli, 1992). Urban-related identification is a measure of an individual’s identification with the town in which they live. The relationship between identity and use of the town is reciprocal; identification with a town relates to action and behaviour in that town and conversely, the extent to which the town supports action determines identification, (Reitzes 1986, Lalli 1992). This analysis examines the relationship between use of the town centre and urban-related identity for adolescents; Is use of the town centre related to urban-related identity?

6.5.2.2. The Measure

The urban-related identity scale (Lalli 1992) is a 20-item scale. The scale requires participants to rate 20 statements on a 5 point scale (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree); for example, the town is like a part of myself, the town is very familiar to me. The complete scale is shown in Appendix 3b. As there were 20 statements, possible urban-related identity scores ranged from 20 to 100. A low score indicates low urban-related identity and a high score indicates high urban-related identity.

6.5.2.3. Hypotheses and Analysis

It was hypothesised that there will be a positive relationship between use of the town centre and urban-related identity; high use of the town centre would indicate a supportive environment and therefore identification would be high.

The relationships between urban-related identity and the scale scores for the town centre were analysed using Spearman’s rho correlations (one-tailed). The analysis was non-parametric as the scale scores were skewed, whilst the urban-related identity scores were normally distributed. Correlation analyses are easily influenced by a high sample size and therefore for this analysis a high probability level (p<.001) was set to ensure against making a Type 1 error.
6.5.2.4. Results

The mean urban-related identity score was 69.78 (12.77), which is mid-point on the scale. Lalli found a similar mean urban-related identity score for his sample of German adults (67.24). Thus, urban-related identity for this sample was moderate. There was a positive correlation between the urban-related identity scores and the town centre INTERACT\textit{often} scale scores ($r=0.254$, $N=251$, $p<0.0001$). Thus, there was a significant relationship between identification with the town and use of the town centre for social interaction. This supports the hypothesis that there will be a positive relationship between use of the town centre and urban-related identity.

There was no significant correlation between urban-related identity scores and the town centre RETREAT\textit{often} scale scores ($r=0.066$, $N=260$, $p>0.05$). This result refutes the hypothesis that there will be a positive relationship between use of the town centre and urban-related identity.

Thus, the hypothesis that there will be a positive relationship between use of the town centre and urban-related identity is only partially supported; there is a positive relationship between urban-related identity and use of the town centre for social interaction, but not retreat.

6.5.2.5. Discussion

This analysis examined Lalli’s (1992) proposition that there is a reciprocal relationship between use of the town centre and urban-related identification. The findings partially support Lalli’s theory. Urban-related identity is related to use of the town centre for social interaction but not for retreat. There is a positive relationship between identification and use of the town centre for social interaction. This suggests that support for social interaction in the town centre results in high urban-related identity. We would expect to observe a similar relationship between urban-related identity and use of the town centre for retreat, but surprisingly, the same relationship does not hold. There is no significant relationship between urban-related identity and use of the town centre for retreat. There are no obvious explanations as to why urban-related identity would relate to use of the town centre for social interaction and not retreat. Further research needs to address possible explanations for these results.
6.5.3. Well-Being and Use of the Environments

6.5.3.1. Aim

Chapter Two reviewed previous research that has examined the relationship between psychological well-being and use of the environment. Wallenius, (1999) proposed that there is a sophisticated relationship between well-being and the supportiveness of the environment. Wallenius proposes that the supportiveness of the environment relates to use of the environment; a supportive environment is used often. A supportive environment also results in high psychological well-being; therefore an environment that is used often, is supportive and results in high psychological well-being. The relationship between supportiveness, use and well-being has not been examined for adolescents. The aim of this analysis was to examine whether use of the environment was related to well-being; Is use of the environment related to psychological well-being?

6.5.3.2. The Measures

Two measures of psychological well-being were used in this study; the self-esteem scale (Rosenberg 1965) and the behaviour problems index (Zill, 1985). These measures were designed to be used with adolescents and are therefore different to the measures used by Wallenius in her study of adults. However, like Wallenius both a positive and a negative well-being construct were measured.

The self-esteem scale (Rosenberg, 1965) is a 10-item scale that measures adolescents' global feelings of self-worth and self-acceptance. Rosenberg tested the self-esteem scale on an American sample of over 5,000 adolescents and found that it demonstrated reliability and validity. The self-esteem scale is a self-report measure and consists of items that relate to self-esteem such as 'I certainly feel useless at times' and 'I feel that I have a number of good qualities'. The complete self-esteem scale is shown in Appendix 3b.

In this study the self-esteem scale was completed using a 5-point scale (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). As there are 10 items in the scale possible self-esteem scale scores ranged from 10-50. A low score indicated low self-esteem and a high score indicated high self-esteem.
The Behaviour Problems Index (Zill, 1985) is a 27-item scale that assesses the frequency with which specific behaviours have occurred over the previous three months. Zill tested the index on an American sample of over 15,000 children aged between 4-17 years and found that it demonstrated reliability and validity. The behaviour problems index includes items that relate to depression/internalising behaviours such as ‘I was fearful or anxious’, ‘I felt unhappy, sad or depressed’ and items that relate to anti-social behaviours such as ‘I was disobedient at home’, ‘I bullied or was cruel and mean to others’. The complete scale used is in Appendix 3b.

As the scale used a three point-scale, ‘Not true’, ‘Sometimes true’, ‘Often true’ and there were 27 items, possible behaviour problems index scores ranged from 27 to 81. A low score indicated a low behaviour problems index score, i.e. low incidence of problem behaviour and high well-being and a high score indicated a high behaviour problems index score, i.e. high incidence of problem behaviour and low well-being.

6.5.3.3. Hypotheses and Analysis

It was hypothesised that there will be a positive relationship between use of the home, neighbourhood, school and town centre and psychological well-being. High use of an environment is indicative of high supportiveness and a supportive environment is related to high psychological well-being.

The relationships between self-esteem and the behaviour problems index and the scale scores were analysed using Spearman’s rho correlations (one-tailed). The analysis was non-parametric as the scale scores were skewed, whilst the self-esteem and the behaviour problems index scores were normally distributed. Correlation analyses are easily influenced by a high sample size and therefore for this analysis a high probability level (p<.01) was set to ensure against making a Type 1 error.
6.5.3.4. Results

Self-Esteem

The mean self-esteem scale score for this sample was 34.61 (7.34), which is mid-point on the scale. This would be expected as the scale is designed to have a normal distribution and therefore norms for this scale would fall in the mid-range of the scale. Therefore, self-esteem for this sample was moderate.

Home

There were no significant correlations between self-esteem scale scores and the Home-Retreat/Friends\textsubscript{often} (r=.084, N=287, p>.05) or the Home-Secure\textsubscript{often} scale scores (r=.107, N=288, p>.01). These results refute the hypothesis that there will be a positive relationship between use of the home and psychological well-being.

Neighbourhood

There were no significant correlations between self-esteem scale scores and the neighbourhood INTERACT\textsubscript{often} (r=.135, N=242, p>.05) or the RETREAT\textsubscript{often} scale scores (r=.081, N=248, p>.05). These results refute the hypothesis that there will be a positive relationship between use of the neighbourhood and psychological well-being.

School

There were no significant correlations between self-esteem scale scores and the school INTERACT\textsubscript{often} (r=.156, N=214, p>.01) or the RETREAT\textsubscript{often} scale scores (r=.063, N=213, p>.05). These results refute the hypothesis that there will be a positive relationship between use of the school and psychological well-being.

Town Centre

There were no significant correlations between self-esteem scale scores and the town centre INTERACT\textsubscript{often} (r=.064, N=307, p>.05), or the RETREAT\textsubscript{often} scale scores (r=.092,
N=315, p>.05). These results refute the hypothesis that there will be a positive relationship between use of the town centre and psychological well-being.

Behaviour Problems Index

The mean behaviour problems index score for this sample was 60.74 (11.42), which is midpoint on the scale. This would be expected as the scale is designed to have a normal distribution and therefore norms for this scale would fall in the mid-range of the scale. Therefore, problem behaviour for this sample was moderate.

Home

There were no significant correlations between the behaviour problems index scores and the Home-Retreat/Friends0ften (r=-.158, N=219, p>.05) or the Home-Secure0ften scale scores (r=.105, N=221, p>.05). These results refute the hypothesis that there will be a positive relationship between use of the home and psychological well-being.

Neighbourhood

There was no significant correlation between the behaviour problems index scores and the neighbourhood INTERACT0ften scale scores, (r=-.077, N=142, p>.05). There was a significant negative correlation between behaviour problems index scores and the neighbourhood RETREAT0ften scale scores (r=-.164, N=142, p<.01). High use of the neighbourhood for retreating is associated with low behaviour problems scores (which indicate high psychological well-being). Thus, there is only partial support for the hypothesis that there will be a positive relationship between use of the neighbourhood and psychological well-being; use of the neighbourhood for retreat is associated with high well-being.

School

There was no significant correlation between behaviour problems index scores and the school INTERACT0ften scale scores, (r=-.105, N=188, p>.05). There was a significant negative correlation between behaviour problems index scores and the school RETREAT0ften scale scores (r=-.217, N=185, p<.001). High use of the school for retreating is associated with low
behaviour problems scores (which indicate high psychological well-being). Thus, there is only partial support for the hypothesis that there will be a positive relationship between use of the school and psychological well-being; use of the school for retreat is associated with high well-being.

Town Centre

There was no significant correlation between behaviour problems index scores and the town centre INTERACT\_often scale scores, \((r=-.052, N=226, p>.05)\). There was a significant negative correlation between behaviour problems index scores and the town centre RETREAT\_often scale scores \((r=-.323, N=231, p<.0001)\). High use of the town centre for retreating is associated with low behaviour problems scores (which indicate high psychological well-being). Thus, there is only partial support for the hypothesis that there will be a positive relationship between use of the town centre and psychological well-being; use of the town centre for retreat is associated with high well-being.

6.5.3.5. Discussion

This analysis examined Wallenius’s (1999) proposition that there is a relationship between use of the environment and psychological well-being. Psychological well-being was related to use of the environments for retreat, but not for social interaction. There was a relationship between problem behaviour and use of the neighbourhood, school and town centre for retreat but not for social interaction. The more often the neighbourhood, school and town centre were used for retreat, the higher psychological well-being was. There was no relationship between self-esteem and use of the home, neighbourhood, school or town centre or problem behaviour and use of the home.

Like Wallenius’s study (1999), the current study used both a positive and a negative construct to measure psychological well-being. Whilst Wallenius (1999) found that the positive construct of satisfaction with life was related to use of the environments for adults, the current study found that the negative construct of problem behaviour was related to use of the environments for adolescents. The current study provides a more detailed analysis of the relationship between environmental use and psychological well-being as it considers use of different environments for different activities. The findings of the current study suggest that
for adolescents there is only a moderate relationship between use of the environment and psychological well-being.

6.5.4. Section Summary: The Consequences of Environmental Use

There are psychological consequences of the environment supporting development in adolescents' identity and well-being (Spencer & Woolley, 2000). These analyses have examined the relationship between the supportiveness of the environment, as measured by environmental use, and urban-related identity and well-being. The results indicate a modest relationship between use of the environments and urban-related identity and well-being.

6.6. Chapter Summary

This chapter has examined group differences in use of the home, neighbourhood, school and town centre. The chapter illustrates that adolescents' use of the environment is not uniform; differences in use do occur between different user groups. The current study furthers previous research by examining group differences in the use of specific environments for specific behaviours.

The analysis in this chapter indicates that whilst age and gender do influence use of the environments, social class does not. There is a developmental dimension to environmental use; there are peaks in the use of specific environments for specific affordances for certain age groups. Gender only affects use of the environment for retreat; there were no gender differences in use of the environments for social interaction. These findings suggest that age and gender have a more moderate affect upon environmental use than suggested by previous studies (e.g. Coleman 1979, Schiavo 1988, Maudlin & Meeks 1990, Cotterell 1993, Hendry, Shucksmith, Love & Glendinning 1993, Deem 1996, Blatchford 1998).

This chapter also furthers previous research by examining the relationship between preference for an environment and use of the environment. Previous studies have assumed that preference for an environment relates to use of the environment (Eubanks Owens 1988, van Andel 1990, Korpela 1992, Eubanks Owens 1994, Lieberg 1997). The current study found that preferences do relate to use of the environment in some settings, for certain
affordances. It should therefore not always be assumed that positive preference for an environment relates to high use of the environment. This study also found that the town centre is the overwhelmingly preferred environment for adolescents.

One of the main findings of this chapter is that peer-group structure is a very strong influence upon adolescents' use of the environment. An increase in peer-group size is associated with greater use of the environment for social interaction. However, the inverse of this relationship does not hold true for retreat; being alone is not associated with greater use of the environment for retreat. It is suggested that seeking out environments for retreat needs an impetus and motivation; it is not enough just to be alone in an environment for retreat to occur. The findings for use of the environment for social interaction support Cotterell's (1996) proposition that the size of a peer-group affects the type of activities it can engage in.

Previous research suggests that a supportive environment has psychological consequences (Lalli 1992, Wallenius 1999, Spencer and Woolley 2000). This chapter has examined two of these proposed consequences; urban-related identity and psychological well-being. There was some support for a relationship between urban-related identity and use of the town centre; high urban-identity was related to use of the town centre for social interaction. There was also support for a moderate relationship between psychological well-being and use of the environments; well-being as measured by problem behaviour was related to use of the environments for retreat. Overall the relationships between use of the environment and urban-related identity and psychological well-being were not as convincing as previous research has suggested (Lalli 1992, Wallenius 1999)

This chapter has focused upon examining group differences in adolescents' use of the home, neighbourhood, school and town centre environments. Whilst identifying that group differences exist, there is a lack of explanation as to why for example, one year group or one gender should use the environment differently to another.

Whilst Chapter Five focused upon the social function of the environments and Chapter Six upon use of the environments, Chapter Seven broadens the study of adolescents' environments to include a consideration of the affective aspects of environmental use. Chapter Seven examines how adolescents' feel about the environments and how these feelings relate to their environmental use. It is hoped that by examining adolescents' feelings
and experiences in these environments that further explanations may be found for some of the group differences identified in Chapter Six. Also, thus far, no consideration has been given to how adolescents’ feel about the home, neighbourhood, school and town centre environments. Examining these feelings will add a further dimension to this examination of adolescents’ environments.
Chapter Seven: Experiences in the Home, Neighbourhood, School and Town Centre Environments.
7.1. Introduction

This chapter broadens the study of adolescents' environments to include the consideration of how adolescents experience and feel about the home, neighbourhood, school and town centre environments. Whilst Chapters Five and Six have focused upon the function and use of the environments, this chapter broadens the study of adolescents' environments to include a consideration of the affective aspects of environmental use. How do adolescents' feel about these environments? What factors effect use of these environments? What emotional responses do these environments elicit? This chapter presents the results of Study Four, which employed a focus group methodology to examine adolescents' feelings about the home, neighbourhood, school and town centre environments.

Chapter Two discussed previous research that has considered what factors can effect adolescents' use of the environment. Previous research suggests that adolescents' use of the environment is strongly influenced by social categories (Cotterell, 1996, Simpson 2000). This chapter examines the influence of social categories upon use of the key environments.

Previous research has found that fear is a predominant emotional response to the neighbourhood and town centre environments (Brown 1995, Lupton 1999, Woolley, Dunn, Spencer, Short & Rowley 1999b). Woolley et al (1999b) suggest that adolescents' use the town centre to learn how to handle threatening experiences. This chapter examines adolescents' experiences of fear and whether fear effects their use of the environment.

This chapter also examines age and gender differences in experiences in the home, neighbourhood, school and town centre. Chapter Six identified age and gender differences in use of the four environments and this chapter identifies further explanations for these age and gender differences.

7.2. Methodology

7.2.1. Aim and Design

The aim of this study was to explore adolescents' experiences of the home, neighbourhood, school and town centre. This study employed focus groups to examine adolescents' experiences of the environments. A qualitative methodology was appropriate for examining
and gaining insight into the feelings associated with the environment as it enabled adolescents to describe their own experiences. The main research questions were; how do adolescents' experience these environments and how do adolescents' feel about these environments? Age and gender differences in these feelings and experiences were also examined in the focus group discussions.

Focus groups are discussion based interviews that use simple, focused, opened ended questions to get participants discussing the topic in question. The focus is upon the participants to expand the topic and to describe their own experiences. Groups are used as it is assumed that the participants will become more aware of their own perspective when confronted with the perspectives of others with whom they may disagree. Section 4.5.2. provides a more in-depth description of the focus group methodology.

7.2.2. Participants

The participants were sampled from the school used in Studies One, Two and Three. This ensured comparability between the four studies conducted. Throughout the thesis views about the same town centre and school environments have been elicited.

Six single gender focus groups were held with groups of adolescents from Years 9, 10 and 11 (13-16 years of age). Each focus group consisted of six participants. It was not possible to conduct focus groups with all five year groups; the school felt that this would take too much organisation on their part. Thus, the three highest year groups were selected to take part in this study. It was felt that these three year groups would reflect the diversity of feelings and experiences associated with the home, neighbourhood, school and town centre.

The focus group discussions took place during class time. At the beginning of the class, the researcher explained that she required six participants to take place in a focus group discussion, what the focus group would involve and that feelings and experiences about the environment would be discussed (See Appendix 4a). On the basis of this explanation, participants then volunteered and the teacher selected the participants. Volunteering to take part was taken to indicate consent. It was requested by the researcher that the individuals selected by the teacher were not close friends with others in the group, but this was not always realised.
7.2.3. Procedure

This study was carried out in February 1999. The focus groups were held during class time. The focus group discussions took place in an unused classroom in the school and lasted for approximately 45 minutes. Prior to the discussion, the researcher explained to the participants their right to withdraw from the research process at any time.

In the discussions the participants were required to discuss feelings and experiences of the home, neighbourhood, school and town centre environments. The schedule of questions asked in the focus groups are listed in Appendix 4a. The discussions were tape recorded with the participants permission and later transcribed by the researcher.

7.2.4. Analysis

The transcripts of the focus group were thematically analysed to examine the meanings and feelings associated with the home, neighbourhood, school and town centre environments. This study was concerned with the meanings associated with the four environments and the resulting data was analysed using qualitative content analysis (see Millward 2000). Qualitative content analysis places emphasis upon the meaning rather than on the quantification of themes.

The transcripts were analysed for each of the four environments separately; the aim was to increase the understanding of how each of the environments were experienced by the adolescents. Initially, for each environment themes were identified from the focus groups. Transcripts were then re-analysed several times, collapsing these themes into the key themes that are reported in the next section. For each transcript a table was drawn up that described which themes occurred in each of the focus groups (see Appendix 4b). This table enabled the differences and similarities between the groups, in terms of school year and gender, to be examined. Quotes are included in the analysis that illustrate the themes, and similarities and differences in opinions between the groups.
7.3. Experiences in the Town Centre

7.3.1. Introduction

Four main themes emerged from the focus group discussion about the town centre. The first theme related to use of the town centre. The town centre environment offered far more activities both in terms of number and variety than any of the other environments. As a result use of the town centre was discussed at great length. The second theme related to group conflict within the town centre. Experiences in the town centre were strongly influenced by the presence of other threatening groups of adolescents. The third theme related to the female adolescents' feelings of fear and vulnerability in the town centre. Female experiences in the town centre at night were dominated by feelings of fear and vulnerability; however only the younger adolescents avoided the town centre because of these fears. The fourth theme related to adolescents’ dissatisfaction with the town centre in providing activities for their age group.

7.3.2. Use of the Town Centre

All the age groups mentioned using the town centre for hanging around, wandering around and being with large groups of friends. They also mentioned the activities of shopping, fast-food restaurants and going to the cinema as popular leisure pursuits.

"We just walk around and go to the cinema", Martin, Year 9

"Most weekends we just hang around down there and go in the shops and stuff", Amelia, Year 9

"Meeting friends and shopping", Samantha, Year 11

"Hanging out with friends and McDonalds and stuff", Anthony, Year 11

"We just go to meet friends and look around. See what is new", David, Year 11

"The town centre is somewhere to be with your friends", Elizabeth, Year 10

"Usually I would go to the cinema, Burger King, looking around the shops, just generally mucking about really", Mark, Year 10

Whilst there was homogeneity between the groups in terms of using the town centre for these affordances there were differences between the age groups in terms of what times of day the town centre was used, their motives for use of the town centre and how advanced use of the town centre was.
The two youngest groups (Year 9 boys and girls) only used the town centre at the weekends in the daytime. Indeed, for some adolescents the only time they had been into the town centre at night was to look at the Christmas lights with their parents. The Year 10 boys only occasionally used the town centre at night time and this use was motiveless; they would just wander around and were not utilising the town centre for any specific activity.

“We do occasionally walk around the town centre at night. Only occasionally. If we go to someone’s house and they live in Guildford then we get bored of their house and just walk around Guildford”, Adrian, Year 10

The Year 10 boys were also the only group who mentioned committing acts of vandalism in the town centre. Several adolescents recalled acts of vandalism they had committed and said that it was fun.

“I use to go up to the multi-storey car park and make a little bonfire and take tiles off the top and chuck them down to the street”, Chris, Year 10

“When we use to skate, me and Mark, we chucked this filing cabinet off the multi-storey car park. It was fun”, Darren, Year 10.

The Year 10 girls were far more sophisticated in their use of the town centre than their male counterparts; their use of the town centre is in many ways comparable to an adult’s use of the town centre. They used the town centre after school, at weekends and also at night time. Getting away from their parents and avoiding going home after school were strong motives in their use of the town centre.

“Town isn’t somewhere for you to really go with your parents. Usually you just want to get away from them”, Joanne, Year 10

“.the town you go to, to get away from everyone and to be with your friends and it’s something you do and whether you are shopping or not it doesn’t really matter you know, because you are with your friends”, Elizabeth, Year 10

“Sometimes I stay in town. Like if I have got to get something or if I just didn’t want to go home”, Elizabeth, Year 10

“If you don’t want to go home because your parents are getting on your nerves”, Hayley, Year 10

This group were also the first to discuss use of the town centre for over 18 activities. In the UK the legal age to consume and purchase alcohol is 18 years. Entry to nightclubs and pubs is therefore based upon the individual being 18 years old. Whilst the Year 10 girls admitted that they looked too young to gain access to pubs and nightclubs, they could sometimes purchase alcohol from an off-licence.
“Sometimes, if like one of you looks old enough you might go into an off-licence and get something to drink. But it isn’t like, not loads of alcohol, just like sitting around drinking it”, Joanne, Year 10.

For nightclubbing they had to be content with the under 18’s events that most of the nightclubs ran every month. These were popular as they gave the adolescents the chance to dance and also to meet new people.

“We go to clubs and like dance and because there are no other places to dance there will be loads of us and that is like when you meet other people from other schools or different ages, Elizabeth, Year 10

The Year 10 girls used the town centre in a far greater activity based way than both the younger adolescents and male adolescents. This pattern continues for the Year 11 girls who structure their use of the town centre around specific activities and also engage in over 18 activities. Indeed, there was a strong preference for using the town centre at night rather than in the day time. The lack of provision for their age group was given as a reason for going to clubs and pubs but the excitement of the risk involved also played a role.

“I go to Bo’s (a nightclub) or the pubs really. That’s what I do in the evening. I don’t go out much during the day unless I really need to go shopping. Most people find that going out to Bo’s you meet more people anyway”, Nichola, Year 11

“We are at that stage where there are places to go but you are not really suppose to go there”, Ellie, Year 11

“We are at the age where you get to the point…. I just got so bored with nothing to do that you have to go to the extremes of doing things which aren’t actually legal”, Becky, Year 11

“If they had an all night café maybe people wouldn’t have started going to pubs and whatever so early. But because there is nothing else you want to find new things at an earlier age. Plus it is more fun if you are underage and trying to get in because you have the risk of getting caught...which you don’t like but it is there anyway”, Nichola, Year 11

Pubs and clubs were desirable leisure venues for several reasons; they offered enjoyment, alcohol and the opportunity to meet new people. The group did not really worry about being underage users of pubs and clubs. They felt that the police really lacked the power to do anything and that the worst thing that could happen was to be thrown out of the pub and embarrassed in front of other people.

“The clubs are the easiest place really because you will get people just coming up to you. Because it is that sort of atmosphere you will meet more people. They are more likely to come and open up to you”, Nichola, Year 11
"We don’t go out to get drunk and act stupid. We go out to drink, to enjoy ourselves, Nichola Year 11.

“It’s not like they [the police] can take us home and show us to our parents”, Samantha, Year 11

In comparison the Year 11 boys did not use the town centre at night time or for over 18's activities. They instead expressed their frustration at the lack of activities for their age group; they were legally too young to use clubs and pubs and did not wish to socialise with younger adolescents.

“We are too young for pubs and we are too old for youth clubs and things like that. We need something for our age, so that we can hang around”, David, Year 11

“They have some events going on in nightclubs for people our age, but they are usually pretty boring”, David, Year 11.

“In the under 18's clubs you get a lot of really young ones”, Gary, Year 11

“Instead of being 18 to get into a nightclub I reckon you should be 16. It’s all based on whether they think you are old enough to drink inside. I am not saying that you should be able to drink at 16, just go into a nightclub”, David, Year 11.

7.3.3. Group Conflict in the Town Centre

In discussing their use of the town centre all the groups mentioned the group conflict that characterised use of the town centre. All groups acknowledged that there were different types of groups of adolescents who used the town centre; groups named included Grungers, Skaters, Goths, Garys and Sharons (working class adolescents). These classifications encompass both different lifestyles and distinctive styles of dress. None of the adolescents belonged to any of these groups and when asked to describe themselves the adolescents described themselves as normal or the ‘norms’. The adolescents described how the presence of these out-groups meant that you could not be yourself in the town centre.

“You have always got people who are like different...different to us. You have got the Grungers, the Skaters...you don’t want to hang around with any of them as they are too immature. So you sort of make up your own group”, Claire, Year 9.

“Town is divided into groups like Skaters, Grungers, Goths and Garys and Sharons and I don’t know..they just can’t share. They can’t accept people who are different, so you can’t be yourself”, Joanne, Year 10.

“You can’t be different as in act stupid or anything as you are just going to get laughed at”, David, Year 11

“People judge you by what you are doing quite a lot”, Connor, Year 10
Two other types of groups were also mentioned by the participants; groups of adolescents from specific housing estates and groups of adolescents from other schools.

"From different schools the girls get..the girls from George Abbot [another school] are well bitchy. They get so leary, they don't want to like get on with us", Hayley, Year 10

"In winter it’s horrible as you go into the Friary [a shopping mall] as you find that there are people like from Park Barn who are out for a fight", Nichola, Year 11.

"But the Park Barn people they go out and they actually go out and try and be hard and smoke and stand on the side starring at people and shouting abuse at them, Nichola, Year 11.

All of these different out-groups were seen to judge the ‘normal’ adolescents. Adolescents had been subject to verbal abuse from these out-groups and felt vulnerable when confronted by them in the town centre. The adolescents also discussed how, when in the town centre, they avoided attracting the attention of these out-groups. Physical fighting appeared to be confined to between the out-groups and none of the adolescents reported being involved in physical fighting with these out-groups.

"Well basically you have to watch what you say. People our age, who may be a bit different, even if you are not looking or anything. They are like ‘oh they are looking at us’. There are people like that so you should go with the right people. But it doesn’t really matter. It is quite a safe environment but you have to watch what you say around those people or look the other way. So that way you can’t be yourself. You can’t really relax”, Joanne, Year 10

"You have to fit into the category and the other categories take the piss out of you”, Darren, Year 10

"There are quite a lot of fights. Well not quite a lot but like if there are fights it’s between a bunch of Garys and a bunch of Grungers”, Hayley, Year 10

Apart from trying to avoid attracting the attention of these groups, the adolescents did not mention avoiding certain parts of the town because of them. Indeed, some adolescents accepted that the presence of people they didn’t like was something that had to be endured. You cannot control who does and does not have access to public spaces.

"It’s like you can go out in Guildford, but there are always going to be some kinds of people that you don’t want to hang around with. I think that whatever you do they are going to end up being there. That is the problem. You can’t just say ‘you can’t come here as we don’t like you’", Gillian, Year 11

Indeed, it is possible that learning to cope with a threatening situation like this is an important life skill that adolescents learn in the town centre. Adolescents have to learn to cope with conflicts with other users of the environment.
7.3.4. Vulnerability and Fear in the Town Centre

All of the female adolescents felt vulnerable when using the town centre at night. Two types of vulnerability were discussed; perceived vulnerability which was based on hearsay and actual experienced vulnerability. The youngest group of girls rarely used the town centre at night and their reports of vulnerability were strongly based on hearsay.

“No, there is no point. New Year’s Eve I didn’t go into town but I was told by quite a few people who did that everyone was just being sick everywhere and they were all drunk and out of their heads”, Claire, Year 9

This group suggested that their lack of use of the town centre at night was because they were so vulnerable. The town centre was avoided at night so that they didn’t get into a situation that they could not control or cope with. This group also discussed how their parents did not like them to use the town centre at night and the group felt that their parents did have valid concerns about their safety in the town centre.

“In the summer they will let me out if they know where I am going then they usually let me. If I am just going to wander around town then they don’t like that”, Amelia, Year 9

“They don’t like me being out where they don’t know where I am. They like to know where you are, which is acceptable as they don’t want you getting raped or anything. They don’t like me just wandering the streets”, Claire, Year 9

Only one older adolescent reported similar feelings to the youngest adolescents.

“Yeah, I haven’t been but from what other people have said I don’t like the sound of it. Sounds scary”, Kelly, Year 10

“I don’t want to walk around town on my own”, Kelly, Year 10

Thus, for the younger adolescents perceived vulnerability can affect use of the town centre at night time. Parents share the fears of the adolescents and hearsay from both parents and other adolescents act to collaborate feelings of perceived vulnerability.

The two older age groups used the town centre at night time for leisure. Surprisingly, most of the older adolescents had experiences in the town centre that had made them feel fearful and vulnerable. Feelings of vulnerability were associated with not being in control, for example being too drunk or surrounded by drunk people, pushy men and strangers. Fear was often associated with being in environments meant for over 18’s and the use of under 18’s environments was associated with feeling considerably less vulnerable.
"I went out with my friends and got chatted up by loads of guys and they were really pushy and everything. You wouldn't think. I don't know. Sometimes you do get in the position where there is no one to help you and you get really scared. So it is best to go with quite a lot of people if you are going to go", Joanne, Year 10

"It's a lot more safe in the under 18's [nightclub]. Because we were younger and more vulnerable. So older guys would take advantage of you. If you are taking alcohol then you are a lot more vulnerable", Joanne, Year 10

"I was in Wetherspoons [a pub] once and someone got bottled because there was a massive fight. This woman got taken out screaming", Nichola, Year 11

Whilst the Year 10 girls attributed feeling vulnerable to losing control of the situation, Year 11 girls attributed feeling vulnerable to the fact that Guildford was not a safe town. They cited the police presence as supporting the fact that Guildford was unsafe.

"There is always some sort of fight going on in Guildford, whenever I am out there. I think that that is why the police have to be everywhere. And the murder up by the Civic Hall", Becky, Year 11

"My Mum hates coming into Guildford to pick me up. I think because when she came to pick me up once there was this fight in The Drink [a nightclub] and a bloke ran out into the road and was killed", Gillian, Year 11

Despite feeling vulnerable in the town centre, both the Year 10 and Year 11 girls continued to utilise it. In fact, learning how to handle the fear was seen as important. Feeling fear did certainly not put these groups of girls off using the town centre at night, it was just something that had to be borne.

"We still go into town as there isn't much to do. You just have to handle it. Take it with how it flows. You can't do anything about it", Joanne, Year 10

"Sometimes it will be good and sometimes not", Ellie, Year 11

"It just depends what kind of people are there. You have to handle it. You can't do anything about it. You have to have some fun", Joanne, Year 10

It is interesting that the females gave such vivid accounts of their feelings of vulnerability in the town centre and that males only reported feeling vulnerable in situations of group conflict. One explanation for this difference is that the males in Years 10 and 11 reported hardly ever using the town centre at night and the female accounts of vulnerability relate only to use of the town at night.
7.3.5. Dissatisfaction with the Town Centre

All the groups except the Year 10 boys felt that there were not enough facilities in the town centre for their year group. Each year group felt that they had needs that were particular to their age group that were not being met by the town centre. The use of the term age group by the adolescents was confined to their own specific age group; it did not refer to adolescents that were either younger or older. Whilst we might expect discussions of the school environment to be marginalised by school year, we would not necessarily expect discussions of the town centre to be marginalised along the same lines.

The Year 9 adolescents were the least specific about what the town centre lacked and what needs were not met. Both Year 9 boys and girls felt that the town centre was boring despite the fact that in their discussions of all four environments, the town centre stood out as by far the most interesting and attractive environment available to them. There was a sense in which the Year 9 adolescents were simply repeating claims they had heard about the town centre being boring. When pressed to articulate what the town centre lacked the discussions became considerably limited. The Year 9 boys wanted more places to hang around, to meet new people and to avoid adult supervision and the girls wanted a youth club and to be kept occupied.

"Yeah, we don't want to walk the streets late at night but at the end of the day that is all that you can do. We need it to be not expensive as obviously we are not earning any money. Just something that can keep us occupied and is not boring, activities that change all the time", Claire, Year 9

However, this lack of articulation could also be due to their more limited experience in the town centre compared to the older age groups; the Year 9 adolescents reported only using the town centre during the daytime at the weekends.

The Year 10 girls felt that the town centre lacked places where they could go to meet people. They felt that pubs and clubs offered the best opportunities for this and were frustrated that they were too young to gain entry to such settings. They were also frustrated that places they could use such as cafés required them to keep spending money if they wished to stay in them.

"If we were older it would be much easier to go into a pub or something to meet people. At our age it is quite difficult", Elizabeth, Year 10

"If you do go into a place the thing is like you usually don't have much money so you can get like a drink and then you have to go. Then you are like 'where are we going to go now?' Places won't have you unless you are buying something, so you end up just walking around", Joanne, Year 10
"They start chucking you out [in cafés] if you don’t buy anything every 15 minutes or something", Hayley, Year 10

The Year 11 girls felt that the town centre lacked provision, variety and space for their needs.

“[The town] is too small now anyway. You have done everything around town, all they have got is Laserquest or whatever”, Nichola, Year 11

“There’s not much to do. You want something new, it doesn’t really matter what. Just something different”, Gillian, Year 11

“You don’t want the size of London but you want more variety”, Samantha, Year 11

This group seemed to have given the greatest consideration to what could be provided to meet their needs. They had a strong opinion about not wanting to share their leisure facilities with younger adolescents and wanted places where they could gather with their friends located away from pubs and clubs and areas in which they felt vulnerable.

“Yeah, you hear of people trying to open up a 16 year old’s dance club and you are like ‘I don’t want to go there’”, Samantha, Year 11

“If there were cafés and stuff my Mum would let me go. They wouldn’t have a problem with that. They would be more comfortable”, Ruth Year 11

“It would be nice to just have somewhere you could be with all your friends without any other hassle”, Nichola, Year 11

There was also a strong sense of injustice that the decision makers in Guildford could not be bothered to provide for their age group and this group felt that the decision makers were more concerned with commerce than with providing leisure facilities for their age group.

“I just think that in Guildford where things are being redeveloped yet they can’t fit in anything for people of our age. It’s always got to be an office block or something to make money”, Becky, Year 11

“They are always building houses, yet there is nowhere for people to go”, Gillian, Year 11

Thus, the majority of adolescents expressed dissatisfaction with the town centre despite the fact that it is the most utilised and attractive environment available to them and that it offers the greatest variety of leisure time pursuits. The older adolescents especially are very articulate about what additional provisions they would like to see in the town centre and it would appear that with careful planning and a little investment most of these provisions could be achieved.
7.3.6. Discussion

Despite being a highly used environment, the town centre was not evaluated very positively by adolescents. The only positive aspect of the town centre that was discussed was being with friends. Being with friends was an important element in using the town centre. However, despite the commonality of being with friends there were both age and gender differences in experiences and use of the town centre. Younger adolescents and male adolescents reported using the town centre only in the day time. These groups use the town centre in an unstructured, motiveless way to hang around with their friends. The older female adolescents’ use of the town centre was far more sophisticated; they used the town centre in both the day time and evening and use was activity based.

The adolescents' experiences in the town centre were strongly influenced by the group memberships and group conflict that occurred in the town centre. Out-groups were demarcated by their dress and lifestyles. Adolescents reported feeling threatened by the presence of out-groups. Adolescents did not avoid using the town centre because of these groups; but their presence did affect how the town centre was used. The groups described in the town centre are similar to the reputation based peer-groups and social identity groups described by Cotterell (1996). The current findings are also similar to those of Simpson (2000), who found that the use of public places by adolescents was affected by social categories. These findings suggest that social categories are another type of environmental affordance; the function of the environment altered with the presence of out-groups.

Female adolescents’ experiences in the town centre were strongly influenced by feelings of vulnerability and fear. For the younger adolescents this vulnerability was based upon hearsay from parents and friends. Female adolescents’ feared physical assault from drunk people, pushy men and strangers. They avoided the town centre because of these fears and felt that their parents concerns were valid. The older female adolescents used the town centre often at night and their fears were based upon experience. Fear was often associated with the use of Over 18’s environments. For the Year 10 females, feelings of fear were attributed to a loss of control over the situation, whereas the Year 11 females attributed feelings of fear to the fact that Guildford was unsafe. None of the Year 10 or 11 female adolescents had avoided the town centre because of fear. This suggests that learning how to handle fear is an important competence developed in the town centre; a suggestion also made by Woolley, Dunn, Spencer, Short & Rowley (1999b). These results suggest that learning to handle fear is an affordance of the town centre. The town centre functions as an environment where fear management can be learnt.
The current findings are similar to those of Woolley, Dunn, Spencer, Short & Rowley (1999b). Both studies have found that adolescents feel vulnerable in the town centre and fear physical assault. However, the current study found that only females feel vulnerable in the town centre. Woolley et al (1999b) found that fears were associated with undesirable adults and adolescents, whereas in the current study female fears were associated with older pushy men. The current study examined feelings of fear for both an older and a wider age range than the Woolley et al (1999b) study.

All the adolescents expressed dissatisfaction with the town centre, despite the fact that the town centre stands out as easily the most attractive environment available to the adolescents. The adolescents felt that the town centre did not meet their needs. The younger adolescents were not very articulate about what leisure facilities they would like in the town centre. The older adolescents wanted places, such as cafes, where they could be with friends and meet new people. They did not want to share facilities with younger or older adolescents and they wanted these facilities located away from places where they felt vulnerable, such as existing nightclubs and pubs.

Interestingly, none of the adolescents described using the town centre for retreat, thus, it was not possible to identify further explanations for the age and gender differences in use of the town centre for retreat, identified in Study Three. Studies Three and Four use different methodologies and this could account for the different findings. However, Woolley, Spencer, Dunn & Rowley (1999a) found that adolescents used the town centre for retreat, using a focus group methodology. One possible explanation for the difference in findings is that in the focus group discussions for Study Four, adolescents were not specifically asked about use of the town centre for retreat.

Thus, adolescents had to endure feelings of fear and vulnerability and group conflict when using the town centre to be with their friends. Adolescents felt that the town centre did not provide enough activities and facilities for their age group.

7.4. Experiences in the School

7.4.1. Introduction

Five main themes emerged from the focus group discussions about the school. The first theme related to the importance of friends and more importantly belonging to a *friendship group* within the school. Activity within the school took place within these groups and these
groups gave the adolescents a sense of belonging. The second theme related to group conflict, both between friendship groups and school years and also to space conflict in the school. The lack of space within the school to cater for different needs and activities was a cause of contention between the adolescents. The third theme related to dissatisfaction with the school environment, which centred around the lack of space within the school to meet their needs. The fourth theme related to the female adolescents’ discussions about the difficulties of using the school for retreat. The fifth theme related to the female adolescents’ vulnerability to the judgements of peers in the school. Female adolescents felt strong pressure to fit in and conform within the school environment.

7.4.2. Friendship Groups

As with the other environments being with friends was very important. For the adolescents use of the school environment centred around use that occurred within the friendship group. Female adolescents described how they hung around in friendship groups with their close friends, whilst male adolescents used their friendship group for sporting activities at break- and lunch-time. The oldest adolescents who were shortly to be leaving school felt that being with their close friends was one of the main aspects of school that they would miss.

“We all have our own little groups out in the playground, around the courtyard and around the back”, Martin, Year 9

“Because we have been here since Year 7 we have all got into groups with close friends that we like to hang around with”, Elizabeth, Year 10

“At the end of the holidays sometimes it is quite nice to go back to school, to see your friends that you haven’t seen during the holidays”, Connor, Year 10

“I have quite a few close friends but then I also have a lot of friends who I don’t really know that well”, Elizabeth, Year 10

“And we are all like best friends but we do have other friends and I don’t know, we do sometimes hang around with other people but it is mainly maybe just us”, Joanne, Year 10

“I think that I will miss school because I really like coming to school and just being with your friends. I just get so bored at home”, Ellie, Year 11

“There is this new game that we have made up which is like rugby except there are no rules”, David, Year 11
Belonging to a group was seen as important and the older adolescents described what the advantages of belonging to a friendship group were.

“Yeah, it is good to feel that you belong to one of them”, Todd, Year 11

“In school you are not always sure if people like you or not, so you are always very nervous about going to talk to them. Those who aren’t in your group”, Connor, Year 10

“I think that being in different groups is a lot less stressful. People accept you more. You can have like ten people who like you all the time whereas one hundred and fifty people aren’t going to”, Samantha, Year 11

The friendship cliques of the oldest female adolescents seemed far less harmonious than those of the younger adolescents. The Year 11 girls recounted how very often bitching and squabbling took place within their friendship groups. The school had a set system which
meant that the adolescents were not always with their friends in lessons. The female adolescents described how this enabled them to get away from the conflict and to discuss it with people who weren’t involved.

“We have a group of friends and we have lots of problems with them. Now it is splitting up into groups of threes and fours”, Ellie, Year 11

“I find that there is more tension within the small groups than there is between the groups”, Nichola, Year 11.

“It’s nice to be able to talk to someone who isn’t a close friend. They don’t know the whole story”, Samantha, Year 11

“It’s good in a way as well as you can talk about things that they will understand and they are not connected with it”, Nichola, Year 11.

This splitting up of the oldest adolescents’ friendship groups could be part of the inevitable wind down of such friendship groups. The adolescents were to be leaving school in a few months and acknowledged that many of these relationships would not endure.

7.4.3. Group Conflict and Space Conflict in the School

As use of the school environment occurred among friendship groups this lead to a lot of intergroup conflict within the school environment. Some friendship groups were labelled by others according to their lifestyle and appearance, for example, Pikies, Grungers, Metallers, Skaters and Garys. As with the group conflict in the town centre, none of the adolescents reported belonging to any of these groups; the labelling of any group was negative and derogatory. The adolescents descriptions of what distinguished themselves from these outgroups lacked substance and were based upon feelings of superiority and being cool.

“The Grungers, the Garys, the Skaters”, Claire, Year 9

“They are the Pikies stay away. We are really cool and they are not”, Nichola, Year 11

“The Cool and the Sad”, Martin, Year 9

“The sad group are all Garys”, Warren, Year 9

“But there are really structured groups, like their group and their group. Our whole year is like ‘oh you don’t talk to them’”, Gillian, Year 11

“I don’t know, it’s just that we are better than them”, Martin, Year 9
Another group dynamic that featured strongly in the adolescents descriptions of the school was the school year distinction. School year was a strong classification system that pervaded use of the school outside of lesson time. Each year group had territory that belonged to them and that made them distinctive.

“You could pick a point and say which year group goes to which spot, as each year goes to the same places”, Rachel, Year 10

“Most of the Year 10's stick together but they have got some Year 9's as well now”, Claire, Year 9

“There are a few benches where the Year 11's sit”, Carly, Year 9

The Year 11 adolescents, as the oldest pupils in the school, felt they had a certain status over the other years and often used this status to gain territory from the younger years. The oldest adolescents also discussed how the younger years did try and challenge them for territory and suggested that this was disrespectful of their year 11 status.

“There are separate benches all around the courtyard. One year goes in one corner and another group goes in another corner. If one year goes in your corner then... you tell them to go or take it over or something....lift the bench up with them on it. Get their bags and move them across”, David, Year 11

“It’s like gang warfare for benches”, Gary, Year 11

“Our group use to have benches out in the courtyard and nobody would go there as they knew that was the Year 10 or Year 11's place but now lots of Year 7's have taken over”, Nichola, Year 11

Figure 7.3. The School Courtyard
The younger years expressed frustration that they did not have the physical strength or stature to be successful in challenging the older years for territory. Even the Year 10 adolescents felt that they were not powerful enough to challenge for space.

"Because we are only Year 9 we can’t argue with them. They are about 10 foot taller than us”, Claire, Year 9

"We hit them and they hit us back harder”, Jason, Year 9

"Year 10's just come up to you and punch you. It’s annoying”, Jamie, Year 9

"If there is a large group that is a bit intimidating. You just stay clear. When there are not many people we could like sit down, but you don’t really have much choice. Maybe if we were a bigger group we wouldn’t feel so intimidated. That would give us some power to get some space.”, Joanne, Year 10

For the male adolescents further space conflict occurred with males from other school years as the result of conflict over space for sporting activities. The male adolescents often engaged in sport and this required much of the space available in the playground. Each school year wanted their own space in which to play football or rugby. The school field could only be used in the summer and this alleviated the space problems in the playground.

“It’s just rivalry and we fight over space”, Martin, Year 9

“We need more room. There is always conflict when you want to play football”, Mark, Year 10

“We get all squashed up when you are trying to do activities”, Darren, Year 10

“It can be so cramped in this school. Everyone is around everyone all the time. If we are allowed everyone goes on the field as you can have some space. Play games on there”, Todd, Year 11

The excessive space that the male adolescents required for their sporting activities also leads to conflict with females; their more active use of the school environment was not appreciated by the females who wished to use the school in a more sedentary way.

“The boys have to play football or rugby”, Gillian, Year 11

“And another problem is that the blokes haven’t matured yet and they are still running around throwing each other into bushes and stuff, Samantha, Year 11

“It is better in the summer as all the boys go on the field and the girls can sit around and sunbathe, so it gets better”, Nichola, Year 11.
Within the school environment, group identities based upon both friendship groups and year groups are salient and the issues of friendship groups, year group, territory and space conflict are very much intertwined with each other. The membership of friendship groups is associated with the desire to be positively evaluated by others. Year group operates as a status system under which space and territory is demarcated. The older adolescents described how they could use their status to gain space and the younger adolescents described their frustration about not having status that would enable them to gain space. Thus, space and territory in the school is used to reinforce the status system.

7.4.4. Dissatisfaction with the School Environment

Not surprisingly, when discussing how the school environment could be improved the requirement for more space was paramount. Whilst the male adolescents expressed a desire for more places for sport, the females wanted more places where they could gather together inside of the school building. Both males and female adolescents expressed a desire for territory to be divided up on the basis of school year.

“We need a bigger field”, Alan, Year 10

“Too many people in too little space”, Todd, Year 11

“It would be really nice if we could have a common room or something but there is nothing like that”, Ruth, Year 11

“There’s nowhere to go. The school is just too small for everyone”, Nichola, Year 11
"The sixth formers all have a common room which they use as their area", Rachel, Year 10

"I reckon that there should be a room for each year that people could go in. Like a big hall", Hayley, Year 10

"They should have set areas for set people, so that the small people can’t steal your territory. They can be quite violent", Connor, Year 10.

The adolescents also complained that during wet weather the environment available to them in break- and lunch-times was very small. Break and lunch times are typically spent outside in schools in the UK and wet weather therefore has a very disrupting effect on the adolescents school environment. The adolescents described how there were few places for them to go to or things for them to do inside the school. Another problem was being forced to use the outside environment when it was cold.

"There is nowhere to go if it is cold and wet", Georgia, Year 9

"They throw us out in the rain", Carly, Year 9

"When it is a nice day, nice weather, you have got the whole field, courtyard, but when it is raining we ain’t got nothing. You are just stuck indoors", David, Year 11

"Just kind of walk around and sit on a wall but if it is cold we try and stay inside for as long as possible", Kelly, Year 10

7.4.5. Using the School for Retreat

Female adolescents were greatly concerned about the lack of privacy available to them in the school environment. They wanted places to be on their own and to get away from other people. This need also came from wanting to get away from the conflict that could occur
between friendship groups. There was consensus between the female adolescents that seeking out privacy in the school was near impossible. There appeared to be two reasons for this; the first was a lack of private places to go to and the second was the presence of friends who would not let you seek out privacy. One place that was frequently mentioned as being used to gain privacy was the toilets but the shortcomings of this environment for restorative behaviours was acknowledged.

“No, there is nowhere in the school where you can really be by yourself”, Elizabeth, Year 10

“There are not many areas to get peace and quiet. Well there is locking yourself in the toilet”, Kelly, Year 10

“Unless you lock yourself in the toilet. At lunch time you don’t get any privacy”, Ruth, Year 11

“You find that if you do go off by yourself people are thinking ‘oh no, what is wrong with you”, Nichola, Year 11

“Wherever there is a quiet place there is going to be one or two people. You can never like just be alone”, Joanne, Year 10

The female adolescents undeniably required places they could use for restorative purposes in the school. It was suggested that anywhere that did afford restorative behaviours would soon become overcrowded, as so many people would want to be by themselves.

“The thing is, if there was, then everyone would go there wouldn’t they, as they would all want to be by themselves”, Hayley, Year 10

Overall, the female adolescents could not use the school environment as often as they wanted for restorative behaviours due to a lack of places that afforded restorative behaviours. It is interesting that the male adolescents did not feel that there was a lack of places for restorative behaviours. They were more concerned with using the school environment for sport and being with friends than with wanting time to themselves.

7.4.6. Vulnerability to the Judgements of Peers

Another reason why female adolescents may have a greater desire for places for restorative behaviours is that they were far more affected by peer-pressure. When discussing the school environment females came across as extremely vulnerable. They were vulnerable to the judgements of their peers about any aspect of their identity. The female adolescents were unduly concerned with other people’s impressions of them and there was a strong sense of wanting to fit in with one’s friendship group and often succumbing to peer-pressure in order to do so.
"When you have loads of different friends at school, they all like different things and you have to like prove yourself, that you fit in with them. If like people disagree then you have to choose who to go with or if people like different things and you are not sure, you don't know whether to like that or that, because of them. It's a bit confusing.", Rachel, Year 10

"I just want to fit in basically. I don't want to be untouchable or anything, or that everyone notices you. Just for me, I don't want to be noticed loads. I just want to fit in and be like everyone else", Joanne, Year 10

"It's quite hard. It is hard to be yourself. I mean you know that you want to, you try acting yourself and everyone thinks 'God' she's a weirdo'", Claire, Year 9

"Yeah, you can't be yourself", Georgia, Year 9

"Sometimes you feel pressurised to follow the group. It's just like really unfair how you can only be friends with someone if you don't like so and so", Joanne, Year 10

"You have always got people watching you, worrying about what your friends think, telling you what to do", Maria, Year 9

Surprisingly, the Year 11 females were not so concerned with these issues. They felt that this was all in the past and that now that their friends and peers were mature enough to accept them as they are. This suggests that there is a period from 13-15 years where adolescent girls are concerned with other people's opinion of them and with fitting in.

"I think that we have just got to that age when everyone accepts who you are. And people are changing quite a lot. There are no like bitchy comments if you change. People are accepting that you have got to that age where you can be what you want to be", Ellie, Year 11

Possible consequences of not fitting in included being bitched about, ridiculed or even rejected from the group. It was also felt that this pressure to fit in could actually alter the identity of people. Thus, the consequences of not fitting in were quite brutal and the adolescents did not wish to be on the receiving end of such treatment.

"It would be fun if you could do whatever you liked and people wouldn't whisper and bitch behind your back", Claire, Year 9

"The thing is if you are different like that then they won't accept you. You are only allowed to be a certain type of person to be in that group. If you aren't that type of person you can't hang around. That kind of splits up people, friends and things", Rachel, Year 10

"Some people, if anyone is different, they just laugh and everyone takes the mickey out of you. One of my friends, she is like really different in how she dresses. Well, she was anyway. She got the piss ripped out of her completely and now she has just changed to more normal kinds of clothes. Now she is like upset that they changed her completely you know. Because people were taking the mickey out of her she has changed her complete life. She was like loud and always talked to people she didn't know and now she doesn't", Elizabeth, Year 10

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Another consequence of having to conform was that it was incredibly difficult to be distinctive within the school environment. Conformity eroded the distinctiveness of their identity and this was resented by some adolescents.

“We are in a group, there are about 10 or 11 or us in the group and like one person buys something and everyone else follows”, Claire, Year 9

“It was like when everyone started wearing these starry bracelets. One person started getting them and suddenly the whole school had them. Everyone had them”, Maria, Year 9

“Also if you do something original in school, like with your hair or whatever, maybe something to your shoes. The next day everyone has got it like done. If someone likes it then they will just try and do the same. So you like run out of ideas”, Joanne, Year 10

However, despite describing how they disliked having to compromise themselves and fit in with their friends, many adolescents described situations where they had put their friends under pressure to fit in. The following quotes describe a story that the adolescents told about a friend who dared to be different on one non-school uniform day.

“One of our friends wears a really bad pink and blue fluffy jumper (laughter)”, Claire, Year 9

“Yeah, (laughter)”, Georgia, Year 9

“But you have just said that you think it is wrong to judge each other on appearance and that you would like to be different”, Interviewer

“Yeah...but I have got respect for her....she has got guts (laughter)”, Claire, Year 9

Thus, as much as they dislike this pressure they are part of the system that exercises it. Given the extent of female concerns about fitting in and conforming it seems almost incredible that the male adolescents were not affected at all by similar concerns. However, no males reported such feelings even when asked directly. It is possible that they did not wish to discuss this topic in front of their peers.

7.4.7. Discussion

Use of the school environment centred around being in friendship groups. For the male adolescents friendship groups engaged in sporting activities, whilst for female adolescents friendship groups were more inactive and were associated with hanging around and talking. The friendship group is a means of locating oneself within the school; it offers both a sense of belonging and identity to the adolescent. These results support those of Blatchford (1998) and Eubanks Owens (1988) who have both found that the school is an important context for being with friends.
Chapter Seven

As with the town centre, experiences within the school were strongly influenced by group memberships. These groups are different from friendship groups; they have names and are demarcated by their lifestyle and dress. Groups were evaluated negatively and no adolescents reported belonging to any of the groups mentioned. Whilst, in the town centre out-groups were perceived to be threatening, in the school these groups were ridiculed. This difference suggests that the school is a more protective environment than the town centre. These findings also suggest that social categories are established and used in the school environment.

Space conflict was widespread in adolescents’ experiences of the school environment and was the main cause of dissatisfaction with the school environment. Male adolescents using the school for sporting activities clashed with both other groups of males also wishing to use the space for sport and with groups of females, who wished to use the space for hanging around. Female adolescents especially resented the amount of space that the sporting activities of males occupied. This difference in use of the school environment by males and females is similar to the difference found by Blatchford (1998). Female adolescents were also dissatisfied with the lack of places for retreat in the school environment. Study Three found that males used the school more often for retreat than female adolescents. The findings of Study Three and Study Four suggest that male adolescents were having their needs for retreat in the school met, whilst female adolescents were not.

Female adolescents were particularly vulnerable to the judgements of their peers and these results can be interpreted using Breakwell’s Identity Process theory (1986). Breakwell views identity (both individual and group identity) as a dynamic social product that is guided by the principles of continuity, distinctiveness, self-esteem and self-efficacy. Identity can be threatened by a situation that challenges the continuity, distinctiveness, self-esteem and self-efficacy of identity. The school was an environment that ‘threatened’ both group identity and the individual identity. Female adolescents were subjected to threats which questioned their membership of a group; they had to prove that they were members of the group and there was strong pressure to conform. In turn, the group identity eroded the adolescents’ sense of individual distinctiveness. These results suggest that the school environment has strong implications for both the individual and group identity of adolescents.

Overall the school was evaluated neutrally by adolescents; it was valued for it’s associated with friends but was disliked for it’s lack of space. Group identities were a powerful influence upon use of the school environment.
7.5. Experiences in the Home

7.5.1. Introduction

Three main themes emerged from the focus group discussions about the home. The first theme related to being with friends in the home. The home afforded a relaxed environment in which activities could be shared with close friends. The second theme related to retreat and security in the home. The home was used to escape from peers and close friends and afforded a sense of security for the adolescents. The third theme related to the oldest female adolescents feelings about the home as a stressful environment. The home could become a stressful environment due to tensions with parents.

7.5.2. Being with Friends in the Home

The majority of adolescents made use of the home environment to be with their friends. Friends were invited round for activities such as chatting, watching video’s, playing computer games and listening to music. Only some of the older adolescents felt that there was little to do at home with friends.

“My house is like the place where everyone else comes around for tea and biscuits”, Ruth, Year 11.

“You can kind of use it [the home] to ask your friends over and spend time with them and watch television and videos”, Elizabeth, Year 10.

“There is nothing to do at home with your friends anymore as you are past the computer games and video stage. So you go home and you just do homework if you have a friend round. There is nothing else to do”, Nichola, year 11.

It was acknowledged that only small groups of friends could be invited round and the adolescents contrasted this with their use of other environments, such as the town centre, where large groups of friends could congregate. Despite acknowledging the spatial limits of the home, some adolescents still wished to be able to invite more friends back to their house.

“I am normally allowed three or four friends around”, Martin, Year 9

“Sometimes we will come around to each others houses but there probably won’t be many of us”, Kelly, Year 10.

“I can’t have large groups of friends’ as my house is tiny. But I can go out to my friends’ houses”, Ellie, Year 11

“It gets awkward if there are too many people as they just start mucking about”, Tim, Year 9
“It would be better [having large groups of friends round the house] as there would be more social stuff going on”, Martin, Year 9

For the male adolescents, use of the home environment with their friends often leads to use of the neighbourhood.

“My friends usually come around to my house as there are lots of things to do where I live. I live quite a long way out of Guildford, so there is lots of countryside to build stuff in”, Martin, Year 9

“I have my friends around for tea or whatever and then we go out and do stuff around where I live”, Darren, Year 10

“I usually take a couple of friends back from town, play on the Playstation and have some tea and walk the dog around the neighbourhood”, Mark, Year 10

Males also reported feeling bored at home if their friends were not there. For male adolescents, use of the home appeared to be more strongly related to being with friends than it did for female adolescents.

“It’s quite boring being at home on your own”, Darren, Year 10

“I just try not to be home as much as possible unless my friends are there, Alastair, Year 11

“I can’t stay in. I just have to get out. Not because of my parents. I just have to get out because I hate staying inside. It just gets boring on your own. Nothing to do. You have just got to get outside”, David, Year 11.

The older female adolescents also expressed a preference for using the home environment to be with friends than the town centre. The home or a friend’s house offered freedom from the judgements of others that had to be endured if one went to the town centre.

“I prefer to be with my friends at home as then you can talk to them all. You can be yourself whereas in town you feel that people are looking down on you”, Kelly, Year 10

“Maybe I am different. I have got other stuff to do rather than go to pubs. I would rather go around my friend’s house and get together and have gatherings and stuff, Ellie, Year 11.

“If you are going out every Saturday then it is nice to have every Friday night to go round your friend’s house, as it’s nice to be with your friends and have no constraints on what you are doing. You can just be yourselves. If you are going out, no matter where, it is something to worry about”, Samantha, Year 11.

The majority of female respondents felt that the home was an environment where they could be themselves. Only a few adolescents felt that being in the company of their parents meant that they could not be themselves.
“You can just be whatever you want at home”, Georgia, Year 9

“When you go out you are yourself, but you always think of what other people are thinking of you. At home you can walk around in whatever you want. There is no one to think about what you are wearing”, Ellie, Year 11

“I can’t swear at home or be loud and be who I want to be. Around my friend’s I can be”, Nichola, Year 11.

7.5.3. Retreat and Security in the Home

The home acting as a retreat away from the pressures of the outside world also featured strongly in the female adolescents discussions about the home. The home was an environment that was used to get away from friends, the school and the town centre. Some adolescents also reported being able to work through the tensions of the day with their parents at home.

“It’s quite nice for peace and quiet. You can find out what things you enjoy about yourself, sometimes, just thinking and things. Whereas at school you always have people hassling you all the time”, Rachel, Year 10

“It’s quite nice because I don’t live in Guildford, so I can just go home. I don’t live far, just in Farncombe, but it is nice to get away from Guildford and chill out at home. It is nice to get away from the school”, Ellie Year 11

“Yeah, it is a good place to go and escape from all your friends”, Samantha, Year 11.

“If I have had enough of my friends then I can sit and talk to my Mum. That often helps as we get on quite well”, Rachel, Year 10

Thus, for female adolescents the home environment acts as a retreat away from the other environments. The male adolescents did not report using the home as a retreat. It is possible that they may have been inhibited in the discussion of this by the presence of other males in the focus groups. Both male and female adolescents reported using their bedroom to get away from parents or siblings. The bedroom afforded the adolescents privacy and also somewhere to retreat to after conflict.

“It’s good to have a bedroom of your own because if you have an argument with your brother, your Mum or your Dad, you can just go to your room and laze around and relax and stuff”, Claire, Year 9
7.5.4. The Home as a Stressful Environment

The oldest female adolescents (Year 11) expressed concerns that the home was increasingly becoming a stressful environment. There were two main causes of stress; the first was about their impeding GCSE exams and the second was about the strained relationship with their parents.

"I just think 'God, I have got so much stuff to do'. Especially with the GCSE's coming up. Home for me is just somewhere where I have got to revise. I don't really like that", Becky, Year 11.

"My brother has just recently left and my parent's don't get on very well. My younger brother doesn't talk. No one really gets on with my Dad", Nichola, Year 11.

"I don’t look forward to it (going home) as I know that there is always going to be an argument. It’s going to go wrong because we are all stressed out. I think that it is a very stressed environment at my house", Becky, Year 11.

For those adolescents who felt relationships at home were strained, the home was not an environment that they wanted to use. Several adolescents reported staying in the town centre after school for as long as possible

"I find that it is nicer to stay out with your friends in Guildford. Like go for a coffee in Guildford itself rather than go home. I try to put that off until you get thrown out. 6 o'clock - time to go home", Nichola, Year 11.

7.4.5. Discussion

The home environment was evaluated positively by most adolescents. Both male and female adolescents used the home to be with small groups of friends. Only a few older adolescents felt that there was little to do at home with friends. For male adolescents, use of the home environment was dependent upon friends being present. For female adolescents the home was an environment that could be enjoyed with friends away from the gaze of other judgmental adolescents. Conversely female adolescents also used the home to get away from their friends. The home was an environment that afforded getting away from the peer-pressures associated with close friendships.

These results are similar to those of Schiavo (1987), who found that the home was used both for being with friends and for retreat. However, whilst Schiavo found that both males and females used the home for retreat, the current study suggests that only females use the home in this way. Conversely, Study Three found that both male and female adolescents used the
home for retreat. However, these studies used different methodologies to examine use of the home for retreat; the current study used focus groups, Study Three used questionnaires and Schiavo used interviews. It is possible that these different methodologies account for the difference in findings; studies where responses were elicited individually suggest that the home is used by both male and female adolescents for retreat, studies where responses were elicited in the presence of others suggest that only females use the home for retreat. It is therefore possible that the presence of other males in the focus group discussions may have inhibited discussions about use of the home for retreat.

The qualitative study of the home environment has added to our knowledge about the functional significance of the home for adolescents by examining experiences and feelings associated with the home. Overall the home was evaluated positively by the adolescents; it could be boring or stressful, but overall it was an environment that supported their needs to be with their close friends, to retreat from the outside world and to seek security.

7.6. Experiences in the Neighbourhood

7.6.1. Introduction

Only one theme emerged from the focus group discussions about the neighbourhood, use of the neighbourhood environment with friends. Discussions of the neighbourhood environment focused upon use of the neighbourhood to be with friends.

7.6.2. Use of the Neighbourhood with Friends

The Year 11 adolescents did not make use of the neighbourhood environment. When asked to discuss the neighbourhood environment they simply stated that they did not use it anymore. Discussions of the neighbourhood environment by the Year 9 and Year 10 adolescents focussed upon use of the neighbourhood to be with friends. Indeed, the neighbourhood was only used with friends. Use of the neighbourhood was dependent upon there being friends of a similar age with which to utilise it. Adolescents who were younger were seen as being too young to use the neighbourhood with. Whilst female adolescents tended to simply describe being with their friends in the neighbourhood, male adolescents tended to concentrate upon using the neighbourhood for sporting activities such as football.

"I have got a friend who lives in the next road. It's about a thirty second walk to get to her, so we do stuff and that", Claire, Year 9.
“Down my road, I live in Shalford, there are quite a lot of people that I know, who I have known for years. I always want to see them and they come and see me”, Elizabeth, Year 10

“I have my friends around for tea or whatever and then we go out and do stuff around where I live”, Darren, Year 10

“I play football and skate in my neighbourhood”, Mark, Year 10

“I might use it to go for a walk as there is like a common area. If my friends come around we might go up to the little shop”, Kelly, Year 10

“I play football with my friends”, Chris, Year 10

“I know everyone in my neighbourhood but they are all a bit younger than me. They are quite sad so I don’t go out in the neighbourhood. Sometimes I ride my bike around. In our neighbourhood they are all in Year 6 and 5. There are a couple of people in Year 8 but I just don’t like them so I don’t go outside”, Maria, Year 9

“My neighbourhood is quite friendly but there is like a road that is full of Garys and Sharons. They are all horrible. There are no other people... just these five Garys and Sharons and they are all horrible”, Hayley, Year 10

One of the male adolescent utilised the neighbourhood of his friends instead of his own, which he felt did not afford very much.

“I would never do anything around my neighbourhood as it is boring. I come to Onslow Village as all my friends live there. I go up to the recreation ground in the summer. We play football”, Darren, Year 10.

Only one female adolescent reported experiencing feelings of vulnerability when using the neighbourhood. For this adolescent vulnerability was associated with the presence of older adolescents and this did lead to the avoidance of areas in the neighbourhood.
“The park, all the older people hang around there and vandalise it and go and swing on the swings. Stand on them and everything. Seventeen and eighteen year olds who haven’t got anything better to do. It’s not like we would want to go and swing on the swings but like if you want to go for a walk you have to go around the roads or something”, Rachel, Year 10

Surprisingly, none of the adolescents reported using the neighbourhood either when they were alone or seeking out the neighbourhood for restorative purposes.

7.6.3. Discussion

The neighbourhood was evaluated neutrally by the adolescents. Unlike the other environments, discussions of experiences in the neighbourhood were not very forthcoming. The oldest adolescents reported not using the neighbourhood at all and for younger adolescents use of the neighbourhood was dependent upon being with friends. These findings support those of Schiavo (1988) who found that adolescents over 16 years of age had few social ties in the neighbourhood and did not use the neighbourhood for social interaction.

In contrast to Lieberg (1995, 1997) none of the adolescents reported using the neighbourhood for retreat. The adolescents in the focus group discussion came from different neighbourhoods, yet none described using the neighbourhood in this way. This suggests that the neighbourhood environment was not used for retreat by the adolescents. The current study and Lieberg’s study used different methodologies to examine use of the neighbourhood for retreat. The current study used focus groups, whilst Lieberg used interviews. It is possible that the different findings are an artifact of these different methodologies. The current findings also contrast with those from Study Three; when asked individually, by questionnaire adolescents indicated that they did use the neighbourhood for retreat. It is therefore, suggested that methodologies that allow individual’s to respond alone are more effective in studying use of the environment for retreat than methodologies, such as focus groups, where other people are present.


The analysis of the focus group transcripts reveal that the four environments are experienced differently by the adolescents. Whilst friends are a key component in the use of all four, the environments differ in how they are experienced with friends. For example, the home is used as a setting to be with close friends, whilst the town centre is used as a setting for meeting larger groups of friends. Use of the neighbourhood, school and town centre was in fact dominated by being with friends; for male adolescents so was use of the home. Whilst all the
environments are used with friends it is therefore important to recognise that each environment offers a different experience.

Some of the environments also offer different experiences to adolescents of different ages and gender. Use of the town centre varied the most according to age and gender. Young adolescents and male adolescents' use of the town centre was motiveless, whereas older females' use of the town centre was activity based. Use of the school environment varied according to gender; whilst male adolescents used the school for sporting activities, female adolescents used it for hanging out with their friends. Use of the neighbourhood environment varied according to age; older adolescents did not use the neighbourhood environment at all. These findings both parallel and offer further explanation for the age and gender differences in use of the environments, identified in Study Three.

Adolescents' experienced group conflict in both the town centre and the school. Both environments were associated with the presence of out-groups that are defined by their lifestyle and dress, i.e. social categories operated in the town centre and school environments. In both environments these social categories were evaluated negatively; in the town centre out-groups were perceived to be threatening, whereas in the school environment they were ridiculed. One explanation for this difference is that the school is a more protected environment in which to have to deal with members of such groups, than the town centre.

Dissatisfaction was expressed mainly with the school and town centre environments. In the town centre adolescents wanted more facilities for their age group. Adolescents also did not wish to share facilities with older or younger adolescents. In the school environment dissatisfaction centred around the lack of space available; male adolescents required more space for sporting activities and female adolescents for social interaction and privacy.

Fear was only associated with the town centre environment and only female respondents expressed feelings of fear. Female adolescents were fearful of physical assault and felt vulnerable in the town centre. Fear was attributed to both not being able to control a situation that might develop in the town centre and to the fact that Guildford town centre was perceived as unsafe. However, experiences of fear and vulnerability did not effect actual use of the town centre. Female adolescents also reported feelings of vulnerability in the school, but this vulnerability was associated with peer-pressure and conformity.
7.8. Chapter Summary

This chapter has broadened the study of adolescents' environments to include a consideration of how adolescents' experience and feel about the environments. Study Four furthers previous research by considering the affective components of adolescents' use of the home, neighbourhood, school and town centre. This chapter illustrates that the home, neighbourhood, school and town centre environments are experienced and evaluated differently by adolescents. Thus, whilst Chapter Five has indicated that the neighbourhood, school and town centre environments have similar functions, i.e. they all support social interaction and retreat, the analysis in this chapter suggests that the environments are experienced differently by adolescents of different ages and gender.

This chapter also examined how affective factors effect use of the environments. This chapter illustrates that several factors affected use of the environments. Use of the school was affected by the presence of other adolescents. Space conflict dominated discussions of the school; male adolescents wanted more space for sport and female adolescents wanted more space for social interaction. Both use of the school and town centre was affected by group conflict; however, the presence of out-groups was perceived to be more threatening in the town centre than in the school environment. Use of the neighbourhood was affected by the presence of friends.

Feelings of fear associated with the town centre had a moderate affect upon use of the town centre. Whilst female adolescents were concerned about their personal safety in the town centre, only the younger female adolescents reported avoiding the town centre because of these fears.

Finally, this chapter examined how the home, neighbourhood, school and town centre environments are evaluated by adolescents. Despite being an environment which is highly utilised by adolescents, the town centre was not evaluated very positively. Adolescents were dissatisfied with the facilities in the town centre for their age group. The school was evaluated neutrally; it was appreciated for it's association with friends but was evaluated negatively as it did not provide enough space for all of its users. The home was the most positively evaluated of the four environments. Whilst the home could only be used with small groups of friends it was an environment that was liked and adolescents could relax and feel secure there. The neighbourhood was evaluated neutrally; it was used to be with friends and adolescents did not express dissatisfaction with it as a setting.
Chapter Eight: Discussion.
8.1. Introduction

The aim of this research was to identify the function, use and affective experiences of the environment for adolescents. A greater understanding of adolescents' environments will lead not only to more informed planning and design for adolescents as a user group but also to a greater acceptance of adolescents as users of the environment.

This research examined the social affordances of the home, neighbourhood, school and town centre environments for the key developmental needs of social interaction and retreat. Group differences in the use of these environments were also examined. Finally, this research examined how the home, neighbourhood, school and town centre environments were affectively experienced by adolescents.

This chapter discusses the theoretical implications of this research. It takes an overview of the empirical findings, sets them in a larger context and discusses the potential application of the affordance scale methodology developed in this research. Finally this chapter sets out a model of the adolescent-environment that encompasses the affordances of the environment and the developmental needs of the adolescent.

8.2. Theoretical, Empirical and Design Implications

8.2.1. Developing Gibson’s Theory of Affordances

This research attempted to build on and develop the application of Gibson’s theory of affordances (1966, 1979) in environmental psychology. Gibson’s theory of affordances offers environmental psychology a rich theory for studying the functional significance of environments. The value of Gibson’s theory is that it brings together the physical and social environments to account for the functional significance of the environment. The concept of affordances is truly transactional; the individual and the environment coexist and jointly contribute to the meaning of an event. This thesis contributes to the development of both the methodological and theoretical application of Gibson’s theory in environmental psychology. Indeed, the methodology for identifying and measuring affordances developed in this thesis has many potential applications, both in environmental psychology and other disciplines. The
affordance scale methodology is of potential interest to both physical planners such as architects, designers and planners and social planners such as environmental managers and educational specialists.

Methodologically the current research builds upon the previous studies of Heft (1988) and Kyttä (1995). Heft created a taxonomy of the affordances of child environments and Kyttä utilised this taxonomy to evaluate the affordances of different types of neighbourhood environments. Kyttä’s methodology offers environmental psychology a way of operationalising Gibson’s theory of affordances to examine the functional significance of the environment. The current study generates a more sophisticated measurement of the affordances of the environment than that provided by Kyttä’s methodology.

Study One and Study Two produced a comprehensive taxonomy of 34 social affordances of adolescents’ environments, that describe the functional significance of the home, neighbourhood, school and town centre for adolescents. Study Three utilised this taxonomy as a rating instrument to evaluate the function of these key adolescents’ environments. Whereas Kyttä only measured the presence or absence of an affordance, the current research measured the number of places available in the environment for an affordance. This is an important advance to the existing methodology because it enables a more insightful comparison to be made between the environments, and scales to be developed to measure the function of the environment. Scores on these scales for different environments can then be compared, thus enabling a systematic comparison of the function of various environments. These scales can also be utilised to examine individual or group differences in environmental perception.

These methodological advances increase the value and applicability of affordance theory in environmental psychology. This transforms Gibson’s theory from an ecological theory of environmental perception into a methodology that can be used by environmental psychologists to measure and compare the function and use of different environments. The real strength of the methodology developed in this thesis is that it can be used to evaluate the function of any given environment for any user-group. This is a significant contribution to environmental psychology.

Professionals who manage the use of environments such as town centre managers and the police would benefit from this application of affordance theory. The affordance scale
methodology enables the function of the environment to be predicted for different user
groups which could inform management of the environment. For example, understanding the
function of the same environment for different user groups would be useful for understanding
and resolving conflicts that occur in use.

Gibson’s theory of affordances brings together the physical and social affordances of the
environment to account for the functional significance of the environment. This thesis has
only examined the social affordances of adolescents’ environments. The current research was
concerned with developing and applying the concept of social affordances in environmental
psychology. Previous attempts to operationalise the affordance concept in environmental
psychology have predominantly focused upon the physical affordances of the environment
(Heft 1988, Kytä 1995). Gibson saw social affordances as being the richest type of
affordances available in the environment and this thesis has developed the concept of social
affordances in environmental psychology. The creation of a taxonomy of the social
affordances of adolescents’ environments is also an important contribution to environmental
psychology. This is the first time that research has attempted to identify and measure the
social affordances of the environment.

As well as identifying and measuring the social affordances of the environment this thesis has
also explored the role of other people in the environment. Whilst Gibson felt that other
people provided the richest type of affordances in the environment it is unclear whether he
saw people as ‘objects’ in the environment like any other (albeit the richest type of
affordance) or as mediators in the perceptual process, i.e. the presence or absence of others
alters the observer’s perception of the affordances. The role of other people in environmental
perception is of fundamental interest to environmental psychology. The results of this
research suggests that the presence or absence of others is very much a motivation in
adolescents’ use of the environment. For example, it is unlikely that the town centre would be
such a preferred environment for adolescents and utilised so frequently if it were not for the
presence of others. Thus, the findings of this thesis suggest that people are mediators in the
perceptual process; the affordances offered by the environment, to an individual, change with
the presence or absence of other people. The presence of other people mediates between the
affordances of the environment and the observer.

This thesis also considered Gibson’s proposal that the perception of affordances is a
prerequisite for action. Gibson believed that it is necessary to perceive the affordances for
action before you can use the environment for action. Whilst the analysis in this thesis was not able to examine the issue of causality between the perception of affordances and use of the environment, there was a moderate degree of correlation between the perception of affordances and use of the environment. This finding suggests that there is a relationship between the perception of affordances and use of the environment, thus providing support for Gibson’s theory.

The results of Study Four illustrate a role for an affective component in adolescents’ environmental use. Interpreting these results in terms of affordance theory suggests that the environment could provide affective affordances. Affective affordances refer to the emotional feelings that an individual experiences in the environment. The function of the environment is influenced by how an individual feels about the environment. Possible affective affordances include feelings of fear, belonging, satisfaction with the environment and support for identity processes. The idea of there being a role for emotional meaning in the environment sits well with Gibson’s ideas of the role for social and cultural meaning in the environment. Ecological theorists accept that individuals learn about the social and cultural meaning of objects and are then able to extract this information directly from the environment (Costall, 1995). The same process could occur for the affective meaning of objects; individuals discover the affective meaning of objects and are then able to extract this information directly from the environment.

Foreseeing a role for affective affordances in the functional significance of environments extends the potential application of affordance theory in environmental psychology. A taxonomy of the physical, social and affective affordances of the environment can be created and used to measure and compare the function of different environments. By considering the physical, social and affective affordances of the environment, a full evaluation of the functional significance of the environment can be obtained. Knowledge of the physical, social and affective affordances of adolescents’ environments would enable more informed planning to take place for this age group.

The current research has not examined the physical affordances of adolescents’ environments. The examination of the physical affordances of adolescents’ environments should be the focus of further research and a taxonomy of the physical affordances of adolescents’ environments should be created. Whilst Heft (1988) identified the physical affordances of children’s environments, previous research has not examined the physical
affordances of adolescents’ environments. The methodologies utilised in Studies One, Two and Three illustrate how a taxonomy of affordances can be created and used to evaluate environments. This process would have to be repeated to create a taxonomy of the physical affordances and to create scales to measure the physical function of adolescents’ environments.

Whilst Study Four has examined the affective components of adolescents’ use of the home, neighbourhood, school and town centre, no taxonomy of these affective affordances has been created. The examination of the affective affordances of adolescents’ environments should be the focus of further research. The results of Study Four could provide the basis of such a study. Study Four explored the affective components of the home, neighbourhood, school and town centre using a qualitative methodology and illustrated the possible affective affordances of the environment. These affordances can then be examined in the same way that the social affordances were examined in Studies One and Three. Conducting a large scale quantitative study of the affective affordances of the environment could produce a taxonomy of affective affordances and enable scales to be created that measure the affective function of adolescents’ environments.

Future research needs to examine the relationship between the physical, social and affective affordances of the environment. Whilst proposing a role for physical and social affordances, Gibson did not consider whether physical and social affordances could be associated with each other. For example, can the physical affordances of the environment be associated with the social affordances of the environment? The concept of affective affordances forces consideration of this issue.

It is postulated that an affordance is either physical, social or affective; an affordance cannot belong to more than one of these categories. Physical affordances relate to the physical features of the environment, social affordances to the social features of the environment and affective affordances to the affective features of the environment. However, it is hypothesised that physical, social and affective affordances can be associated with each other. For example, it is envisaged that specific physical features will be associated with specific social and affective affordances. The relationship between the three types of affordances is multidirectional; each affordance has the potential to be associated with another. Whilst it is both possible and useful for environmental psychologists to be able to trace the social and affective affordances of the environment back to specific physical affordances of the
environment, it is important to realise that the relationships can also work in the other
direction. Physical affordances do not take precedence over social or affective affordances;
Gibson sees the physical and social as residing equally in the environment and both can be
directly perceived.

![Diagram of Physical, Social, and Affective Affordances]

**Figure 8.1. Proposed Relationship between Physical, Social and Affective Affordances**

Once taxonomies have been created that identify the physical, social and affective
affordances of the environment, the relationships between the physical, social and affective
affordances of adolescents’ environments can be examined. For example, which physical
features of the environment are associated with the social and affective affordances of the
environment? Such research would further our understanding of adolescents’ environments.

This application of the affordance scale methodology would also inform the design and
management of the environment. By utilising affordance theory, the physical features
associated with certain behaviours can be identified for a particular user group. This is of use
to design professionals. Having knowledge about which physical features are associated with
certain behaviours enables the prediction of how environments will function both socially
and affectively for certain user-groups. This is not to imply a deterministic relationship
between the person and the environment; whilst the environment has different meaning for
different individuals, the environment has similar meaning for certain user-groups.

At present the affordance scale methodology enables scales to be constructed to indicate the
function and use of the environment, i.e. the affordances of the environment are represented
numerically. Future research should develop the affordance methodology so that it enables
the affordances of the environment to be mapped. This development would make the
affordance scale methodology more accessible to environmental designers and managers.
8.2.2. The Function of the Home, Neighbourhood, School and Town Centre

The use of Gibson's theory of affordances in this research has enabled the function of the home, neighbourhood, school and town centre to be systematically compared. Previous studies of adolescents' environments have been limited as they consider only one or two environments. One of the principal findings of this study is that the neighbourhood, school and town centre can all support both social interaction and retreat behaviours. The home environment does not support social interaction behaviours; it instead provides affordances for two different types of retreat, retreat involving close friends and retreat involving seeking security. Thus, the home has a different function for adolescents than the neighbourhood, school and town centre. One explanation for the different function of the home is that the home is a closed and indoor environment whereas the neighbourhood, school and town centre environments are predominantly open and outdoor environments. The home is also shared with the family and this could contribute to why it does not afford social interaction; social interaction is associated with freedom and the presence of the family inhibits this.

Use of the environment for retreat is not the same as use of the environment for restorative purposes (Korpela 1989, 1992, Korpela & Hartig 1996). Whilst, retreat includes aspects of restoration, such as being on your own to think and having space in which to be upset, it also includes aspects of privacy. Privacy is the control an individual has over access to the self or to one's group (Altman, 1975). It is the extent to which an individual can control access and have the amount of social contact that they desire. Retreat includes aspects of privacy such as avoiding people, being alone, being in control and being in your own space. Thus, the concept of retreat identified in this research encompasses use of the environment for both privacy and restorative purposes.

Whereas the current study sampled adolescents from different neighbourhoods, Lieberg (1995, 1997) sampled adolescents from only one neighbourhood. Thus, the current study provides a more representative study of the function of the neighbourhood than that offered by Lieberg. The current findings suggest that the neighbourhood and town centre are more similar in function than suggested by Lieberg.

In describing the function of the neighbourhood and town centre environment for Swedish adolescents, Lieberg drew upon Goffman's (1963) work on behaviour in public places. Goffman used the metaphor of public places as theatres where individuals can be seen like
actors on the stage. The stage is divided into backstage and frontstage. Lieberg saw the city
centre as a frontstage environment for adolescents, where they are in front of an audience and
can show themselves off, and the neighbourhood as a backstage environment, where
adolescents can retreat to when they have had enough of being on show in the city centre. In
considering the home, neighbourhood, school and town centre environments the current
findings suggest that an alternative conclusion might be reached. The neighbourhood, school
and town centre environments are frontstage settings because they predominantly afford
social interaction. However, these environments can also function as backstage settings
because they afford retreat. The home is a backstage setting; it is here that adolescents retreat
to with close friends and when they wish to get away from their peers. These findings
challenge Lieberg’s suggestion that adolescents only have places in the public domain to
utilise for backstage places. Indeed, the findings of this research challenge the usefulness of
applying Goffman’s metaphor to adolescents’ use of the environment.

As well as being a backstage setting, the home environment should also be considered as a
primary territory, as defined by Altman (1975). The home environment is the environment
over which the adolescents have the greatest control. Access to the home can be controlled by
adolescents and it is used to retreat with close friends and for security. Whilst the
neighbourhood, school and town centre afford retreat, control does not exist over other
people’s access to these environments. The school is a secondary territory, the adolescent is
one of a number of qualified users but does not own or control the space. The neighbourhood
and town centre are public territories, the adolescent is one of a large number of possible
users and control is very difficult to assert.

Both Hall (1994) and Eubanks Owens (1999) suggest that more places for social interaction
should be designed into the environment. The study of the function of the neighbourhood,
school and town centre found that social interaction was the predominant function for which
these environments were used. Whilst this suggests that these environments provide
affordances for social interaction, it does not mean that further provision is not required. In
discussing their experiences in the town centre, adolescents expressed dissatisfaction with the
facilities of the town centre for social interaction. Adolescents wanted more places to hang
around and meet new people. However, adolescents did not want to share any facilities with
either younger or older adolescents. Realistically it would be difficult to provide areas that
would only be used by adolescents of a similar age. Also, if further provision for social
interaction were to be incorporated into the town centre then businesses and residents in the
area would have to be consulted. Increasing the facilities in the town centre for adolescents has implications. For example, it could lead to increased noise, possible conflict with other users and possible use of the environment for illicit activities. These implications need to be considered in any plans to increase facilities for adolescents in public environments.

Adolescents also expressed dissatisfaction with the school environment. This dissatisfaction centred around the lack of space in the school environment. Male adolescents took up much of the space available in the school grounds to play football and this was resented by the female adolescents. Ironically, the male adolescents felt that there was not enough usable space in the school for their sporting activities.

Female adolescents also expressed dissatisfaction with the number of places available for privacy in the school. There was a real need for places to be alone in the school. In managing the school environment there is conflict between giving adolescents the freedom to use the environment to be alone and controlling use of the environment for illicit activities such as smoking. It is likely that the use of places in the school to be alone would be viewed suspiciously by teachers. Future research should examine if places for retreat could be incorporated into the design of school environments.

Previous research suggests that the shopping mall is an important social setting for adolescents. Researchers have even suggested that the shopping mall is the third ground between the home and the school (Anthony 1985, Lewis 1989, Matthews, Taylor, Percy-Smith & Limb 2000). The current study has found the shopping mall to be far less central in the adolescents’ social world than suggested by previous research. Study Four found that in describing their experiences in the town centre that adolescents did not make specific mention of any of the three shopping malls in Guildford town centre. Whilst the adolescents stated that they shopped in the town centre with friends, the various settings available for shopping were not discussed. These findings also challenge those of Uzzell (1995). In studying the retail environments of the High Street and the Friary shopping mall in Guildford, Uzzell found that the environments were evaluated differently by users. Uzzell concluded that the High Street and the shopping mall afforded users different actions and behaviours. The findings of the current research suggest that the shopping mall is not differentiated from the town centre environment by adolescents. In Guildford the shopping mall is not a third ground between the home and the school for adolescents; the shopping mall is just part of the town centre. However, the difference between Uzzell’s findings and the current findings
could be methodological. Uzzell specifically asked participants to evaluate the High Street and the shopping mall, whereas the current research asked participants to consider the town centre as a whole.

Whilst, the current study has only examined the affordances of one town environment, the results, it is suggested are generalisable to other towns in the UK. Geographically Guildford is structurally similar to other UK towns; neighbourhood environments are situated around the periphery of the town centre. Guildford is a town in which adolescents can and do utilise the home, neighbourhood, school and town centre environments. Although Guildford is considered an affluent, middle class town by many, the social composition of Guildford is actually diverse, as was the sample of adolescents drawn in this research.

Despite the similarities to other towns, it is unknown whether the affordances of the key adolescents’ environments would be the same in a city environment. Kytta (1995) found differences between the affordances of a city, a small town and a rural village. She found the rural environment to be the richest environment for children. Kytta’s results suggest that the affordances of a town and a city environment may be different. The difference between Lieberg’s (1995, 1997) results and the current results could also attributed to the fact that Lieberg studied a city and the current research studied a town. It would be interesting to identify whether different types of environments such as rural, town and city areas differ in their affordances for adolescents. Whilst a rural environment could be extremely rich in affordances for retreat it is unlikely that it would be the richest environment for social interaction. We might also expect city environments to possess the opposite qualities and be rich in affordances for social interaction and not for retreat. If it were found that some types of environments were lacking in affordances for social interaction or retreat, it would be valuable to examine how the developmental need for social interaction or retreat could be more adequately fulfilled.

One of the great strengths of the affordance scale methodology is that it enables comparisons to be made between different types of environments such as rural, suburban and urban areas. This application of affordance methodology is of potential interest to both physical and social planners. This application could be used to identify areas which are poor in terms of their affordances for adolescents’ developmental needs. Additional facilities could be designed into these areas to improve their affordances for adolescents. Similarly, educational specialists could use the methodology to make comparisons between different schools. This
would enable richer and poorer school environments to be identified and additional facilities provided in the poorer environments. Furthermore, this type of comparison between environments could be carried out for any type of environment for any user group.

It would also be productive to compare the affordances of town and city environments in different countries where there may be cultural differences in the affordances. For example, Lieberg's study of adolescents in a city suburb of Sweden found that only retreat was associated with the neighbourhood environment. This could be a cultural difference compared with Guildford in the UK or it could be a function of Lieberg only examining one neighbourhood and the current study investigating several.

The current research has examined the affordances of adolescents' environments at the macro-level. Thus, the scales developed for the home, neighbourhood, school and town centre are aggregations of all of the affordances available in those environments. The decision to examine adolescents' environments at the macro level was taken as it enabled the overall function of the key adolescents' environments to be compared and predicted. However, the methodology developed in this thesis to examine the function of the environment could also be applied at the micro level. Indeed, it would be useful to examine the physical, social and affective affordances of different places within an environment. This would enable managers and designers to identify where additional facilities could be located within the existing environment.

One shortcoming of the current research was that it did not directly address adolescents' use of the environment for illicit activities such as drinking alcohol and petty crime. The focus group results suggest that some adolescents use the environments for these activities. To study illicit use of the environment approval would have had to be obtained from the University Ethics Committee. This was beyond the time constraints of this research and therefore questions relating to this type of environmental use were omitted from the research. Further research should examine what physical, social and affective features of the environment afford illicit use of the environment? Research of this kind would further enhance the picture of adolescents' environments that has been built up in this thesis.
8.2.3. Group Differences in Use of the Home, Neighbourhood, School and Town Centre

As well as examining the affordances of the home, neighbourhood, school and town centre for social interaction and retreat, this research has also examined how often the environments are used for these purposes. Whilst the neighbourhood, school and town centre offered the same function to adolescents there was a difference in how often the environments were used for retreat but not for social interaction. The town centre environment was used significantly less often than the school and neighbourhood environments for retreat. This suggests that the number of places available affects how often the environment is used for retreat but not for social interaction. One explanation for this difference is that there were considerably more places in the neighbourhood, school and town centre for social interaction than retreat. Thus, few affordances for retreat could mean that the town centre was not able to function as a retreat environment for some adolescents.

This research also examined group differences in use of the environments for social interaction and retreat. Use of the environment is not uniform; differences in use do occur between different user groups. The findings of this research support the notion that there are transitions and a developmental dimension to adolescents’ use of the environment (Coleman 1979, Schiavo 1988, Hendry, Shucksmith, Love & Glendinning 1993).

Both Study Three and Study Four show that use of the neighbourhood declines at 15-16 years of age. These results support those of Schiavo (1988) who found that use of the neighbourhood declined at 16 years of age. Schiavo suggested that this decline was a function of the neighbourhood no longer meeting the developmental needs of the adolescent. However, Study Four found that the older adolescents were not dissatisfied with the facilities of the neighbourhood environment, they were simply disinterested in it as an adolescent environment. Coleman’s (1979) transition theory proposes that adolescents become concerned with gaining independence from their parents at around 16 years of age. Psychoanalytic psychologists also believe that adolescents have a need to sever emotional ties with parents (Marcia 1966, Erikson 1968). The need to gain independence from one’s parents could explain the disinterest of the neighbourhood environment; older adolescents have a developmental need to be independent and therefore seek to utilise environments outside of the neighbourhood.
The findings of this research suggest that more facilities for younger adolescents could be provided in the neighbourhood. Younger adolescents make use of the neighbourhood to be with friends and retreat, suggesting that further facilities to support both social interaction and retreat could be provided in the neighbourhood environment.

Study Four found that the older female adolescents (15-16 years) used the town centre for commercial leisure activities; principally the pubs and nightclubs of the town centre. This supports Coleman’s (1979) transition theory that suggests that adolescents move from organised activity settings to casual leisure settings to commercial leisure settings. This transition is motivated by a change in the developmental needs of the adolescent; in casual leisure settings adolescents are concerned with peer-relationships, in commercial leisure settings adolescents are concerned with gaining independence from their parents. Hendry, Shucksmith, Love & Glendinning (1993) found that the use of casual settings starts to decline at around 16 years of age. Whilst this is consistent with the findings of Study Four, this decline in the use of casual settings was only found for female adolescents. Use of the environment for male adolescents was still very much based in casual leisure settings at 16 years of age. This suggests that the female adolescents were more advanced in terms of the transition from casual to commercial leisure settings than male adolescents.

Further research should analyse the transition from casual leisure settings to commercial leisure settings in more detail, especially in terms of gender differences and developmental needs. By the age of 18 the leisure activities of adolescents are transformed as they are able to legally use pubs and nightclubs. The current research suggests that for female adolescents the transition from casual to commercial leisure begins to occur at 15-16 years of age. It is also likely that this transition will be influenced by the financial resources of the adolescent.

There was little support for females’ access to the environment being more restricted than males, as suggested by previous research (van Vliet 1983, Maudlin & Meeks 1990, Cotterell 1993, Deem 1996). Female adolescents did not utilise the neighbourhood, school and town centre environments for social interaction less than male adolescents. In fact, Study Four suggests that older female adolescents are actually less restricted in their use of the environment than their male counterparts: older female adolescents used the town centre at night for over 18 activities whilst their male counterparts did not.
The peer group is immensely influential in adolescents’ use of the environment for social interaction. Cotterell (1996) suggested that adolescents belong to several cliques, with each clique being located and confined to a specific setting. This research systematically compared the effect of peer group structure upon use of the home, neighbourhood, school and town centre. Different environments were used with different peer-group structures, but these were not always cliques as suggested by Cotterell. An increase in peer group size is associated with greater use of the environment for social interaction. These findings have implications for the design of adolescents’ environments. To encourage adolescents to socially interact, large areas where they can gather together need to be incorporated into the design of urban environments.

Interestingly, being alone is not associated with greater use of the environment for retreat. Seeking out an environment for retreat requires a motive. It is not enough to simply be alone in an environment for retreat to occur. Korpela (1992) found that both positive and negative experiences were associated with seeking out a restorative environment and future research should investigate the experiences that lead to the home, neighbourhood, school and town centre being used for retreat and how the affordances can be extended in order to fulfil this need more adequately.

This research has also examined the assumption of previous research that a preference for an environment is reflected in the use of the environment (Eubanks Owens 1988, van Andel 1990, Korpela 1992, Eubanks Owens 1994, Lieberg 1997). It is suggested that preference for an environment relates to use of the environment in some settings for certain affordances. Adolescents who least preferred the neighbourhood and town centre environments use the environments least for social interaction. A similar result was not found for the school and home and this could be because adolescents have less choice about their use of these environments. For environments where there is a choice, preference affects use for social interaction.

The findings of this research also have other implications for the design of adolescents’ environments. The town centre is the overwhelmingly preferred environment for adolescents. This suggests that any facilities that are provided for adolescents’ leisure should be located in the town centre. This is the environment to which they are attracted and with which they wish to engage. However, previous research suggests that adolescents are not seen as legitimate users of the town centre (Brown 1995, Valentine 1996, Lupton 1999, Matthews, Taylor,
However, rather than increasing the management of adolescents’ use of space, it is suggested that the perception of adolescents as illegitimate users of the environment needs to be challenged. Increased facilities for adolescents in the town centre (in terms of both number and quality) could lead to increased contact between adolescents and adults, which could reduce the prejudice that adults feel towards adolescents. Thus, facilities for adolescents should not be isolated from other facilities in the town centre.

In describing their use of the school environment, female adolescents discussed personal and group identity. These results were interpreted using Breakwell’s Identity Process theory (1986). Breakwell views identity as a dynamic social product that is guided by the principles of continuity, distinctiveness, self esteem and self-efficacy. Identity can be threatened by a situation that challenges the continuity, distinctiveness, self esteem and self-efficacy of the individual or group. Thus, for female adolescents the school was an environment that threatened both group and individual identity.

These concerns with personal and group identity are related to the developmental needs of the adolescent. Coleman (1979) found that adolescents had a developmental need to be accepted by their peers between the ages of 13-16 years of age. This developmental need results in the adolescent experiencing fear and anxiety about being rejected by their peers. Coleman found that these concerns were higher for female adolescents than male adolescents. Also, in adolescence, formal operation thought is developed. It has been hypothesised that with the development of abstract thought, adolescents become overly concerned with how they are perceived by other people (Smith, Cowie & Blades, 1998). However, this explanation does not account for the gender difference found in this study. It is possible that as well as being less concerned with identity issues, that the male adolescents were less willing to discuss such issues in front of their peers.

It is envisaged that the environmental support for an individual’s sense of identity would relate to the affective affordances of the environment. Affective affordances relate to the emotional feelings that an individual experiences in the environment. The school environment was an environment that threatened the group and individual identity of the female adolescents. This was an important affective component of their experiences in the school environment. What are the affective affordances of the home, neighbourhood, school and town centre that support the identity principles of continuity, distinctiveness, self-esteem and self-efficacy in adolescence? Future research in this area would further develop
knowledge about adolescents’ environments and also add to recent social interpretations of place identity (Twigger-Ross & Uzzell 1996, Speller 2000).

Perceived parental control had no affect upon use of the environment. This suggests that Baumrind’s (1967) three parenting styles of authoritarian, authoritative and permissive do not affect an adolescents’ use of the environment. However, there were methodological problems with the measure of parental control. Only perceived parental control was rated, not actual parental control. Also, the measurement of perceived parental control was undeveloped; a more developed measure of the three parenting styles needs to be developed that rates both the parents’ and the adolescent’s perception of parenting style. This methodological development would enable the relationship between environmental use and parenting style to be examined accurately.

Whilst parents do play a role in adolescents’ use of the environment, it is possible that the term control may not be broad enough to encapsulate the complex relationship between parents, adolescents and use of the environment. Rutter, Graham, Chadwick & Yule (1976), in a study in the UK, found that only a minority of parents reported arguing with their adolescent son or daughter about when and where they went out and their choice of activities. Further research should examine parents’ attitudes to their adolescent’s use of the environment; what role do parents play in adolescents’ use of the environment? Also, examining a broader age range of both children and adolescents, would enable the examination of when parents cease to operate controls over use of the environment.

A supportive environment is seen to have psychological consequences for adolescents (Spencer & Woolley 2000). This research has found that both urban-related identity and psychological well-being are moderately related to the supportiveness of the environment. Urban-related identity was related to use of the town centre for social interaction. There was also a moderate relationship between psychological well-being and use of the environments; a low incidence of problem behaviour was related to use of the environments for retreat. These results suggest that a supportive environment has psychological consequences for adolescents. Furthermore, any attempt to manage adolescents’ use of the environment needs to consider these consequences; restricting adolescents’ use of the environment will have psychological consequences.
Female adolescents experience feelings of fear and vulnerability in the town centre environment. However, unlike previous studies (Brown 1995, Woolley, Dunn, Spencer, Short & Rowley 1999b) fear was experienced only by female adolescents. Male adolescents do not experience such feelings of fear and vulnerability. Affective experiences in the environment were examined using focus group discussions and it is possible that males did not want to admit to feeling vulnerable in the town centre in front of their male peers.

Spencer and Woolley (2000) proposed that initially fears are instilled in adolescents by their parents and peers and that direct experience later reinforce this hearsay. The findings of the current research support this argument for female adolescents. Study Four found that younger female adolescents (aged 13-14) had not had direct experience of feeling vulnerable in the town centre, but they did have fears associated with the town centre. At 14-15 years of age, as their experience in the town centre increases, these fears become firmly grounded in experience.

Previous research has found that adolescents fear physical attack from undesirable adults and groups of older adolescents (Lupton 1999, Woolley, Dunn, Spencer, Short & Rowley 1999b). In the current study vulnerability in the town centre was associated with physical attack from older men. The younger female adolescents reported regulating their use of the town centre because of these fears, but the older adolescents did not. This finding supports the theories of Lieberg (1995, 1997) and Woolley et al (1999b) who suggest that the town centre is an important environment for learning how to handle threatening experiences.

8.2.4. The Role of Time in Environmental Evaluation and Use.

It is important to realise that the affordances identified and measured in the current research represent the function of the home, neighbourhood, school and town centre environments for adolescents at a specific time. This study of affordances represents a snapshot of adolescents' environments in the late 1990's. Affordances are transient; the environment in which they reside changes over time, as does the individual who perceives them. It is envisaged that use of the environments for social interaction and retreat will not change over time for adolescents as a user group as this use is related to developmental needs. However, the number of places that afford social interaction and retreat are likely to change in the long term. Environments are developed and the facilities offered by an environment alter over time. It is also possible that adolescents' use of public environments may become more
managed in the future, thus altering how certain environments function for adolescents.

The methodology developed in this thesis offers a tool by which changes in the function of environments over time can be examined. For example, the current study could be repeated in Guildford in ten years time to examine if the function of the home, neighbourhood, school and town centre environments have altered. The current study could also be repeated if a major new facility for adolescents was added to one of the environments. This would enable the impact of the new facility on adolescents' use of the environments to be assessed. Applying the affordance scale methodology in this way represents another possible application of affordance theory in environmental psychology.

Previous research has found that adolescents use social categories in the environment to describe other users of the environment (Cotterell 1996, Simpson 2000). Use of the school and town centre was based upon social categories. Adolescents described their own group in terms of an in-group and other adolescent users of the environment as out-groups. Different groups were also found to have their own territories in the environment. In the school environment these territories were fixed; different areas of the school belonged to the same groups at all times of the day. In the town centre environment territories were transient; different areas of the town centre belong to different groups at different times of the day. The transient nature of territories in the town centre have implications for the management of the town centre. Thus, whilst the town centre will be used by adolescents for social interaction and retreat, managers should be aware that the type of adolescents using the same place in the town centre will alter over the course of the day. Future research should examine how the fixed territories of the school environment and the transient territories of the town centre are defined. What are the physical, social and affective affordances that define these territories? It is hypothesised that the affordances of such territories will be different for those individuals to whom the territory belongs and those who it does not.

8.3. Methodological Assessment

This research adopted a methodologically eclectic position; that is a combination of quantitative and qualitative methods were used. The strength of a methodologically eclectic position is that it enables the researcher to focus upon the types of data that each method yields. As a result it offers a methodology that can be used for exploratory work through to
hypothesis testing and theory. Thus, quantitative and qualitative methods were used to obtain different types of data for different research questions; the taxonomy of affordances of adolescents’ environments was created using both quantitative and qualitative methods, the function and use of the environments were examined using a quantitative method and affective experiences associated with the environments were examined using a qualitative method. One of the strengths of using a mixture of quantitative and qualitative methods is that they enable different types of data to be elicited.

As well as enabling different types of data to be elicited for different research questions, the use of both quantitative and qualitative methods enabled the results to be triangulated. The affordances of adolescents’ environments have been examined using both quantitative and qualitative methods. In the current research the results of the quantitative study of adolescents’ environments (Study Three) and the qualitative study of adolescents’ environments (Study Four) are comparable. Both studies suggest that there are age and gender differences in use and experiences in the environment. However, the studies resulted in different findings concerning gender differences in use of the home and school environments for retreat. Using quantitative methods, Study Three found that males used the home and school environments for retreat more often than females; using qualitative methods, Study Four found that males did not use the home and school for retreat. Previous studies have found that both males and females use the environment for retreat (Schiavo 1987, Lieberg 1995, 1997). It is suggested that the difference in these results is an artefact of the methodologies. Where retreat has been examined using methods that enable the individual to respond alone such as questionnaires or interviews, both males and females are found to use the environments for retreat. Where retreat has been examined using methods where other people are present such as focus groups, only females are found to use the environment for retreat.

These results suggest a shortcoming in the focus group methodology for the male respondents. Focus group discussions are designed to be permissive and non-judgmental (Krueger, 1994). All respondents should feel free to give their own opinion about the topic. It is suggested that in the current research male respondents were affected by the presence of male peers. This problem could have been avoided by conducting interviews with the adolescents to examine their feelings about the environments. Interviews have the advantage of being qualitative and thus enabling feelings to be examined, whilst also enabling the individual to respond alone.
The quantitative and qualitative methods utilised in this thesis differ in the amount of control that the researcher had over the data collection. The questionnaire studies (Study One and Three) are less controlled than the focus group studies (Study Two and Four). In the focus group studies the data was directly elicited by the researcher, whereas the questionnaires were completed over several weeks in the presence of a teacher. It would have been advantageous for the researcher to have been present for the questionnaire studies. However, having teachers administer the questionnaires enabled a larger sample to complete the questionnaires than would have been possible if the researcher had administered the questionnaires. It was essential that a large sample was surveyed so that generalisations about adolescents' use of the environments could be made.

Whilst the use of both quantitative and qualitative methods is becoming more popular in psychology (Bryman 1988, Henwood & Pidgeon 1992, Speller 2000), the methodologically eclectic position has been criticised by some researchers as it ignores the epistemological differences between the methods (Lincoln & Guba 1985, Hammersley 1996). This argument is acknowledged, but it was never the aim of this research to be able to draw conclusions about this issue.

It should be acknowledged that the current research has focused upon studying nomothetic aspects of adolescents' use of the environment, as opposed to idiographic aspects. The aim of this thesis was to be able to generalise the function of adolescents' environments and both environments and developmental needs have been described at a general rather than a specific level. It therefore follows that the taxonomy of social affordances developed in this thesis measures general developmental needs in adolescence. The focus on the developmental needs of social interaction and retreat in this thesis has its origins in developmental psychology, there is clearly also a role for more specific developmental needs in environmental use.

Whilst it is useful to be able to generalise the function of adolescents' environments, it would also be useful to understand individual differences in the function of adolescents' environments. Relationships between an individual's specific developmental needs and environmental use should be examined. This type of research would elaborate upon the more idiographic aspects of adolescents' use of the environment. This research could be conducted within the framework of affordance theory. The strength of the affordance methodology is that it can be applied to macro or micro environments and to general or specific
developmental needs. The affordance methodology is not limited to measuring the macro environment and general developmental needs. Another strength of the affordance methodology is that it combines qualitative and quantitative methods; the identification of affordances does not rely upon only one data collection method.

Finally, it is important to acknowledge some of the sampling shortcomings of the current research. Whilst sampling from the same school throughout the research meant that the same town centre environment was being studied, it did limit the research in other ways. For example, the function of only one school environment has been obtained. The research is also limited by the number of focus group discussions that were held with adolescents. Six focus group discussions were held with male and female adolescents from Years 9, 10 and 11; the two younger years (Years 7 and 8) were not sampled. Thus, a smaller age range was sampled to examine affective experiences in the environment than had been sampled to examine the function and use of the environments. Also, a broader examination of the affective experiences of the adolescents would have been achieved if more than one focus group discussion could have taken place with each 'demographic' group. Sampling participants from other schools in Guildford would have avoided these shortcomings and enabled a broader examination of adolescents’ experiences in the environment to take place.

8.4. Conclusion.

8.4.1. Modelling the Adolescent-Environment Relationship

The examination of adolescents’ environments in this thesis is concluded by the proposal of a model of the adolescent-environment relationship. Figure 8.2. outlines a model of the adolescent-environment relationship which summarises the relationship between the adolescent’s developmental needs, their actions and the physical, social and affective affordances of the environment. The model also outlines the influence that other people can have both upon the adolescents’ actions and the affordances of the environment. The theoretical bases of the model are described in detail below.
The Environment

Gibson's theory of affordances (1966, 1979) proposes that the functional significance of the environment is denoted by its physical and social affordances. The environment possesses physical and social affordances that enable individuals to understand the meaning of the environment. The current research has extended the definition of affordances to include affective affordances. Thus, it is proposed that the environment comprises of physical, social and affective affordances each of which have equal potential to be associated with each other.

Figure 8.2. A Model of the Adolescent-Environment Relationship.

The Adolescent

In his theory of affordances, Gibson proposed a transactional, reciprocal relationship between the individual and the environment. The individual obtains knowledge of the environment and uses this knowledge to guide their actions; the environment supports the actions as the individual’s knowledge was derived from the environment. The individual and the
environment can influence each other and thus in the model there is a reciprocal relationship between the adolescent and the environment.

Actions within the environment are seen to be driven by the developmental needs of the adolescent (Coleman 1979, Noack & Silbereisen 1988, Lieberg 1995, 1997). The function of the environment is characterised by its physical, social and affective affordances and adolescents consider environments in terms of how much support these affordances provide for their developmental needs.

**Other People**

Within the model there is also a role for other people. Other people have two potential influences upon the adolescent-environment relationship. Firstly, other people play a role in the formation of affordances. We are introduced to objects in the environment by other people. People play a role in constructing affordances and in defining, explaining and policing their use (Costall, 1995). The construction of affordances influences both the actions of the adolescent and the function of the environment. Secondly, other people are mediators in the perceptual process. The affordances offered by an environment, to an individual, change with the presence of other people. The presence of other people influences both the actions of the adolescent and the function of the environment.

8.4.2. Contribution of the Thesis

This research develops both the theoretical and the methodological application of Gibson's theory of affordances in environmental psychology. The current research extends the original theory of Gibson and develops the methodologies of Heft (1988) and Kyttä (1995).

This thesis has outlined the significance of Gibson's theory of affordances (1966, 1979) for environmental psychology. Gibson offers a comprehensive theory of environmental perception that brings together the physical and social environments to account for the functional significance of the environment. The concept of affordances is truly transactional; the individual and the environment coexist and jointly contribute to the meaning of an event. However, whilst Gibson saw the perception of affordances as a conscious process (which means that affordances could potentially be identified and evaluated), he did not concern
himself with developing a methodology that enables the affordances of the environment to be measured.

Heft (1988) was the first psychologist to attempt to develop a methodology that would enable the affordances of the environment to be identified. Heft created a taxonomy of the physical affordances of children’s environments. Whilst the creation of a taxonomy of affordances is a significant contribution, Heft did not apply his taxonomy to compare the function of different environments; it remains a preliminary list of physical features of children’s environments.

Kyttä’s study (1995) represents the first attempt to fully operationalise Gibson’s theory of affordances to examine the functional significance of the environment. Kyttä made two significant contributions to the development of methodology. Firstly, she extended Heft’s taxonomy to include some social affordances of the environment. Despite the fact that Gibson saw the environment as consisting of both physical and social affordances, Heft’s taxonomy only encompassed the physical affordances of the environment. Secondly, Kyttä applied Heft’s taxonomy as a measurement tool to compare the affordances of different types of children’s environments. Kyttä’s methodology enables the presence or absence of affordances in different environments to be compared.

The current research develops the theoretical application of Gibson’s theory of affordances in environmental psychology. The concept of social affordances has been developed in the current research and this represents the first time that the social affordances of the environment have been identified and measured. Gibson’s original theory also neglects the role of affect in the functional significance of the environment. Gibson defined the environment as comprising of physical and social affordances. The current research extends this definition and sees the environment as comprising of physical, social and affective affordances.

Whilst the affordances of the environment reflect the functional significance of the environment, the current research has considered how the function of the environment is related to developmental needs. This research develops a model of the adolescent-environment relationship that illustrates the relationship between the adolescent’s developmental needs, their actions and the physical, social and affective affordances of the environment. This model also incorporates the influence that other people can have both upon the adolescents’ actions and the affordances of the environment.
Methodologically, the current study builds upon Kytta's methodology. It creates a taxonomy of the social affordances of adolescents' environments and uses the taxonomy as a measurement tool to evaluate the function of different environments. The current research makes a more detailed measure of affordances than Kytta's methodology; the number of places available for each affordances in an environment is measured rather than just the presence or absence of an affordance. This measure enables scales to be constructed to measure and systematically compare the function of different environments. These scales enable a greater insight and comparison of the function of environments to be made.

In conclusion, this research provides a detailed picture of adolescents' use of the environment and illustrates a legitimate role for adolescents as users of the environment. The current research develops the theoretical and methodological application of Gibson's theory of affordances in environmental psychology and the findings of this research have implications for the planning, design and management of adolescents' environments.
References.
References


References


References


References


References


Appendices.
Appendix 1: Letter to the School
Dear Mr Smith,

I am an environmental psychology PhD student from the Department of Psychology at the University of Surrey. My PhD is focusing on adolescents and their use of the environment.

I am currently seeking participants for a questionnaire survey. The survey (which is enclosed for your information) is concerned with how adolescents use their neighbourhood and town centre environments and what activities these environments offer adolescents.

The aim of the research is to assess how the environment is used by adolescents, how the environment could be designed to meet their needs in terms of facilities, spaces and places and how they feel about places.

I would very much like to include the pupils at your school in my survey. The questionnaire takes about 30 minutes to complete. I would require 50 pupils from Year groups 7 to 11 to complete the survey. I understand that this is a busy time of year because of exams but if you could let me have access to any of your pupils I would be most grateful. I will of course provide you with the results of the study after they have been analysed.

I will contact you next week to discuss this matter further.

Yours sincerely

Charlotte Clark
Appendix 2a: Instructions for Teachers for Study One
Adolescents and their Use of the Environment Study: Instructions for Teachers

Thank you for agreeing to assist in the administration of this study. My PhD is focusing on adolescents and their use of the environment and the questionnaire focuses upon how adolescents use their neighbourhood and town centre environments and what activities these environments offer adolescents.

The questionnaire should take approximately 30 minutes to complete and is to be completed during registration time. I would be grateful if all pupils are given as much time as they need to complete the questionnaire. This ensures that pupils of differing academic abilities have an equal opportunity to complete the questionnaire.

It must be made clear to pupils that participating in the research is voluntary. Pupils should be asked whether they wish to opt into the research rather than having to opt out. It must also be made clear to the pupils that they can opt out of the research at any time; pupils must not be forced to complete the questionnaire once they have consented if they do not wish to.

Finally, the information obtained through this research must be treated confidentially. To ensure this is it advised that pupils should not write their names on the questionnaires. Once completed questionnaires should be returned to your Head of Year.

Many thanks for your valuable assistance with this study.

Charlotte Clark
Appendix 2b: Questionnaire for Study One
The following questionnaire is about how you as a teenager use your environment. What activities does your neighbourhood and town centre offer you? What do you think about Guildford as a town? The answers to such questions will be used to assess how satisfied you are with and how you actually make use of the facilities in Guildford and your neighbourhood.

The questionnaires are anonymous but any questions that you do not wish to answer, please leave blank. All the information that you give in the questionnaire will be treated with the strictest confidentiality by the researcher.

Thank You For Taking the Time to Complete the Questionnaire

Charlotte Clark
Department of Psychology, University of Surrey
Affordances of the Environment

Below are some statements about what your neighbourhood and town centre environments offers you. Please indicate how many opportunities there are in your neighbourhood and town centre (separately) for the activities stated. **Write next to the statement an estimate of the number of places there are where you could go to do this activity.** If you think that there are no places where you can do the stated activity then put a 0. Please consider your answers carefully.

By your neighbourhood, I am referring to the immediate area in which you live, By town centre I am referring to the main central areas of Guildford.

**Question A. How many places are there where you can do the following activities?**

<table>
<thead>
<tr>
<th>Statement</th>
<th>In my Neighbourhood</th>
<th>In Guildford Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR EXAMPLE:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I want to be with my friends</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>If I want privacy</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>A1  If I want to be alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A2  If I want to avoid adult observation or supervision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3  If I want to avoid my peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A4  If I want privacy to be with my best friend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5  If I want privacy to be with my boyfriend or girlfriend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A6  If I want to be free from the expectations of my friends</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A7  If I want to be free from the expectations of my family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A8  If I want to be free to be the real me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A9  If my group of friends and I want privacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A10 If I want to relax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A11 If I want to be on my own to think</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A12 If I want to be with others, amongst strangers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A13 If I want to be free from the pressures of my parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A14 If I want to be free from the pressures of my friends</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A15 If I want freedom of expression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A16 If I want to be in control of my environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A17 If I want to go to an area that belongs to teenagers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A18 If I want to go to an area that is predominantly used by teenagers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A19 If I want to go somewhere I feel I belong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>In my Neighbourhood</td>
<td>In Guildford Town</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>A20 If I want to be with friends</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A21 If I want to meet new people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A22 If I want to be with people who are similar to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A23 If I want to be with close friends</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A24 If I want to be alone with my boyfriend or girlfriend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A25 If I want to do something that society disapproves of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A26 If I want to do something that my parent’s disapprove of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A27 If I want to be active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A28 If I want to enjoy myself</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A29 If I want to be entertained</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A30 If I want to be in an attractive place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A31 If I want to feel comfortable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A32 If I want to be free to be myself</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A33 If I want to be noisy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A34 If I want to be upset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A35 If I want to feel happy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A36 If I want to feel secure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A37 If I want to be peaceful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A38 If I want to observe people</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
About You Section B

B1. Are You  Female □  Male □

B2. Date of Birth: __________________________________________

B3. Town of Birth: __________________________________________

B4. Name of road where you live: _______________________________

B5. Name of neighbourhood where you live: _________________________

B6. How long have you lived in this neighbourhood?
   Less than 1 year □
   Between 1 - 5 years □
   Between 6 - 10 years □
   Between 10 - 16 years □

B7. Do you have your own bedroom at home?
   Yes □  No □

B8. What is the average number of friends that you usually hang around with?
   __________________________________________ (Please write in number)

B9. Are the friends you hang around with in your leisure time.... (Tick as many as are applicable)
   Friends from school □
   Friends from the neighbourhood □
   Friends from an organised activity that you do □
   Friends from work □
   Friends known through other friends □
   Other: (Please state) __________________________________________
B10a. Amount of allowance you receive per week  
£ ________________________

B10b. Amount of money you earn working per week  
£ ________________________

B11. Do you live with your.....

☐ Mother only
☐ Father only
☐ Mother and Father
☐ Other

B12a. What is your mother’s occupation?  
______________________________

B12b. What is your father’s occupation?  
______________________________

B13. What set are you in for the following subjects at school?

<table>
<thead>
<tr>
<th>Subject</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3a: Instructions for Teachers for Study Three
Adolescents and their Use of the Environment Study: Instructions for Teachers

Thank you for agreeing to assist in the administration of this study. My PhD is focusing on adolescents and their use of the environment and the questionnaire focuses upon how adolescents use their home, neighbourhood, school and town centre environments and what activities these environments offer adolescents.

The questionnaire should take approximately 45 minutes to complete and is to be completed during registration time. I would be grateful if all pupils are given as much time as they need to complete the questionnaire. This ensures that pupils of differing academic abilities have an equal opportunity to complete the questionnaire.

It must be made clear to pupils that participating in the research is voluntary. Pupils should be asked whether they wish to opt into the research rather than having to opt out. It must also be made clear to the pupils that they can opt out of the research at any time; pupils must not be forced to complete the questionnaire once they have consented if they do not wish to.

Finally, the information obtained through this research must be treated confidentially. To ensure this is it advised that pupils should not write their names on the questionnaires. Once completed questionnaires should be returned to your Head of Year.

Many thanks for your valuable assistance with this study.

Charlotte Clark
Appendix 3b: Questionnaire for Study Three
Teenagers and the Environment Questionnaire

The following questionnaire is about how you as a teenager use the environment. The environments you will be asked questions about are the home, the school, the neighbourhood and the town centre. This questionnaire forms part of my studies at the University of Surrey.

The questionnaires are anonymous and confidential. Any questions that you do not wish to answer please leave blank.

Thank you for taking the time to complete the questionnaire.

Instructions

Throughout the questionnaire you will find tables like the ones shown below.

Some of the questions require you to write the number of places there are where you can do the activity in a certain environment.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of places</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be with friends</td>
<td>4</td>
</tr>
<tr>
<td>Avoid your peers</td>
<td>0</td>
</tr>
</tbody>
</table>

Other questions require you to use a rating scale. For these questions you are required to read the statement in the table and then put a number in the box that indicates your response. In the following example you are being asked to indicate how often you do the activity. So if you were with your friends very often you would put a 1 in the box, if you never avoid your peers you would put a 5 in the box.

<table>
<thead>
<tr>
<th>Very Often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Hardly Ever</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Different forms of the rating scales appear, so make sure that you read the question carefully. Some of the questions may appear to be similar but no question is being asked more than once.
Your Local Neighbourhood

How many places are there in your local neighbourhood where you could do the following activities?

For each of the statements below write a number in the box to indicate how many places there are in your local neighbourhood where you can do the activity. If you think that there are no places put a 0.

<table>
<thead>
<tr>
<th>Local Neighbourhood Environment</th>
<th>Number of places</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1 Be free from the expectations of your family</td>
<td></td>
</tr>
<tr>
<td>N2 Be active</td>
<td></td>
</tr>
<tr>
<td>N3 Be alone</td>
<td></td>
</tr>
<tr>
<td>N4 Be entertained</td>
<td></td>
</tr>
<tr>
<td>N5 Avoid people</td>
<td></td>
</tr>
<tr>
<td>N6 Be free from the expectations of your friends</td>
<td></td>
</tr>
<tr>
<td>N7 Relax</td>
<td></td>
</tr>
<tr>
<td>N8 Be free from the pressures of your parents</td>
<td></td>
</tr>
<tr>
<td>N9 Be noisy</td>
<td></td>
</tr>
<tr>
<td>N10 Be happy</td>
<td></td>
</tr>
<tr>
<td>N11 Be in an area that belongs to teenagers</td>
<td></td>
</tr>
<tr>
<td>N12 Be in control of the environment</td>
<td></td>
</tr>
<tr>
<td>N13 Be with close friends</td>
<td></td>
</tr>
<tr>
<td>N14 Be free to be yourself</td>
<td></td>
</tr>
<tr>
<td>N15 Be on your own to think</td>
<td></td>
</tr>
<tr>
<td>N16 Be peaceful</td>
<td></td>
</tr>
<tr>
<td>N17 Be in your own space</td>
<td></td>
</tr>
<tr>
<td>N18 Get away from your parents</td>
<td></td>
</tr>
<tr>
<td>N19 Be with similar people</td>
<td></td>
</tr>
<tr>
<td>N20 Be yourself</td>
<td></td>
</tr>
<tr>
<td>N21 Enjoy yourself</td>
<td></td>
</tr>
<tr>
<td>N22 Feel secure</td>
<td></td>
</tr>
<tr>
<td>N23 Get away from your friends</td>
<td></td>
</tr>
<tr>
<td>N24 Be with friends</td>
<td></td>
</tr>
<tr>
<td>N25 Get away from your peers</td>
<td></td>
</tr>
<tr>
<td>N26 Be in a place where I feel I belong</td>
<td></td>
</tr>
<tr>
<td>N27 Be in an area that is mainly used by teenagers</td>
<td></td>
</tr>
<tr>
<td>N28 Hang around</td>
<td></td>
</tr>
<tr>
<td>N29 Have freedom of expression</td>
<td></td>
</tr>
<tr>
<td>N30 Have privacy with your best friend/s</td>
<td></td>
</tr>
<tr>
<td>N31 Have space to be upset in</td>
<td></td>
</tr>
<tr>
<td>N32 Meet new people</td>
<td></td>
</tr>
<tr>
<td>N33 Be free from the pressures of your friends</td>
<td></td>
</tr>
<tr>
<td>N34 Try out new behaviours</td>
<td></td>
</tr>
</tbody>
</table>

This question was repeated for the home, school and town centre environments.
Your Local Neighbourhood

How often do you use your local neighbourhood for the following activities?

For each of the statements below please write a number in the box, using the scale below, to indicate how often you do the activity in your local neighbourhood.

<table>
<thead>
<tr>
<th>Very Often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Hardly Ever</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Neighbourhood Environment</th>
<th>How often you do this activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO1 Try out new behaviours</td>
<td></td>
</tr>
<tr>
<td>NO2 Relax</td>
<td></td>
</tr>
<tr>
<td>NO3 Meet new people</td>
<td></td>
</tr>
<tr>
<td>NO4 Enjoy yourself</td>
<td></td>
</tr>
<tr>
<td>NO5 Have space to be upset in</td>
<td></td>
</tr>
<tr>
<td>NO6 Be free from the expectations of your friends</td>
<td></td>
</tr>
<tr>
<td>NO7 Have freedom of expression</td>
<td></td>
</tr>
<tr>
<td>NO8 Hang around</td>
<td></td>
</tr>
<tr>
<td>NO9 Go to an area that is mainly used by teenagers</td>
<td></td>
</tr>
<tr>
<td>NO10 Get away from your peers</td>
<td></td>
</tr>
<tr>
<td>NO11 Be on your own to think</td>
<td></td>
</tr>
<tr>
<td>NO12 Feel secure</td>
<td></td>
</tr>
<tr>
<td>NO13 Be yourself</td>
<td></td>
</tr>
<tr>
<td>NO14 Be with similar people</td>
<td></td>
</tr>
<tr>
<td>NO15 Be in an area that belongs to teenagers</td>
<td></td>
</tr>
<tr>
<td>NO16 Get away from your parents</td>
<td></td>
</tr>
<tr>
<td>NO17 Be with close friends</td>
<td></td>
</tr>
<tr>
<td>NO18 Be peaceful</td>
<td></td>
</tr>
<tr>
<td>NO19 Get away from your friends</td>
<td></td>
</tr>
<tr>
<td>NO20 Be noisy</td>
<td></td>
</tr>
<tr>
<td>NO21 Be in your own space</td>
<td></td>
</tr>
<tr>
<td>NO22 Be free from the pressures of your parents</td>
<td></td>
</tr>
<tr>
<td>NO23 Be with friends</td>
<td></td>
</tr>
<tr>
<td>NO24 Be in a place where I feel I belong</td>
<td></td>
</tr>
<tr>
<td>NO25 Be happy</td>
<td></td>
</tr>
<tr>
<td>NO26 Be free to be yourself</td>
<td></td>
</tr>
<tr>
<td>NO27 Be in control of the environment</td>
<td></td>
</tr>
<tr>
<td>NO28 Be free from the pressures of your friends</td>
<td></td>
</tr>
<tr>
<td>NO29 Have privacy with your best friend/s</td>
<td></td>
</tr>
<tr>
<td>NO30 Avoid people</td>
<td></td>
</tr>
<tr>
<td>NO31 Be entertained</td>
<td></td>
</tr>
<tr>
<td>NO32 Be alone</td>
<td></td>
</tr>
<tr>
<td>NO33 Be active</td>
<td></td>
</tr>
<tr>
<td>NO34 Be free from the expectations of your family</td>
<td></td>
</tr>
</tbody>
</table>

This question was repeated for the home, school and town centre environments.
For each of the statements below please write a number in the box, using the scale below, to indicate how much you agree with the statement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that I am a person of worth, at least on an equal basis with others *</td>
</tr>
<tr>
<td>I feel that I have a number of good qualities *</td>
</tr>
<tr>
<td>All in all, I am inclined to feel that I am a failure</td>
</tr>
<tr>
<td>I am able to do things as well as most other people *</td>
</tr>
<tr>
<td>I feel I do not have much to be proud of</td>
</tr>
<tr>
<td>I take a positive attitude towards myself *</td>
</tr>
<tr>
<td>On the whole I am satisfied with myself *</td>
</tr>
<tr>
<td>I wish I could have more respect for myself</td>
</tr>
<tr>
<td>I certainly feel useless at times</td>
</tr>
<tr>
<td>At times I think I am no good at all</td>
</tr>
</tbody>
</table>

(Rosenberg’s Self-Esteem Scale, 1965).

*Reversed-score item
For the statements below think about yourself and decide whether each statement has been often true, sometimes true or not true of yourself in the past three months.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Often true</th>
<th>Sometimes true</th>
<th>Not true</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had sudden changes in mood or feelings</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I felt or complained that no one loved me</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was rather high strung, tense or nervous</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I cheated or told lies</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was too fearful or anxious</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I argued too much</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I had difficulty concentrating, could not pay attention for too long</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was easily confused, seemed to be in a fog</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I bullied or was cruel and mean to others</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was disobedient at home</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was disobedient at school</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I did not seem to feel sorry after I misbehaved</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I had trouble getting along with other children</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I had trouble getting along with teachers</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was impulsive or acted without thinking</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I felt worthless or inferior</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was not liked by other children</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I had a lot of difficulty getting my mind off certain thoughts, had obsessions</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was restless, overactive, could not sit still</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was stubborn, sullen or irritable</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I had a very strong temper and lost it easily</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was unhappy, sad or depressed</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was withdrawn, did not get involved with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I felt that others were out to get me</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I hung around with people who get into trouble</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I was secretive, kept things to myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I worried too much</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

(Zill's Behaviour Problems Scale, 1985).
Which is your preferred environment for leisure time activity?

Rank the following in order of your preferred environment to spend your leisure time in, with 1 being the most preferred and 4 being the least preferred environment.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>The local neighbourhood</td>
<td></td>
</tr>
<tr>
<td>The town centre</td>
<td></td>
</tr>
<tr>
<td>The school</td>
<td></td>
</tr>
<tr>
<td>The home</td>
<td></td>
</tr>
</tbody>
</table>

How do you feel about Guildford?

Below are some statements about how you feel about Guildford. Please write a number in the box, using the scale below, that indicates how much you agree with the statement.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other towns see Guildford as having prestige</td>
</tr>
<tr>
<td>Guildford has many advantages compared to other towns</td>
</tr>
<tr>
<td>Guildford can be recommended to tourists</td>
</tr>
<tr>
<td>There are many things about Guildford which are envied by other towns</td>
</tr>
<tr>
<td>I have a strong attachment to Guildford</td>
</tr>
<tr>
<td>I see myself as a ‘Guildfordian’</td>
</tr>
<tr>
<td>I feel really at home in Guildford</td>
</tr>
<tr>
<td>The town is like a part of myself</td>
</tr>
<tr>
<td>Guildford brings back lots of memories to me</td>
</tr>
<tr>
<td>Much of my identity is tied up in Guildford</td>
</tr>
<tr>
<td>I have had so many experiences in Guildford that I have become very attached to the town</td>
</tr>
<tr>
<td>I would immediately recognise the town from any historical photograph</td>
</tr>
<tr>
<td>When I wander around Guildford I feel very strongly that I belong here</td>
</tr>
<tr>
<td>This town is very familiar to me</td>
</tr>
<tr>
<td>This town is very important for my daily life</td>
</tr>
<tr>
<td>I experience Guildford town extensively every day</td>
</tr>
<tr>
<td>I would like to stay in Guildford indefinitely</td>
</tr>
<tr>
<td>I am looking forward to seeing Guildford’s future development</td>
</tr>
<tr>
<td>Guildford plays an important role in my future plans</td>
</tr>
<tr>
<td>My personal future is closely tied up with Guildford</td>
</tr>
</tbody>
</table>

(Lalli’s Urban-Related Identity Scale, 1992).
The following section contains questions about you.

1. Are You  Female  [ ]  Male  [ ]

2. Date of Birth: ________________________________

3. Town of Birth: ________________________________

4. Name of road where you live: ________________________________

5. Name of neighbourhood where you live: ________________________________

6. How long have you lived in this neighbourhood?

   Less than 1 year  [ ]
   Between 1 - 5 years  [ ]
   Between 6 - 10 years  [ ]
   Between 10 -16 years  [ ]

7. Do you have your own bedroom at home?

   Yes  [ ]  No  [ ]

8. What is the average number of friends that you would usually hang around with?

   (Write in number) ____________________________

9a. Amount of allowance you receive per week £ ____________________________

9b. Amount of money you earn working per week £ ____________________________

10. Do you live with your.....

    [ ] Mother only
    [ ] Father only
    [ ] Mother and Father
    [ ] Other

11a. What is your mother’s occupation? ____________________________

11b. What is your father’s occupation? ____________________________
12. What level of control do you parents have over your leisure time activities?

□ Very High
□ High
□ Neither high nor low
□ Low
□ Very Low

13. What set are you in for the following subjects at school?

English

Mathematics

Science
Appendix 4a: Schedule of Questions for Study Two and Study Four
Read to the class to recruit participants

I am a PhD student from the psychology department at the University of Surrey. I am currently conducting research on teenagers use of the environment. I am looking for six volunteers to take part in a discussion that I am conducting today. The discussion will be about how you use and experience the home, neighbourhood, school and town centre environments.

**Introduction** [to be read to participants]

I am currently conducting research on adolescents use of the environment, which is the topic that we are going to discuss today. I am particularly interested in your use and experiences of four environments; the home, the neighbourhood, the school and the town centre. I am interested in how you use these environments for social behaviours such as being with other people, being alone and trying out new behaviours and also how you describe your experiences in these environments.

I would like you to discuss these environments in terms of what you can do in these places and what you cannot do in these places. For example, if you wanted privacy you might seek out the home, rather than the town centre. To be with a large group of friends you might seek out the town centre rather than the home. I am also interested in how you experience these environments and how you feel and evaluate these environments.

I would like to tape record the discussion that you have today. This tape recording would be transcribed by me and used in my research. Quotes from the discussion would appear in my PhD thesis and also in any further publications that I write. Would it be OK with everyone if I tape recorded the discussion and used quotes in my work?

[If permission to tape-record has been obtained]

As I am tape recording this discussion it is important that you speak clearly and also one at a time. I will also be making brief notes during the discussion. Anything that is said in this discussion will be kept confidential.

Has anybody got any further questions?
To start we will go around the group and can you please tell me your name and your age

A) First of all we are going to discuss your use of the **home environment**.

A1) **What behaviours can you use the home for?**
   Probes: being alone, privacy, being with peers, escape

A2) **What activities/behaviours can you not use the home for?**
   Probes: Trying out new behaviours, being with a larger group of peers
   What would they like to do in the home that they cannot

A3) **How do you feel about the home environment?**
   Probes: Feelings of security, safety, refuge, attachment

A4) **How would you evaluate the home environment**
   Probes: Evaluate – positives and negatives.
   How does the home compare with other environments?

A5) **Are there any further experiences of the home environment that you would like to discuss?**

B) Next I would like you to consider your use of the **school environment**.

B1) **What behaviours can you use the school for?**
   Probes: Being with peers, to be part of a group of teens,
   belonging, social interaction, escape from parents,
   enjoying myself, being with similar people.

B2) **What behaviours can you not use the school for?**
   Probes: Privacy, being alone, freedom to be different,
   protection/security, friendliness, freedom to be yourself.

B3) **How do you feel about the school environment?**
   Probes: is there enough space and freedom to do what you want.
B4) How would you evaluate the school environment
   Probes; Evaluate – positives and negatives.
   How does the school compare with other environments?

B5) Are there any further experiences of the school environment that you would like to discuss?

C) Having considered the home and school environment I would now you to consider the town centre environment.

C1) What activities can you use the town centre for?
   Probes: Being part of a group of teens, freedom to be alone, social interaction, retreat, escape from parents.

C2) What behaviours can you not use the town centre for?
   Probes: Privacy, being alone, freedom to be different, protection/security, friendliness, freedom to be yourself.

C3) How do you feel about the town centre environment?

C4) How would you evaluate the town centre environment
   Probes; Evaluate – positives and negatives.
   How does the town centre compare with other environments?

C5) Are there any further experiences of the town centre environment that you would like to discuss?

D) Finally I would like you to discuss the neighbourhood environment.

D1) What activities can you use the neighbourhood for?
   Probes: Being part of a group of teens, freedom to be alone, social interaction, retreat, escape from parents.
D2) What behaviours can you not use the neighbourhood for?
   Probes: Freedom to be different, freedom to be yourself.

D3) How do you feel about the neighbourhood environment?

D4) How would you evaluate the neighbourhood environment
   Probes: Evaluate – positives and negatives.
   How does the neighbourhood compare with other environments?

D5) Are there any further experiences of the neighbourhood environment that you
   would like to discuss?

E) [To conclude the discussion]
   Has anyone got any further comments that they would like to make about the discussion that
   you have had today.
Appendix 4b: Table of Themes for Study Four
<table>
<thead>
<tr>
<th>Year Group &amp; Gender</th>
<th>Notes from transcript</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 9 (13-14 years) Males</td>
<td>Being with friends in the home Had their friends round a lot Limitations in size of home for how many friends they could take home Lead to use of the neighbourhood</td>
<td>Being with friends in the home</td>
</tr>
<tr>
<td>Privacy in the home</td>
<td>Could be themselves at home Privacy was not guaranteed Be alone in bedroom/go out to be alone</td>
<td>Retreat and security in the home</td>
</tr>
<tr>
<td>Group memberships in the school</td>
<td>Group memberships and conflict Group membership and self-esteem Membership based on friendship The cool and the sad Dominated their talk of the school</td>
<td>Group conflict and space conflict in the school</td>
</tr>
<tr>
<td>Conflict between the school years</td>
<td>Fighting/aggression in the school Rivalry over space - football Rivalry over space conceptualised as a problem between year groups</td>
<td>Group conflict and space conflict in the school</td>
</tr>
<tr>
<td>Sport in the neighbourhood</td>
<td>Use of neighbourhood confined to sporting activities with friends</td>
<td>Use of the neighbourhood with friends</td>
</tr>
<tr>
<td>Use of the town centre</td>
<td>Activities in the town centre Not much to do Use at day not at night</td>
<td>Use of the town centre</td>
</tr>
<tr>
<td>How the town centre could meet their needs</td>
<td>Low person-environment fit in the town centre Suggestions for improvements</td>
<td>Dissatisfaction with the town centre</td>
</tr>
<tr>
<td>Year Group &amp; Gender</td>
<td>Notes from transcript</td>
<td>Theme</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Year 9 (13-14 years) Females</td>
<td><strong>Being yourself in the home</strong>&lt;br&gt;Be yourself&lt;br&gt;Relaxing</td>
<td>Retreat and Security in the home</td>
</tr>
<tr>
<td></td>
<td><strong>Use of bedroom to be alone</strong>&lt;br&gt;Used to be alone - get away from parents and siblings&lt;br&gt;Use after conflict</td>
<td>Retreat and Security in the home</td>
</tr>
<tr>
<td></td>
<td><strong>Use of neighbourhood</strong>&lt;br&gt;Used neighbourhood only with friends</td>
<td>Use of neighbourhood with friends</td>
</tr>
<tr>
<td></td>
<td><strong>Friendship groups in school</strong>&lt;br&gt;Such friendship groups dominate discussions of the school</td>
<td>Friendship groups in the school</td>
</tr>
<tr>
<td></td>
<td><strong>Group membership in the school</strong>&lt;br&gt;Different names for different groups- based on appearance&lt;br&gt;Also school year memberships&lt;br&gt;Space conflict between school years</td>
<td>Group conflict and space conflict in the school</td>
</tr>
<tr>
<td></td>
<td><strong>How the school could meet their needs</strong>&lt;br&gt;No privacy or wet weather places</td>
<td>Dissatisfaction with the school environment</td>
</tr>
<tr>
<td></td>
<td><strong>Being yourself in the school</strong>&lt;br&gt;Not an environment where you could be yourself&lt;br&gt;Peer pressure to look good&lt;br&gt;Vulnerable to the judgement of others&lt;br&gt;School doesn’t support them being themselves&lt;br&gt;They also judged other people</td>
<td>Vulnerability to the judgements of other peers</td>
</tr>
<tr>
<td></td>
<td><strong>Use of the town centre</strong>&lt;br&gt;Only in the daytime&lt;br&gt;Evaluate the town centre positively</td>
<td>Use of the town centre</td>
</tr>
<tr>
<td></td>
<td><strong>Group membership in the town centre</strong>&lt;br&gt;Different groups fighting&lt;br&gt;Didn’t really effect them</td>
<td>Group conflict in the town centre</td>
</tr>
<tr>
<td>Year Group &amp; Gender</td>
<td>Notes from transcript</td>
<td>Theme</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td></td>
<td><strong>Unattractiveness of the town centre at night</strong>&lt;br&gt;Felt vulnerable and as a result rarely used the town centre at night&lt;br&gt;Avoid the town centre</td>
<td>Vulnerability and fear in the town centre</td>
</tr>
<tr>
<td></td>
<td><strong>How the town centre could meet their needs</strong>&lt;br&gt;Not much to do in town, suggested activities.</td>
<td>Dissatisfaction with the town centre</td>
</tr>
<tr>
<td>Year 10 (14-15 years) Males</td>
<td><strong>Use of the home with friends</strong>&lt;br&gt;Use of home often results in neighbourhood being used as well&lt;br&gt;Alleviates the boredom</td>
<td>Use of the home with friends</td>
</tr>
<tr>
<td></td>
<td><strong>Use of the town centre</strong>&lt;br&gt;With large groups of friends&lt;br&gt;Sharing activities</td>
<td>Use of the town centre</td>
</tr>
<tr>
<td></td>
<td><strong>Being judged by other users of the town centre</strong>&lt;br&gt;Can’t be different in the town&lt;br&gt;Actions, behaviours and clothing is judged by others&lt;br&gt;Different groups - Goths, Garys&lt;br&gt;Verbal fighting</td>
<td>Group conflict in the town centre</td>
</tr>
<tr>
<td></td>
<td><strong>Use of the town centre</strong>&lt;br&gt;Went into town centre after school</td>
<td>Use of the town centre</td>
</tr>
<tr>
<td></td>
<td><strong>Group conflict in the school</strong>&lt;br&gt;Different groups of users&lt;br&gt;Conformity, conflict, rivalry&lt;br&gt;Wanted own group to be positively evaluated</td>
<td>Group conflict and space conflict in the school</td>
</tr>
<tr>
<td></td>
<td><strong>Space conflict in the school</strong>&lt;br&gt;Liked to be active - high requirement for space&lt;br&gt;Suggest an area for each year group</td>
<td>Group conflict and space conflict in the school</td>
</tr>
<tr>
<td>Year Group &amp; Gender</td>
<td>Notes from transcript</td>
<td>Theme</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Use of neighbourhood with friends</td>
<td>Use of neighbourhood with friends</td>
</tr>
<tr>
<td></td>
<td>Used the neighbourhood quite often</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Friends and sport</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of a friends neighbourhood</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Town centre at night</strong></td>
<td>Use of the town centre</td>
</tr>
<tr>
<td></td>
<td>Did not use town centre at night and used group distinctiveness as a reason</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Anti-social behaviour in the town centre</strong></td>
<td>Use of the town centre</td>
</tr>
<tr>
<td></td>
<td>Drinking alcohol</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vandalism</td>
<td></td>
</tr>
<tr>
<td>Year 10 (14-15 years) Females</td>
<td><strong>Being yourself in the home</strong></td>
<td>Retreat and Security in the home</td>
</tr>
<tr>
<td></td>
<td>Restorative behaviours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Being themselves which other environments didn’t afford</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Retreat – able to work through the tensions of the day with parents</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Being with friends in the home</strong></td>
<td>Being with friends in the home</td>
</tr>
<tr>
<td></td>
<td>Spend time and talk with friends</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Home better than the town for this</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Lack of provision in the school</strong></td>
<td>Dissatisfaction with the school environment</td>
</tr>
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<td>No privacy - or other restorative behaviours</td>
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<td>Little self-efficacy over use of space in school</td>
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<td>No where to do homework/study</td>
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<td></td>
<td><strong>Being with friends in the school</strong></td>
<td>Friendship groups in the school</td>
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<td>Being in cliques</td>
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<td></td>
<td><strong>Group conflict and space conflict in the school</strong></td>
<td>Group conflict and space conflict in the school</td>
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<td></td>
<td>No control over use of space in the school</td>
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<td>Group conflict over space</td>
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<td>Want a room for their year group</td>
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<td>Year Group &amp; Gender</td>
<td>Notes from transcript</td>
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<td></td>
<td><strong>Not being yourself at school</strong></td>
<td>Vulnerability to the judgement of peers in school</td>
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<td>Vulnerable to the judgements of others</td>
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<td>Peer-pressure</td>
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<td>Want to fit in and not be different</td>
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<td>Frustration with lack of distinctiveness</td>
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<td><strong>Use of the town centre</strong></td>
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<td>Being with friends, get away from parents</td>
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<td>Used after school - also avoid going home</td>
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<td>Lido</td>
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<td>Off-licence and under 18's nightclub</td>
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<td><strong>Lack of things to do in the town centre</strong></td>
<td>Dissatisfaction with the town centre</td>
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<td>Not much for their age group</td>
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<td></td>
<td>Don’t wish to share facilities with younger adolescents</td>
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<td>Need money to use places</td>
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<td></td>
<td><strong>Vulnerability in the town centre at night</strong></td>
<td>Vulnerability and fear in the town centre</td>
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<td>Perceived vulnerability and experience of vulnerability</td>
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<td>Feelings come from not being in control and being in environments used by over 18's.</td>
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<td>Despite vulnerability they still used it</td>
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<td><strong>Group memberships and conflicts in the town centre</strong></td>
<td>Group conflict in the town centre</td>
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<td>Can’t be yourself</td>
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<td>Group conflict - verbal and physical</td>
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<td>Inter-group and inter-school conflict</td>
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<td><strong>Use of the neighbourhood with friends</strong></td>
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<td>Use of neighbourhood contingent upon friends</td>
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<td>Vulnerability</td>
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<td>Year 11 (15-16 years) Males</td>
<td>Use of the town centre&lt;br&gt; Motiveless use of the town centre&lt;br&gt; Mostly used in the day</td>
<td>Use of the town centre</td>
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<td>Lack of provision in the town centre&lt;br&gt; Not enough places&lt;br&gt; More provision should be made&lt;br&gt; Lack of places to socialise&lt;br&gt; Didn't want to be with younger adolescents&lt;br&gt; Seeking out other environments to support needs</td>
<td>Dissatisfaction with the town centre</td>
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<td>Being judged by others in the town centre&lt;br&gt; Not a relaxing environment&lt;br&gt; Not specific about who would judge them or laugh at them</td>
<td>Group conflict in the town centre</td>
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<td>Use of the home&lt;br&gt; Had friends round to the house&lt;br&gt; Also affords privacy and relaxation - especially more than other environments&lt;br&gt; Boring- nothing to do</td>
<td>Being with friends in the home</td>
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<td>Neighbourhood and friends&lt;br&gt; Confined to activities that involved being with friends&lt;br&gt; Hang out in friends neighbourhood&lt;br&gt; Not much to do in the neighbourhood</td>
<td>Use of the neighbourhood with friends</td>
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<td><strong>Space conflict in the school</strong>&lt;br&gt;Playing games - lack of space&lt;br&gt;Lack of other space&lt;br&gt;Used their year group distinction in order to access and utilise space&lt;br&gt;Territory divided up by year group</td>
<td>Group conflict and space conflict in the school</td>
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<td><strong>Lack of provision in the school</strong>&lt;br&gt;Nothing to do when it rained&lt;br&gt;No places for privacy&lt;br&gt;Places to sit down</td>
<td>Dissatisfaction with the school environment</td>
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<td></td>
<td><strong>Group membership in the school</strong>&lt;br&gt;This group were the least concerned.&lt;br&gt;Didn’t feel threat of group conflict.&lt;br&gt;Year group was important to them</td>
<td>Group conflict and space conflict in the school</td>
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<tr>
<td>Year 11 (15-16 years) Female</td>
<td><strong>Home as an escape/refuge</strong>&lt;br&gt;Good place to escape school, friends and Guildford</td>
<td>Retreat and Security in the home</td>
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<td><strong>Having friends around the home</strong>&lt;br&gt;Some felt it inconvenient and nothing to do at home other did have friends round&lt;br&gt;Friend’s home is somewhere you can be yourself&lt;br&gt;Friday/Saturday nights</td>
<td>Being with friends in the home</td>
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<td><strong>The home as a stressed environment</strong>&lt;br&gt;Can’t relax&lt;br&gt;2 stresses - GCSE’s and strained relationships with parents&lt;br&gt;Some put off going home at night - stayed in the town centre</td>
<td>The home as a stressed environment</td>
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<td><strong>Being yourself in the home</strong>&lt;br&gt;Was the only environment in which they could be themselves</td>
<td>Retreat and Security in the home</td>
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<td><strong>Friendship groups in the school</strong>&lt;br&gt;Friendships groups – can be conflict within the group. Lessons enabled them to get away from the conflict</td>
<td>Friendship groups in the school</td>
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<td><strong>Lack of control over use of space in the school</strong>&lt;br&gt;Not enough space - lacked their own year territory</td>
<td>Group conflict and space conflict in the school</td>
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<td><strong>Lack of places for privacy in the school</strong>&lt;br&gt;No privacy - lack of places and also friends would not let you seek out privacy</td>
<td>Using the school for retreat</td>
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<td><strong>Use of the town centre</strong>&lt;br&gt;More sophisticated users of the town than younger adolescents&lt;br&gt;Use after school&lt;br&gt;Over 18's activities&lt;br&gt;Lack of provision for their age group&lt;br&gt;Risk of getting caught</td>
<td>Use of the town centre</td>
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<td><strong>Lack of facilities for their year group in the town centre</strong>&lt;br&gt;Lack of variety, provision and space&lt;br&gt;Want activities not near areas where they feel vulnerable&lt;br&gt;Guildford more concerned with commerce than adolescent leisure</td>
<td>Dissatisfaction with the town centre</td>
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<td><strong>Vulnerability in the town centre</strong>&lt;br&gt;Often felt vulnerable&lt;br&gt;Fighting, police, murder&lt;br&gt;Especially fearful of fights and confrontation with drunk people. Felt they would be able to control such a situation</td>
<td>Vulnerability and fear in the town centre</td>
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<td></td>
<td><strong>Group conflict in the town centre</strong></td>
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<td>Conflict between users groups</td>
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<td>2 groups mentioned - groups from different housing estates and groups from different schools</td>
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<td>Fighting at the Spectrum</td>
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<td>Different groups - Goths, Garys etc</td>
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<td></td>
<td>Not much that can be done about the problems</td>
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