Engagement in the Local Community and Civic Socialisation: An Analysis of Neighbourhood and Household Context Using the British Household Panel Survey

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Abstract

The University of Manchester Lee M Bentley 27/09/2013 PhD Engagement in the Local

Engagement in the Local Community and Civic Socialisation: An Analysis of Neighbourhood and Household Context Using the British Household Panel Survey

This thesis sets out to examine the notion that social context throughout the life course plays an important role in the development of social capital. It explores this using the British Household Panel Survey (BHPS), a longitudinal data set, using data from England and Wales. It argues that social capital can be thought of as being composed of different dimensions which develop differentially over time. It frames the research within the context of the local community and examines three distinct dimensions of social capital: participation in local groups, neighbourhood attachment, and interpersonal trust. Frameworks are developed within which each is hypothesised to develop at different times and within different contexts. Different expectations are outlined which suggest how they should develop within a view of social capital based on Putnam (2000) and his predictions concerning social participation and trust. These are contrasted with theories and findings form the literature on political socialisation and Uslaner's (2002) conception of trust as a deep rooted moral trait.

It is shown that participation in local groups, neighbourhood attachment and interpersonal trust, do develop at different stages and in different contexts. Moreover, it is shown that growing up in a highly trusting environment may predict participation and engagement later in life.

Declaration

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Chapter 1: Foreword

1.1: Introduction

This thesis sets out to examine the notion that social context throughout the life course plays an important role in the development of social capital. It explores this using the British Household Panel Survey (BHPS), a longitudinal data set, using data from England and Wales. It will argue that social capital can be thought of as being composed of many different dimensions which develop differentially over time. The notion that social capital is not uni-dimensional is of course not new and was mentioned by Putnam (1995) in his influential paper *Bowling Alone: America's Declining Social Capital*. However, few studies have sought to address precisely when and why different aspects of social capital develop and how they relate to one another. The thesis examines the relationship between interpersonal trust, attachment to the neighbourhood, and participation in local groups. These attitudes and behaviours are commonly brought together and discussed under the rubric of social capital and are often treated as though they are contemporaneous in nature. The key contribution made here is to view the relationships between these phenomena from a temporal perspective, arguing that an important way in which one relates to another is likely to be contingent on past experiences.

The primary argument concerns the fact that while most studies of social capital take a perspective by which attitudes and behaviours are necessarily socialised, in a broad sense, few studies seek to integrate findings from the well-established literature on political and behavioural socialisation (for a notable exception see Stolle and Hooghe, 2004; or Campbell, 2006). The findings within this literature challenge many of the important assumptions to be found in studies of social capital. For example Putnam (2000) has argued that frequent social interaction leads to the creation of norms of generalized trust and reciprocity within communities. However, the findings in much of the political socialisation research suggest that many behaviours and attitudes are formed at an early stage in life and may therefore be less amenable to change later (Sapiro, 2004). Within this literature it is clear that many of the important norms and behaviours thought to be essential by social capital scholars may be influenced by different contexts and at different stages. For example it can be argued that trust should develop in early in life (Renshon, 1975; Uslaner, 2002) and that participation may be

stimulated in late adolescence (Jennings and Niemi, 1968; Jennings et al, 2009). Different contexts should have an impact at each of these times. Young children are likely to be influenced by their parents in the household, and adolescents are much more likely to be influenced by their friends and within schools. Neighbourhood attachment, as it will be defined here, should be most likely to be affected by the particular characteristics of the local environment (Granovetter, 1973; Wilson, 1987).

This is no small challenge as it may imply that some of the primary mechanisms by which social capital is thought to benefit both individuals and society does not work in the way in which is often implied. That is, participation in networks may not increase feelings of reciprocity and trust among members, but instead possessing high levels of reciprocity and trust may make people more likely to participate in networks (Claibourn and Martin, 2000; Stolle, 2001; Mayer, 2003). Given the increasing prevalence of arguments linking social capital to better health outcomes (Kawachi, et al, 1998), social cohesion (Hope and Cheong, et al, 2007), and overcoming problems of collective action (Ostrom, 2000). It is important to establish precisely which causal pathways are most likely, because any prescriptive approach which utilises the findings and arguments in the social capital literature to solve other problems, may fail when these basic mechanisms are misunderstood.

The thesis will therefore also examine the relationships between social *context* and social engagement and trust. Importantly it will step beyond the examination of contemporary relationships and contexts and consider how and why these phenomena develop over time. The fact that some of these relationships are likely to be dependent on one another will also be examined in depth. For example parental socialisation may not have a direct relationship with the participation of adult offspring, but parents may still influence their children if trust is related to participation. In other words, if trust is socialised in the household, this may have an impact on participation because trust earlier in life has an impact on trust later in life, which is, in turn, related to participation. It is argued that other contexts may also have direct and indirect effects in this way. This is one of the key contributions of the thesis because it proposes an approach to socialisation and social capital in which more complicated pathways can be assessed. The thesis focuses on two contexts specifically: the household and the local community. It also assesses the ways in which these contexts relate to one another and develops an argument whereby the

household context might be influenced by the broader context of the neighbourhood in which it is situated.

1.2: The social and political context of engagement in the local community

The past 20 years have seen an upsurge in research investigating the causes and consequences of engagement and participation in local communities. Much of the impetus for this increased focus was stimulated by researchers investigating social capital such as James Coleman (1988; 1990) and Robert Putnam (1995; 2000). Putnam, in particular, has been responsible for engaging policy makers in the debate by arguing that more emphasis should be given at a policy level to efforts which seek to stimulate engaged and participatory communities characterised by higher levels of civic mindedness and social responsibility. Recently this concern has resulted in an emphasis by the government in the UK on a *Big Society* agenda (Office for Civil Society, 2010a; 2010b) aimed at empowering local communities to identify and solve local issues. The primary aims of this initiative have been to promote volunteerism, and devolve powers and responsibilities at a more local level. A pilot National Citizen Service programme, aimed at 16-17 year olds, has also been introduced with the aim of involving young people in their local communities and providing them with direct experience of volunteering and engagement. This latter point is important because it shows a recognition that what happens earlier in life can be important for the way in which people engage later.

This emphasis has come against a backdrop of rapid social change in modern democratic societies. Increasing social heterogeneity and individualism has placed added pressure on social structures already weakened by processes of political de-alignment and globalization (Beck, 2007; Halman, 2007: 313-317). Beck (1992; 2007), and Beck and Beck-Gernsheim (2001), have argued that traditional social structures are increasingly losing their relevance as individuals seek to derive meaning from their own social histories and contexts. In this framework people no longer understand their social and individual lives in terms of pre-existing categorisations and norms but rather seek to emphasise their own individualism. Globalization has led nations and communities to

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become increasingly plural and heterogeneous and this in turn has resulted in more atomised, socially disconnected, societies. Globalized societies might also foster plurality and heterogeneity on the local community level allowing individuals to emphasise the specific cultural histories particular to them (Van Der Bly, 2007). However, individuals are freer than before to choose which aspects of which communities they wish to emphasise. In all of this the caveats given in section 1.1 should be remembered. The earlier in life community engagement, or those things which cause community engagement, are socialised, the more difficult it will be for governments to foster. There is a clear recognition of this in the *Big Society* initiative in targeting young people between the ages of 16 and 17. However, if a propensity to engage is predicated on some other attitude, such as interpersonal trust, which may be developed earlier in life, these approaches may not succeed. The research presented here will help to address this issue insofar as it will investigate potentially competing pathways into engagement.

Places characterized by high levels of social engagement and participation (and social capital more broadly) have been shown to be more socially organized and less prone to incidents of crime and anti-social behaviour (Sampson and Groves, 1989; Kennedy et al, 1998). By encouraging higher rates of participation such communities should be more able to provide a greater range of services to the local community and, by fostering stronger social ties, they should make communities, and the groups within them, more responsive to the needs of the community as whole. If residents from a range of different backgrounds can be encouraged to work together in the identification and achievement of common goals this may increase aggregate levels of cross- and within-group dialogue thereby promoting greater social cohesion (Hope Cheong, et al, 2007). Ostrom (2000) and Ostrom et al (1999) have argued that societies and communities rich in social capital, interpersonal trust, and norms of reciprocity, should be more able to solve community problems, particularly those associated with common resources, more easily than communities that are not. While these points are important they highlight one of the common problems with social capital research, and in particular the approach advocated by Putnam (2000), insofar as they are focused at the level of the community. Certainly a focus on the community is intuitively appealing as it suggests that actions taken at this level might be able to stimulate greater levels of social engagement and participation. However, there is a danger that by focusing on places, rather than people, the process by which civic behaviours and neighbourliness are actually stimulated may be missed.

Research has, of course, considered the individual but this has tended to be with regard to outcomes. These are important and should be briefly mentioned: formal participation and voluntarism should promote the development of civic and social skills that can be applied more generally (Verba, et al, 1995). Such engagement may also empower individuals to become involved in other groups and activities beyond the initial activity (Zimmerman, 2000). Related to this, engagement in the local community may increase knowledge about issues which affect both individuals and their community and help people to better understand local and indeed national political issues and needs. They may also benefit in terms of the types of attitudes they develop over the course of participating. The more socially engaged have also been shown to benefit from increased mental and physical health outcomes that come with deeper and stronger social ties (Kawachi, et al, 1998). Elsewhere, it has been shown that voluntarism can have positive effects on life satisfaction, particularly amongst older people (Van Willigen, 2000).

Certainly many of these may also lead to more engagement and participation among people. For example, increased civic and social skills may lead to a greater sense of empowerment and make participation in the future even more likely. It may also create virtuous circles whereby people will continually benefit from engagement which will propel them to engage further. However, these studies tend not to consider the source of these pro-social behaviours and attitudes, other than by assessing various relationships that they have with a range of socio-demographic characteristics. This is useful and important but a finding that education, for example, is related to participating in the local community will not necessarily tell us why some educated people participate and others do not. This thesis argues that an important aspect of what people do is not simply to ask who they are, but where they come from and what they did.

1.3: Why study social capital and the local community

As outlined in section 1.1 this research is concerned with developing an understanding of the contexts that influence why people develop higher or lower levels of social capital. It argues that different contexts should influence the development of different dimensions of social capital at different stages of a person's life. It examines three aspects of social capital in particular: interpersonal trust, participation in the local community, and neighbourhood attachment. It should be noted at the outset that these concepts do not represent all of the potential dimensions of social capital. Rather, the latter two dimensions represent a particularized form of social capital which has an emphasis on engagement within the local community. The former is more general, but as will be seen, has important consequences both within and beyond specific localities for individuals and the broader community. These measures are particularly interesting because they should each be differentially affected by different kinds of context at different stages of life. Moreover they should each be related to one another. By locating this analysis of social capital within a specific place, the neighbourhood, this should allow the impact of different contexts to be assessed in order to examine precisely how each of the three dimensions of social capital is affected at different times within the local community.

A more detailed discussion of social capital will follow in section 2.2. However, it is necessary to first outline what the particular measures used in this research do, and do not, mean in relation to this broader social capital literature. Researchers generally agree that the *sine qua non* of social capital is the intuition that social networks can be beneficial to both individuals and groups. Bourdieu (1986: 248) emphasises that social capital is the 'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition.' Lin (2001: 34) notes that social capital is simply an 'an investment in social relations with expected returns in the market place.' Each of these definitions is also consistent with the work of both Putnam (2000) and Coleman (1988), although the former in particular has broadened the concepts in such a way as to emphasise the impact that it may have on civil society more generally.

The focus in this thesis is on two distinct types of network: participation in local groups and attachment to the neighbourhood. It is not immediately apparent how these differ from one another. Again, this will be discussed in much greater length in chapter 2. For the moment it is sufficient to note that participation in the local community refers to specific participation in formal groups, whereas attachment to the neighbourhood refers to the way in which an individual views their local community and is contingent on the situational networks that exist within any given community. Researchers such as Putnam (2000) tend to focus on the former because they are generally interested in community level outcomes, whereas authors such as Bourdieu (1986) and Lin (2001) tend to focus on individual level benefits and therefore to emphasise networks of interpersonal relations¹. Researchers interested in the development of norms of neighbourliness and social cohesion within local communities tend to focus on measures such as attachment (Sampson, 1988; Bailey et al, 2012). In other words an interest in local community level outcomes should necessarily imply a focus on some kind of social group at the level of the community as well as the effects of the kind of situational networks that exist within such places. Of course neither of these must necessarily be unrelated to the other and indeed the political mobilization literature implies that situational networks should predict more formal kinds of participation under some circumstances (Rosenstone and Hansen, 1993). However, the processes which generate each may be different. As Li et al (2005) note social groups may vary in the types of social capital they draw on with advantaged groups being more likely to draw on social capital from neighbourhood relations.

Many researchers have argued that social capital is not simply characterised by social networks. Putnam (2007: 137) for instance, is very clear that he views social capital as being composed of both 'social networks and the associated norms of reciprocity and trustworthiness.' From this perspective it can be argued that social capital is comprised of two distinct components: the first is structural and refers to networks, and the second is cultural, or attitudinal, and refers to specific values and attitudes such as trust and reciprocity (van Deth, 2003). It is the relationship between these structural and attitudinal aspects of social capital that rests at the heart of this thesis. These causal relationships are central to the study of social capital because so much emphasis has been placed on the positive impact that social capital can have for both individuals and communities. An improper understanding of the underlying causal relationships may lead researchers who base their findings on cross-sectional research alone to make claims for the existence of potentially spurious relationships. By focusing on distinct

¹ It is worth noting here that a specific measure of social networks is not used in this research. Given that the focus is on neighbourhood engagement this is not thought to be a major problem but it will preclude an analysis which focuses on the effects of networks on the other dimensions of social capital.

aspects of social capital within a setting such as the neighbourhood from a temporal perspective it is argued that a better understanding of these interrelationships might be achieved. Even when studies do employ panel data (Claibourn and Martin, 2000; Sturgis et al, 2012; Sonderskov, 2011) they typically focus on adult populations which may lead researchers to miss why attitudes and behaviours develop in the first place. That is, if trust develops in childhood then a study which focuses on predictors of trust in adulthood will miss one of the key points at which it may develop.

Little research has been conducted into the relationships that these variables have with one another across time (some notable exceptions are, Claibourn and Martin, 2000; Sturgis et al, 2012; Sonderskov, 2011), but there are reasons to think that this is an important question. Even less research has sought to examine how these three dimensions develop from childhood (see Stolle and Hooghe (2004) for example). Interpersonal trust may be generated through the development of networks, and in particular those networks in which people work together, because vibrant participatory communities should encourage people to engage more with others (Putnam, 2000). However, others have argued that interpersonal trust is a relatively stable orientation which should not be subject to a great deal of temporal change (Stolle and Hooghe, 2004; Uslaner, 2002). Uslaner (2002) in particular has argued for a conceptualization of trust as a moral value which conditions how people view the world around them, rather than being conditioned by it, which is developed early in life and is related to parental trust within the household. Others have suggested that trust may have a genetically heritable aspect (Sturgis et al, 2010; Oskarsson et al 2012).

By contrast participation should be subject to more variation over time, as opportunities and life events dictate this to an extent that may go beyond a generally pro-participatory orientation. Moreover there are strong reasons to believe that this is dictated by contemporary effects. Research into mobilisation suggests that being involved in interpersonal networks which have high levels of participation should make it more likely that individuals will get involved themselves (Rosenstone and Hansen, 1993). This focus on networks within the mobilisation literature implies that there should be a degree of cross-over between the two sets of theories. Indeed, the key difference appears to be the fact that the mobilisation literature is largely concerned with the ways in which organisations might mobilize people to become involved and therefore takes a different perspective in terms of engagement. Both have roots in the early studies of information diffusion processes within and across networks such as Granovetter (1973) and Katz and Lazarsfeld (1955).

The socialisation perspective suggests that participation may have deeper roots and, once again, offers a counter-point to research which emphasises contemporary effects. Here it is argued that a propensity to participate cannot be accounted for simply by examining contemporary opportunities and mobilizing effects, but is instead related to a prior predisposition to participate. Indeed, and as Beck and Jennings (1982: 94) *Notes:*

'The central premise of political socialisation research is that preadult political socialisation affects adult political attitudes and behavior. While cognate disciplines may be interested in childhood orientations *per se*, the compelling justification for a political science interest in the preadult's political world is that an understanding of that world can yield useful insights into adult political orientations.'

There are effectively two types of socialisation. The first posits a social learning approach whereby young people learn their civic attitudes in homes, schools, and other organisations. The second suggests that young people will acquire pro-participatory tendencies through the act of participation. These can obviously be expanded and may overlap with each other and it is interesting to note how this line of thinking might also be extended to engagement in social networks. There is an obvious and direct relevance when considering social capital as generated in civic organisations of the kind that Putnam (2000) is concerned with. Socialisation in childhood and adolescence should have a much smaller effect on neighbourhood attachment as should be highly contingent on the particular configuration of the pre-existing networks within the neighbourhood (Granovetter, 1973), rather than any given set of socialised attitudes that may develop in youth.

It is generally argued that participation, interpersonal trust, and social relationships are all related to one another. Often these relationships are believed to be reciprocal in that a propensity to participate will make a person more trusting, and that a more trusting person will be more likely to participate (Claibourn and Martin, 2000). However, this line of thinking is at some point paradoxical as it fails to answer which, if any, of these provides the impetus for the others. Of course there may be many routes in the generation of interpersonal trust and norms of neighbourliness, engagement and participation. Sociological and behavioural theory suggests that these things should be strongly related, although authors may differ on the particular direction. It is often argued that social participation and engagement leads to increased interpersonal trust and many studies have shown this to be the case (see for example, Wollebaek and Selle, 2002; 2003; Mayer, 2003; Delhey and Newton, 2003; 2005). More recently authors have contested this view arguing that there is a degree of selection bias in such studies, as trusting individuals self-select into participatory modes of behaviour (see for example Stolle, 1998; 2001). Others have pointed out the endogeneity problems inherent in this type of analysis (Sturgis et al, 2012; and, Sonderskov, 2011).

The differing expectations about the expected causal direction of these effects might to some extent be argued to be due to the theoretical perspectives of the authors. There is an extent to which social capital theory, and in particular that proposed by Putnam (1993; 2000), is grounded in theories of rational choice which often take a view that trust is a strategic attribute conditioned by relatively contemporary events². By contrast the view of trust as being largely stable is grounded in psychological theories which view trust a deep and integral personality characteristic developed early in childhood. Both perspectives make similar assumptions in terms of trust predicting social participation and engagement. However, they take opposing perspectives in terms of the impact these will have on trust. Of course the dividing line is not necessarily as clear as has been suggested here. In other words both perspectives accept some degree of impact in both directions. That is, trust may have an effect on participation and engagement, and *vice versa*. It should also be noted that Putnam (2000) is careful to differentiate between *generalized* and *strategic* trust.

² It is worth noting that Bourdieu (1984; 1986) for example takes a different approach to both Putnam and Coleman. He sees social capital as a way of maintaining social control by elites. Coleman (1988) took a view based on insights derived from both sociology and economics and saw social capital as a way of overcoming some of the reductive and individualistic view of behaviour often found in economics theory at the time. A detailed discussion is found in Chapter 2.

The major contribution of the thesis is to focus on the genesis of the relationships between social participation, engagement, and trust. As has been noted even if strongly reciprocal effects between all of these behaviours and attitudes were found this would not necessarily explain which causes the others in a study which focuses on adults. Instead, it might be observed that each is generated by the other in a causal loop. This will be addressed by examining data from young people and their parents. If strong socialised effects are found this might indicate one way in which trust, participation and neighbourhood attachment develop in individuals. How strong these relationships are over the key development stage of youth and early adulthood will then be examined. Research has suggested that certain types of participatory behaviour are socialised, although it is debatable how much this can be attributed to parental effects (Kirlin, 2003). If a psychological view of trust is taken the expectations should be clearer as there are strong arguments to suggest that it is highly contingent on parental attitudes (Uslaner, 2002)³. Conversely a rational choice view of trust would suggest less correspondence between parents and young people and a greater impact from contemporary effects. Neighbourhood attachment should not be socialised if it is a reflection of the types of situational networks that characterise communities.

1.4: Original contributions

This research contributes to the existing literature in a number of ways. Firstly, very few studies have sought to develop a view of social capital from the perspective of the socialisation literature. None have brought together these three interrelated dimensions (participation in local groups, neighbourhood attachment, and interpersonal trust) and simultaneously examined how they develop and how they related to one another at different stages of life. As has been noted there are compelling reasons for doing this

³ It is worth noting that there is evidence to suggest that parents and their offspring may show attitudinal similarities because they are genetically similar. This literature will be addressed below. Whichever, argument is correct, and some combination of the two is most likely, will not have an impact on the interpretation of the results in this thesis as both early childhood socialisation and genetic heritability will have similar interpretations.

because differential predictions can be made about when each develops and how labile they are over time.

The focus on different contexts, as environments which may or not affect the differential development of the different dimensions of social capital is also an important contribution. Two primary contexts will be examined as spaces within which socialisation occurs: the household and the neighbourhood. It will be argued that the household should primarily affect the development of trust if socialisation scholars are correct (see Renshon, 1975; Uslaner, 2002). By contrast if Putnam's (2000) view is correct there should be some impact of the neighbourhood on the development of trust insofar as different neighbourhoods should have an impact on the kinds of networks that exist within them. The neighbourhood should also have a powerful effect on neighbourhood attachment as this is conceived of as a reflection of the networks of weak ties that permeate it. Studies have not previously looked at the development of the different dimensions of social capital in this way.

Thirdly, while studies have assessed the simultaneous impact of youth and parental predictors on adult outcomes in terms of social capital (see Stolle and Hooghe (2004) for example) they do not generally assess the relationship between parents and youths. This is an important omission because to gain a full understanding of how effects may be socialised it is important to consider how and why they develop in the first place. Differential predictions can be made in terms of different dimensions of social capital: for example, here, and from the perspective of Uslaner (2002) trust is a deep rooted moral outlook developed in early childhood which is socialised within the household. For Putnam (2000) too it is reasonable for trust to be related to parental trust in youth but this should be much less stable as individuals get older and are exposed to new networks and contexts. Much research suggests that participation should be unrelated to the participation of parents and should instead be stimulated and socialised through networks and contexts in adolescence (Hess and Torney, 1967; Jennings and Niemi, 1968; Beck and Jennings, 1982). It seems unlikely that neighborhood attachment is socialised but there may be some correspondence between parents and their offspring because they inhabit the same social environments. This should be subject to a great deal of change as the children reach adulthood. Once again, how these develop in youth

is crucial to understanding how they relate to one another later in life and is an understudied aspect of the social capital literature.

Fourthly, the use of mediation and indirect effects modelling has not been used in studies of socialisation before. This is an important contribution because this approach to modelling relationships between a set of variables is well suited to the kinds of hypotheses generated within the socialisation literature. It can allow effects to be decomposed between those which are direct and those which are indirectly related to the outcome of interest. For example: if it is accepted that parental participation influences adult offspring participation it may do so in one of two ways. The first would be to stimulate participation in youth which then carries through to adulthood. The second would be to act as a model for grown-up children to follow when they reach adulthood. This kind of approach allows these two pathways to be assessed simultaneously.

This also leads to the final contribution which assesses the notion that the development of these different dimensions of social capital may have an impact on the others at later stages. For example, it is generally shown that trust is related to participation. If trust is socialised within the household by parents it is plausible that this early socialised propensity to trust will predict participation later in life. From a Putnamian perspective the converse may be true with early socialisation of participation being predictive of adult trust through its effect on adult participation. Such pathways from one dimension of social capital to the others have not been assessed before in this way.

1.5: Outline of the thesis

The thesis adopts a quantitative approach and draws data from the British Household Panel Survey (BHPS). It follows a design whereby different, but related, subsamples of the BHPS are used to assess the relationships between the different dimensions of social capital and assesses how they are related to one another, and the household and local community, at different stages in life. Chapter one (this chapter) summarises the thesis and introduces the major themes. It also discusses the objectives of the research and outlines the key contributions that it makes.

Chapter 2 will provide an in depth review of the major themes of this thesis. In particular it will focus on how theories of social capital have developed and how the three dimensions used in this research (participation in local groups, neighbourhood attachment, and interpersonal trust) are related to one another, and indicates how they should be understood in the context of the broader literature. It also discusses some of the broader theories of participation and engagement from the political and sociology literatures and relates these to the three dimensions under study.

Chapter 3 continues with a detailed discussion of the main theories and findings from the socialisation literature. It relates these to the social capital literature and the specific dimensions of interest. It also discusses the role that social context is thought to play in determining participation in local groups, neighbourhood attachment, and interpersonal trust. Another key function of this chapter is to discuss the role that other important concepts, such as social class, education, and sex might play in the development of the three variables of interest.

Chapter 4 will summarise these discussions and reiterate the particular aims and objectives of this thesis.

Chapter 5 will then provide an overview of the data that will be used in the analysis and discuss some of the limitations inherent in its use. It should be noted that the analysis only incorporates data for England Wales. Specific issues relevant to each of the analytical chapters will be provided within these as the thesis progresses. In this section a broad overview of the modelling approach will also be provided and issues common across each of the analytical chapters will be discussed. Specifically an overview of Structural Equation Modelling (SEM) and the key components of this approach, Confirmatory Factor Analysis (CFA) and Path Analysis (PA), will be presented. Issues involved in Multilevel Modelling (MLM) and Multi-Group CFA (MGCFA) will also be addressed.

Chapter 6 is the first analytical chapter and assesses how the three dimensions of social capital relate to one another in an adult population. It provides an opportunity to assess

in a rigorous way the extent to which the three key concepts predict, and are predicted by, one another. It is an opportunity to test the extent to which trust is caused by, or causes neighbourhood attachment and participation in local groups. This chapter is particularly informative insofar as it establishes a baseline against which the findings in the following chapters can be assessed.

Chapter 7 uses a pooled subset of data from the BHPS, of 16 to 18 year olds, in order to examine the extent to which parents are similar to their offspring in terms of the three dimensions of social capital. It first assesses the extent to which the three concepts are related to one another. It then assesses how strongly parental measures of the three dimensions are related to the same measures in their adolescent offspring. The impact of social context will then be examined in terms of direct and indirect effects mediated via parents. The models in this chapter test the extent to which each of the key variables are likely to be developed within the household based on differential hypotheses concerning the way in which they should be influenced by context.

Chapter 8 is the final analytical chapter and will take findings from chapter 7 and assess whether or not relationships that appeared to be socialised via parents in youth are still related to one another in early adulthood. This chapter will allow hypotheses related more directly to socialisation to be tested because it will be possible to test how stable the three dimensions of social capital are over time. The data is across two time points. One fixed in 2008 for all respondents and the second, earlier measure, varying across respondents according to when they answered the relevant question.

Chapter 9 will conclude the thesis and will discuss how each of the analytical chapters are related to one another and what broad conclusions can be made. It will return to the central theme of this research, that different contexts may have a long lasting effect on the development of specific dimensions of social capital, and that these condition the development of other dimensions of social capital. More general consideration of what these findings mean for social capital as a concept will be provided. Finally there will be a discussion of some of the key limitations of the thesis followed by some suggestions for future research and a discussion of some of the policy implications that the research may have.

Chapter 2: The local community, social capital and participation: why they matter

2.1: Introduction

This chapter will outline the key arguments related to questions of participation and engagement in the local community. Such engagement has come to be regarded with increasing importance by both academics and policy makers and it is worth considering why this is the case. Is there anything special about such participation and engagement and how does it differ from other activities? There are fundamentally two ways in which this kind of activity can be thought about. The first is as an outcome that might have some individual or social importance. The second is as a predictor of other outcomes that might be thought of as being significant. As has already been noted in section 1 it is also possible to differentiate between two types of participation: the first is to consider participation in formal civic groups and activities. This is the approach most commonly taken in the literature on political behaviour (see for example Barnes and Kaase (1979) and Dalton (2008)), and is also one of the distinguishing features of the approach that Putnam (2000) takes to social capital. The second way of thinking about engagement in local communities has a focus on non-formal engagement in networks of individuals. Here particular attention will be given to neighbourhood attachment as an indicator of the way in which people view the particular networks that exist in their neighbourhoods. The work of Granovetter (1973) will be drawn upon to provide a framework in which the strong ties which exist between groups of close associates can be linked to the way in which weaker situational networks between these groups can explain feelings of attachment to the neighbourhood.

The key concept of interpersonal trust will also be discussed. Many researchers consider trust to be a fundamentally important concept in behavioural social research. For example it has been suggested that the concept, along with norms of reciprocity, lies at the heart of solving problems of collective action which present central questions at every level of democratic society (Arrow, 1974; Fukuyama, 1995; Ostrom, 2000). Trust is bound up in social capital theory and is suggested to be both an outcome and predictor of engagement in a wide range of formal and informal types of social participation (Putnam, 2000). Indeed, this is not a new concept: Almond and Verba (1963), in *The Civic* 32

Culture, noted that membership of informal social groups appeared to be an important precondition for open democratic functioning. Of course the arguments are also present in earlier work and can be traced back at least as far as de Tocqueville (1835). Portes (1998) indicates that the notion that both individuals and communities can benefit from social engagement and participation was present in the writings of Durkheim (1893) and Marx (1893).

It is also necessary to develop a clear understanding of why individuals participate in their local communities and which kinds of places are conducive to such participation. When reviewing the academic literature this is not entirely clear. There is a strong literature which has focused on political participation, and especially voting, and some studies have considered other forms of participation (see for example Parry et al, 1992; Pattie, et al, 2004). Clearly there are reasons to think that participation in local groups may in many respects be similar to other forms of more overtly political participation. For instance a strong and consistent finding suggests that education gives people the skills and helps develop the networks that will be useful when voting. The same is also generally found to be true in participation in arrange of civic activities. However, there are also reasons to think that participation. This chapter will also discuss when and why the three dimensions of social capital may develop from the perspectives of different scholars. Following this, chapter 3 will relate these discussions to the key findings from the socialisation literature.

Prior to discussing these issues the concept of social capital will be discussed and related to participation, attachment, trust, and the local community.

2.2: An introduction to social capital: Bourdieu, Coleman, and Putnam

The purpose of this section is to understand the development of theories of social capital so that these can be related to socialisation and context in chapter 3. The relationships that the three dimensions have with another will be outlined from the perspective of the social capital theorists, and in particular, Putnam (2000). This is important because the relationships that they have with one another will provide important insights into when and where each is developed and which, if any, is likely to cause the others.

As was noted in chapter 1 the literature on social capital has expanded greatly over the course of the past 20 years. At the most basic level proponents argue that there is an intrinsic value in social networks and that membership of such networks is likely to lead to a range of positive social outcomes for members. Bourdieu (1986: 248) defined the concept as 'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition.' Lin (2001: 19) follows this line of thinking in stating that social capital is an 'investment in social relations with expected returns in the marketplace'. The approach of Bourdieu (1986) is largely instrumental and focused on individuals rather than aggregated groups. However, it is through membership of these groups that individuals are able to accrue benefits which would not be available to them otherwise. He identified two elements of social capital: the first is the group, or network, itself which provides people with access to the resources of others within the network; the second, is the nature, or quality, of the resources that individuals can gain through accessing the network.

The key to understanding Bourdieu's approach to social capital is to be found in his interest in understanding the mechanisms that structure and determine outcomes in complex social systems. This approach to social capital can be best understood in the context of two other forms of capital, *economic*, and *cultural*: the first effectively represents monetary wealth; the second can either be represented by formal institutionalized credentials and qualifications, or through embodied culture, via Bourdieu's (1990) notion of *habitus*⁴, which describes the acquisition of norms of behaviour and attitudes, and describes a socialising process by which people develop beliefs and knowledge about the world based upon their social environment. The three forms of capital therefore represent ways which individuals and groups are able to leverage advantage over others in their social relations. These forms of capital are more

⁴ It should be noted that the notion of *habitus* as described by Bourdieu might be thought of as encompassing theories of socialisation and this is clearly one way in which this has been addressed in the literature.

or less interchangeable: economic and cultural capital may grant individuals access to privileged groups and networks, and access to certain groups and networks may allow individuals to increase their economic and social capital. From this perspective social capital becomes a mechanism by which elites are able to leverage their advantage and entrench their social positions. These social relationships however are the 'product of investment strategies, individual or collective, consciously or unconsciously aimed at establishing or reproducing social relationships that are directly usable in the long or short term' (Bourdieu, 1986).

Consequently, it is difficult to envisage how the benefits that are thought to accrue though social relationships and networks can be utilised by groups which are not in some sense privileged. However, a great deal of literature does suggest that social capital, as manifested through networks of social relations, may be positive more generally. Coleman (1990: 302) offers a functional definition of social capital arguing that it is composed of 'a variety of entities with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure.' Individuals are conceived of as existing in a network, or structure, within which certain norms and behaviours are facilitated to a lesser or greater extent. Notably, Coleman (1988; 1990) also offers a framework where social capital can be an asset for many different kinds of community, and not simply as a mechanism by which the already privileged are able to maintain and enhance their positions.

His starting position was one by which he sought to integrate approaches from both sociology and the rational choice school of economics. He argued that both are necessarily limited: the former views individuals as being subject to, and shaped by, the 'norms, rules, and obligations' (Coleman, 1988: 95) of society without placing enough emphasis on the fact that individuals have purposive motivations which, while embedded within society, also allow people from similar backgrounds to differentiate from one another. Rational choice approaches however are even more limited because they ignore the fact that individuals are, to some extent, products of their social context rather than self-interested rational actors seeking to maximize their goals. A key difference to Bourdieu is Coleman's emphasis on social capital as something which is not necessarily held by individuals but as something which is available to them. This is an

important insight because it suggests that social capital is an attribute of communities or groups, membership of which is not necessarily predicated on other forms of capital.

It can be argued that simply living within a tightly knit community can confer benefits to individuals who might not receive them in other communities. Within this framework Coleman (1988: S102-S104) introduces the notions of obligations, expectations and trust. Clearly this was also an aspect of the work of Bourdieu insofar as actors within specific networks should necessarily feel some sense of reciprocity with the others. However, this occurs because it is recognised to be mutually beneficial for all group members to behave in this way. For Coleman (1988) social capital cannot function without social trust between group members, because 'without a high degree of trustworthiness among the members of the group, the institution could not exist - for a person who receives a payout early in the sequence of meetings could abscond and leave the others with a loss' (Coleman, 1988: S103). Thus, he explicitly links social capital to problems of collective action (see Olson, 1965).

He also argued that networks are a valuable source of information, of group norms, and of sanctions, which can facilitate and regulate exchanges (Coleman, 1988: S104-S105). The notion of closure is important here. Coleman (1988: S99) argued that networks with dense ties have the ability to enforce social norms via sanctions. In other words when ties are strong enough the threat of expulsion from the network, and the inherent loss of the benefits of social capital within it, is enough to ensure that norms and behaviours are adhered to. These notions will be discussed in relation to Putnam below. However, it is worth noting that Coleman (1988) failed to some extent to explain how and why social capital develops. In other words, he argued that the benefits of social capital accrue to recipients but that there is little reason to expect that donors would make such a donation in the absence of an immediate return (Portes, 1998). It may be possible to argue that interpersonal trust may be enough to ensure that this is the case, because even if a reciprocal donation is not made immediately, individuals within the network may trust that it will be made at some point in the future. Moreover, network closure implies that a norm of trust may be established by enforcing the threat of expulsion for defectors.

Putnam (1995; 2000; 2007) went on to extend this logic when he argued that social capital is composed of 'social networks and the associated norms of reciprocity and
trustworthiness.' As has already been discussed the causal direction between networks and trust is disputed and is likely to be more complex than might be intuitively supposed. The definition however, allows two distinct components of social capital to be identified (Fieldhouse, 2008: 24-26). The first is based on the network aspect of the concept. Social capital has a clear structural component that is intrinsically related to the networks that a given individual finds themselves within. This is a key point insofar as it makes clear that not all networks will necessarily be equal in terms of the value that they confer to their members. In other words different networks are likely to have different value for different individuals. The second component is attitudinal and relates to norms of reciprocity and trust. At a group level norms of reciprocity and trust should help ensure the better functioning of society as they facilitate interactions between individuals. They can also help solve problems of collective action as they reduce the probability that individuals will free-ride (Coleman, 1964; Ostrom and Ahn, 2007). This was also the key theoretical insight of Putnam (1993) in *Making Democracy Work* in which he sought to explain the underlying reasons behind the different civic traditions in modern Italy.

Indeed, the key contribution of Putnam (2000) has been to move the study of social capital away from an analysis of the individual level benefits of social capital to a consideration of the community level benefits. That is, both Bourdieu and Coleman were explicitly focused on benefits that individuals can derive through social capital. Putnam's (1995) contention is that the 'quality of public life and the performance of social institutions... are indeed powerfully influenced by norms and networks of civic engagement.' Under this conception of social capital the key measures are not simply access to social networks, although these are considered important, but involvement in associational activities.

However, many of the arguments put forward by Putnam are tautological. A successful community is said to be successful because it has a high level of social capital as measured by participation in civic groups (Portes, 1998). A community which has low levels of social capital does so because people do not participate in civic groups. As Portes (1998: 20) notes 'if your town is "civic," it does civic things; if it is "uncivic," it does not.' In *Making Democracy Work* Putnam (1993) argued that a precondition for the development of strong governmental institutions in the North of Italy was a horizontal network of trusting and cooperative citizens with a tradition of political engagement. The

South by contrast was characterised by the 'imposition of hierarchy and order on latent anarchy' (Putnaml, 1993: 130). Such studies certainly suggests that the hypothesis may be correct but they do not rule out other explanatory factors.

Of more relevance to this thesis are Putnam's views of the relationship between civic organisations and trust. It is argued that working in collaborative groups helps to: 'increase the potential costs to a defector in any individual transaction'; 'foster robust norms of reciprocity'; 'facilitate communication and improve the flow of information about the trustworthiness of individuals'; 'allow reputations to be transmitted and refined'; and, 'embody past success at collaboration, which can serve as a culturally-defined template for future collaboration' (Putnam, 1993: 173-174). Under this framework, trust is an attribute that is imbued within individuals and that others can infer from working together within them. However, they can also encourage trusting behaviour through the ability to sanction individuals who are not trustworthy. Therefore participation in groups can foster trust at the group level by transmitting information about the trustworthiness of others in the same network. Overall this logic suggests that trust arises out of networks of participation.

Extending this framework to include attitudinal as well as behavioural norms is particularly useful. It makes clear that individuals exist within a set of more or less intertwined networks of social relations which themselves must clearly be bounded by other external factors. For example, the household and communities that individuals grow up in play a role in determining those networks and groups that an individual will eventually become a member of. In other words it seems unlikely that many people are able to choose precisely which networks they will become a member of, but are instead conditioned to become a member of certain networks based on prior experiences. It is worth noting that this argument is somewhat extreme and deterministic. There should also be some element of personal preference and variation involved in these processes. However, these factors should hold true across a range of social outcomes. For example it will be argued that growing up in a household characterised by high levels of social engagement may imbue individuals with a greater propensity to participate than individuals who did not grow up in such a household.

It is reasonably clear that living in a household or community which is not characterised by a norm of interpersonal trust, should make it less likely that the people living there will hold this attitude. The same argument holds for participation and was expressed by McAdam and Paulsen (1993) in their discussion and analysis of some of the limiting conditions of recruitment into social movements. These findings are supported by the findings of Portes and Landolt (1996) who found that while marginalised areas may contain significant social capital 'the assets obtainable through it seldom allow participants to rise above their poverty.' The role that household and community context might play in the development of social engagement, participation in local groups, and social trust, will be discussed below.

Figure 2.2.1 presents a path diagram indicating the likely relationship between the three dimensions of social capital under study here from a social capital, and in particular a Putnamian, perspective. It suggests that participation in local groups and neighbourhood attachment should predict one another, with attachment predicting participation through the logic of mobilization, and participation predicting attachment through the logic of social capital. That is working together with others in the community should

Figure 2.2.1: Social capital: relationships between participation in local groups, neighbourhood attachment and interpersonal trust



increase attachment to the community through the development of broader social networks. This will be discussed in much greater detail in section 2.4. Notably, both should predict trust. Involvement in local groups should have a stronger effect than neighbourhood attachment because it is argued that such involvement necessarily entails the development of more trusting and reciprocal relationships. As will be discussed neighbourhood attachment may encourage trust through the development of weak social ties between groups. However, before addressing this in more detail focus 39

will be given to other conceptualizations of trust and how this might relate to both neighbourhood attachment and participation in local groups.

2.3: Moral trust: Uslaner

As was discussed in section 2.2, trust is a fundamentally important concept for researchers such as Putnam. It is also a key aspect of this thesis because two very clear and distinct hypotheses are made in the socialisation and social capital literatures Section 2.2 described a view of trust from the perspective of Putnam (2000). This section describes trust as a socialised phenomenon developed early in life and focuses on the work of Uslaner (2002) in advancing this view.

High levels of trust seem to be related to increased civic engagement and participation and ultimately to better functioning societies (Putnam, 1993). Indeed this was noted by Almond and Verba (1963) and again by Inglehart (1997). The latter has argued that interpersonal trust is related to the democratic functioning of societies because people who trust their fellow citizens are more likely to accept changes in political power even when these do not match their own preferences. Given the amount of weight given to the idea of interpersonal trust it is important to consider how trust may be best conceptualized.

The conception of trust put-forward above is one in which trust is contingent on knowledge about how others will act. It is for this reason that social networks are considered so valuable: they facilitate the transmission of this knowledge thereby making the network itself more trusting. When everybody in the network understands that the others can be trusted the network will function well. A network cannot be characterised by a lack of trust because the network itself could not function under such conditions. This is particularly the case when considering networks which characterise civic groups. High trusting networks and groups should also encourage norms of trust and reciprocity among members.

One of the most important counterpoints to the view of trust under social capital has been the work of Uslaner (2001; 2002; 2008). He argues for a moral view of trust which is fundamentally different to a more strategic view of trust, although he does not discount the notion that *deciding* to trust another person is itself a strategic decision. Instead he argues that trust is essentially *moral* in character which implies that trust is not merely a strategic decision made about the trustworthiness of *others*, but a deeply held value which conditions how individuals perceive the world. Essentially it can be argued that trust is a belief which conditions whether or not people will take advantage of others (Silver, 1989). For Uslaner (2001) the fundamental flaw with a view of trust as strategic is that if trust is predicated on a strategic decision based on an assessment of whether another person is trustworthy, then only people who know one another will choose to work together. As he notes:

'Strategic trust also cannot resolve one key problem in collective action: why people get involved in their communities. Much of the renewed interest in trust stems from its centrality to recent debates on civic engagement. Trusting people are more likely to get involved in their communities... Yet, it is unclear how strategic trust can lead to more civic engagement' (Uslaner, 2001).

He argues that when viewed from a moral perspective the answer to this is clear. If trust is a moral value based on a view of the world concerning how people will behave it is logical that many people will engage in collective activities because they *believe* that others can be trusted. He also makes clear that in his view it is trust which predicts participation in civic groups and not *vice versa* (Uslaner, 2001). However, he does not discount that strategic 'trusters' do not exist, instead arguing that strategic, or particularized, trusters will join groups of people like themselves, whereas moral, or generalized 'trusters' will be more likely to join groups composed of a broader crosssection of people. Here he explicitly argues that those who exhibit generalized trust are more likely to engage in bridging activities whereas those who display a particularized trust are much more likely to engage in bonding social networks.

This moral conception of trust leads to a very different view of the relationships between the three dimensions of social capital. This is shown in figure 2.3.1. This figure shows that when trust is viewed as a moral attribute it has a fundamentally different relationship to both participation in local groups and neighbourhood attachment. It suggests that when viewed in this way trust conditions how likely people are to participate rather being created by participation. Participation and attachment have the same relationship as in figure 2.2.1. That is, they predict one another. Figure 2.3.1: Moral trust: relationships between participation in local groups, neighbourhood attachment and interpersonal trust



2.4: Social capital within the local community

It also important to think about social capital as a phenomenon that occurs within given places, groups, and networks. The overarching aim of the thesis is to examine how different contexts, such as they home and the neighbourhood might differentially affect the three key dimensions of social capital. The neighbourhood, has been chosen as a particular place within which social capital is formed and both participation in local groups and neighbourhood attachment should be influenced by the neighbourhood. As has been noted, interpersonal trust is different, although from a Putnamian perspective it should be influenced by the groups and networks within the community. Criticism of the social capital literature most often focuses on the fact that the concept lacks clarity (for example Fine, 2001; 2010). In other words there is a danger of conflating social capital with the outcomes of interest. In this sense it might be argued that individuals who live in more participatory communities are more likely to participate. While this argument is undoubtedly true it lacks value insofar as it does not explain why more participatory communities promote participation. It is therefore important to define clearly what is measured before making any claims about the role that social capital may, or may not play, in determining the outcomes.

Contrary to Putnam, theories of political mobilisation (see Rosenstone and Hansen, 1993) tend to focus on the individual reasons that *individuals* become engaged in

participatory activities. An individual may be embedded in social networks characterised by many community ties within which there is a norm of social participation and engagement in local issues. Another individual may also be embedded in a community characterised by similarly strong social networks and ties which does not have the norm of active social participation and engagement. Other things being equal these two individuals should not have the same propensity to participate. In other words care should be taken in outlining the reasons why one thing should be expected to cause another. Individuals living in more engaged and participatory communities should receive relatively more mobilising cues which may stimulate participation. This should be more likely when a person lives in a community characterised by denser, situational weak-tie, networks because they should be more likely to be exposed to mobilising effects (McAdam and Paulsen, 1993; Portes and Landolt, 1996). In such a community some people may have higher levels of social capital than others because they are more embedded in the social networks within it. One way in which participation can be thought about beyond a general set of beliefs and attitudes that predispose a person to favour it (Almond and Verba, 1963) is interpersonal trust. Trust is argued to be a key variable here because a general disposition to trust should make individuals more likely to engage in collective actions. Figure 2.4.1 shows a very simple conceptual framework that might be adopted to think about these issues.



Figure 2.4.1: The impact of mobilisation and trust on participation

It shows that both mobilisation and trust are necessary but not sufficient to explain participation. That is, high trust in the absence of the opportunity or stimulus to participate is unlikely to lead to participation. Alternatively mobilisation in the absence of trust is also unlikely to lead to participation. It is worth noting that a direct measure of mobilisation into community participation is not available in the data used here. However the concept is important in understanding how and why communities rich in social capital might differ in terms of the participation that is stimulated within them.

Neighbourhood attachment is adopted as measure which captures many of the key features of mobilising networks. Li et al (2005) find that neighbourhood attachment is an important and distinctive aspect of social capital, alongside social networks, and civic participation. It is argued that neighbourhood attachment is a particular example of a situational network characterised by weak ties. The notion of strong or weak ties is a useful way in which neighbourhood attachment can be differentiated from social networks more generally. The work of Granovetter (1973) is important insofar as it provides a framework within which to think about the kind of ties that develop within communities. Effectively, strong ties are argued to be those which represent direct links and networks between individuals, such as family and friends, within which individuals are broadly similar. Here it is perfectly possible to envisage networks of strong ties which do not overlap meaning that there is no bridging between the different networks. However, it is also plausible that individuals may be part of a number of different strong tie networks. In this instance these individuals can act as *bridges* between the different networks, ensuring that no strong tie network is entirely independent of the others. It is these weak ties which can be thought to tie communities together and to enhance social capital at the level of the community.

This might work within neighbourhoods in a number of important ways. Granovetter (1973), using the example of information diffusion across networks, argues that it is fundamentally linked to weak ties insofar as a neighbourhood consisting of only strong tie networks would not see information spread outside of any single network. By contrast neighbourhoods consisting of weak ties would be much more likely to see information diffused over a greater number of people. Henning and Lieberg (1996) have demonstrated, in their study of Sweden that weak ties are more likely to exist within neighbourhoods than strong ties and that weak ties are likely to be particularly important

for more disadvantaged people. This is because the less disadvantaged tend to have access to a greater range of networks outside of the neighbourhood. It is important to note that effects of such weak ties are referred to by Putnam (2000) as *bridging* social capital, whereas strong ties are referred to as *bonding*.

Figure 2.4.2 shows the relationships between the three dimensions of social capital from the perspective of mobilisation when trust is viewed as a moral value and as also as something which is generated within social networks. In each case neighbourhood attachment predicts participation from the logic of mobilisation. That is areas characterised by weak relationships across the neighbourhood should generate more mobilising effects because information about any groups should spread more effectively across the community. Secondly this effect should be enhanced because of the likelihood that people will be predisposed to become involved in groups that involve the acquaintances of people with whom they have stronger relationships. Of course in reality this effect should work in the other direction but mobilisation would suggest that neighbourhood attachment would not become engaged in the first place. However, the key difference is again between the two conceptualisations of trust. When trust is a moral value it predicts both attachment and participation but the effect on participation is enhanced in the presence of higher levels of participation. When trust is viewed as





Trust as generated within networks

strategic and generated within networks both participation and attachment generate trust but the effect is enhanced because individuals with higher levels of attachment also participate more.

It is reasonable therefore to suggest that a measure which captures these aspects of social capital within the community should be developed. In order to do this a number of different indicators, such as neighbourhood belonging and the importance of neighbourhood friendships, are used. It can be argued that these are measuring distinct attitudinal and behavioural aspects of social capital (Li et al, 2005). This may make the measure open to similar criticisms to those made above about social capital more generally. That is, by simultaneously including both attitudinal and behavioural components it becomes difficult to disaggregate cause and effect. Indeed, measures of attachment normally refer to the *affect* that an individual might have towards a certain place (see Dekker 2007). For example, John et al (2011) refer to neighbourhood *affect* and also include a separate measure of neighbourhood *social norms*.

However, it can be argued that including both attitudinal and behavioural aspects in the framework incorporates the two distinct components of social capital. It can also be argued that whether or not a person *feels* that they belong to a place should be closely related to the nature of the social relationships that they have there. As the focus is on neighbourhood attachment as a measure of the norms of behaviour and attitudes (affect) that an individual has with regard to their neighbourhood it is appropriate to include these in the same measure. This is because questions which seek to specifically determine the nature and extent of the social relationships that an individual has in their local community or neighbourhood are particularly relevant to the research question of interest. A measure of social capital that captures the nature and strength of the relationships that an individual has with, and within, their neighbourhood is therefore necessary. This is not an original concept and aspects of it have been widely referred to in the literature on social cohesion (see Forrest and Kearns, 2001), community attachment (for example Sampson, 1988), and sense of community (Long and Perkins, 2003). This thesis follows Li et al (2005) in referring to neighbourhood attachment as specific sub-type of social capital which captures aspects of the weak ties which characterise many communities and can be differentiated from stronger social networks more generally.

2.5: Neighbourhood attachment and the local community

Section 2.4 discussed how social capital can be thought to relate to local communities and defined what is meant when referring to neighbourhood attachment. This section draws out these discussion further and relates the concept of neighbourhood attachment to the neighbourhood more directly. It suggests that attachment should be highly contingent on proximal characteristics of the local community which will be an important when discussing why the three different dimensions of social capital should develop differently.

It has been argued above that it is reasonable to expect both individual and neighbourhood level differences in the nature of the social networks within neighbourhoods to exist. It has also been argued that some neighbourhoods might be expected to have higher levels of participation than others and that this is likely to be related to the specific opportunities afforded by membership of different neighbourhood networks. Some neighbourhoods may engender a particularly participatory kind of social capital but others may not. Neighbourhoods with many networks characterised by weak ties should also engender greater participation because opportunities to participate should become more widely known than in neighbourhood with few weak, or bridging, social ties. It has also been argued that social capital has both network based and attitudinal aspects. In terms of the latter interpersonal trust was identified as a key aspect of this. Neighbourhood attachment should also have other cognitive aspects which may, or may not, be related to the networks that an individual has within the local community.

Drawing on the sense of community literature it is possible to identify a number of factors that it would be useful to account for when considering how to best characterise neighbourhood attachment. Perkins and Long (2002) have argued that social capital and sense of community are generally investigating similar processes, albeit with sense of community focused at a more individual level and social capital focused on more community based outcomes. They argue that sense of community can be thought of as a catalyst for two key aspects of social capital: organized participation and informal neighbouring. In terms of the former they note that one of the key reasons that individuals engage in formal participatory activities in their neighbourhoods is likely to be a sense of community around which individuals are able to come together and work 47

towards solving common problems. Neighbouring behaviour can be defined as informal assistance and support that may exist within a community. In a sense this might be thought of as informal, or non-instrumental, social contact. The notion that this should include some aspect of obligation to other people is important as it makes clear an important aspect of the nature of the relationships that exist within neighbourhoods. That is, individuals who feel they can seek assistance from their neighbours is likely to value more highly the networks and ties that they have within that neighbourhood. How these things might have an impact in different communities and on individuals is important to note. As Forrest and Kearns (2001: 2130) make clear:

'...in disadvantaged neighbourhoods it may be the quality of neighbouring which is an important element in peoples' ability to cope with a decaying and unattractive physical environment. In more affluent areas, however, *neighbourhood* may be rather more important than *neighbouring* – people may 'buy into' neighbourhoods as physical environments rather than necessarily anticipate or practice a great deal of social interaction.'

That is, in disadvantaged neighbourhoods it might expected that more emphasis would be placed on the importance of social relationships. In more affluent areas by contrast people may be less likely to emphasize the importance of social relationships but to derive a sense of meaning out of living in a certain area. This may in part stem from the fact that people living in more affluent areas are more likely to have access to other networks and support mechanisms outside of the neighbourhood (Guest and Wierzbicki, 1999). The nature of formal participation likely in these different neighbourhoods is important and will be discussed in depth. However, as has been emphasized, certain neighbourhoods may be more likely to stimulate participation more than others and these will not necessarily be the same neighbourhoods that have high levels of neighbourhood attachment. Indeed, places characterised by a 'decaying and unattractive physical environment' as well as higher levels of social disorganization may be the types of neighbourhood in which formal participation is least likely.

The aim here is to consider the *nature* of the social relationships that an individual has with their neighbours and local community. It can be argued that simply referring to a *network* of social relationships is likely to be insufficient to differentiate between neighbourhood ties based on a sense of community, and ties based on how many people

a person knows. As was noted the depth of networks, as characterised in particular by the weak ties between strong tie groups, is of key importance here. It is argued that these facilitate norms of neighbourliness and attachment across communities because they make it more likely that people will know others even if they do not have strong tie networks with them. In other words it is not merely the number, but rather, the nature of the ties that is important when thinking about how these things might have an impact on participation, engagement, and interpersonal trust. As Unger and Wandersman (1985) note 'social interaction refers to the social activities that neighbours engage in such as borrowing or lending tools, informal visiting, and asking for help in an emergency, and to the social networks which residents develop in their neighbourhood.' They go on to note that it is useful to distinguish between social networks and social support. It is argued that places characterised by networks of weak situational ties should encourage a sense of both social support and neighbourliness within the local community or neighbourhood.

Neighbourhood relationships have also been shown to be linked to awareness of local organisations (Wandersman et al, 1981), and that places with more informal neighbouring are likely to stimulate the development of neighbourhood organisations (Ahlbrandt and Cunningham, 1979). Here the aim is to assess the relative strength of the neighbourhood relations, via neighbourhood attachment, of individuals in order to determine whether or not they will be more or less likely to participate than others. By linking these types of relationships to instrumental participation in the neighbourhood, as well as to contextual characteristics of the neighbourhood, it will be possible to gain a deeper understanding of the reasons that individuals engage, and the types of community that this is likely to happen in. Moreover, by focusing on these three distinct aspects of social capital (i.e. interpersonal trust, community participation, and neighbourhood attachment) it will be possible to gain a deeper understanding of how they are related to one another.

Figure 2.5.1 shows the differential relationship that should be expected between in different types of community. It suggests that individuals who have similar levels of neighbourhood attachment will be more or less likely to participate in different types of community. This is because the types of network that develop in affluent



Figure 2.5.1: The relationship between neighbourhood attachment and participation

neighbourhoods will be more likely to generate participation, whereas deprived neighbourhoods will be more likely to generate social support mechanisms.

Sections 2.6 to 2.8 will elaborate what is meant by formal participation before discussing in detail how and why interpersonal trust should play a role in determining neighbourhood attachment and participation.

2.6: Participation

This section develops a framework within which participation is related to ideas found in the social capital literature. It also discusses other approaches to the study of participation. The reason that the work of Putnam (2000) has garnered so much attention is because it speaks to broader societal problems and suggests that those communities which are rich in social capital are most likely to be able to overcome problems of collective action (see also Ostrom, 2000). By focusing on the ways in which communities organise and address collective problems social capital can be seen to enhance civic deliberation. It is also argued that in working together in some formal setting individuals develop norms of reciprocity and trust that create virtuous circles of civic participation and engagement. Conceptually, it is suggested that participation in a formal group is very different to engagement in neighbourhood networks. Brisson and Usher (2007) suggest that social capital can be conceptualised in a number of ways. The first would be as either placebased, or interest-based, communities. Place-based communities are characterized primarily by the fact that they are geographically bounded. The measure of neighbourhood attachment is a clear example of this. Interest based communities may also be specific to a particular geographic place but are characterized by the instrumental aims or beliefs of group members (Brisson and Usher, 2007). That is, members are bound together in some shared interest that is different to neighbourhood attachment described in section 2.5 which emphasises a more general neighbourliness and may have features of social support.

It is also possible to distinguish between formal and informal types of social capital. Neighbourhood attachment should be generated through informal social interactions and neighbourliness, whereas formal social capital may be generated through interestbased networks such as religious organisations or a neighbourhood watch group. Both may generate trust and other forms of participation and interaction, but these might be of very different types. For example some kinds of social capital may generate trust in a local community but a distrust of individuals outside of it. It is therefore important to consider which kinds of participation, beyond neighbourhood attachment, are of interest and what the impact of this should be on other kinds of social engagement and trust. Formal kinds of participation should generate greater trust because neighbourhood attachment does not imply high levels of reciprocity.

As Verba and Nie (1972: 45) point out with reference to political participation, 'there are many types of activists engaging in different acts, with different motives, and different consequences.' In other words there are different paths to participation and different individuals engage in it for different reasons. Generally speaking it is reasonable to expect some sort of attitudinal proclivity to participate in the activity in question. For instance it is reasonable to state that people who participate in the neighbourhood do so because they have some sort of positive attachment to that community. This attachment may be based on a sense of community characterised by participation in local groups and a commitment to other members of the neighbourhood, or it may be characterised by an affective attachment to the place and the people itself. In other

words it may not be reasonable to expect participation in the local community to occur when a person feels disengaged from their neighbourhood. However, participation in some kind of action may place other demands on participants and this may explain differences in participation over and above orientations to do so.

A key argument in the literature suggests that different kinds of participation imply different costs to participants (Downs, 1957; Whiteley, 1995). The level and nature of these costs may explain differences in the levels of participation across different activities and between groups. For instance it has been argued that cost based approaches to voting are inappropriate due to the low cost of actually voting (Aldrich, 1993). Other forms of participation however are likely to involve higher individual costs which may act as a barrier for some individuals. As an example, participation in some neighbourhood groups may require individuals to spend a large amount of time working within the community. Individuals may have more or less free time than others and those people who do not have enough free time will be unable to participate even if they would like to do so. However, once again an emphasis should be placed on the orientations that influence participation in local groups. An individual who is cognitively engaged in community issues and predisposed to participation would be much more likely to participate than one who is not.

As will be discussed below understanding participation in this way allows the question of participation to be framed in terms of collective action (Olson, 1965). An individual or group of individuals involved in a local group might be thought of as having recognised that they are part of a shared community, with shared needs, and that in acting together, often in a voluntary capacity, they are able to improve things for the good of the community as a whole. This is important insofar as it allows a distinction to be made between those who take an interest in the day-to-day life of their neighbourhoods and those who do not actively participate. It should also be reiterated that people will not participate if they do not have the opportunity to do so. Opportunities to participate are likely to be unevenly distributed across different communities and this may account for different levels of participation. However it is difficult to specify precisely how these opportunities will be distributed and there has been relatively little research into the different levels of *opportunities* available in different kinds of area. However, research clearly suggests that people in more affluent areas tend to be involved in more formal community based groups. They are also more likely to be involved in providing one-toone informal assistance although the difference is marginal between deprived and affluent areas (Williams, 2003). It is worth noting that a key aim of current UK policies regarding engagement in civil society is to foster participation in more deprived areas (Office for Civil Society, 2010a; 2010b) and it is plausible that there are not wide differences in the distribution of local groups between areas although the aims and scope may not be the same. That said, there is little evidence to support this in either direction.

It should also be reiterated that this conception of social capital implies that individuals will be motivated to participate in their neighbourhood due to a norm of participation within the networks that they interact within (Portes and Landoldt, 1996). The lack of a norm of participation is likely to act as a barrier to participation as individuals will be less likely to be mobilised into activity (McAdam and Paulsen, 1993). It should be noted that this does not imply that a strong cost-benefit framework plays a role in encouraging individuals to engage in *informal* social networks and *non-instrumental* activities. It is also worth pointing out that some individuals are likely to participate in formal, or instrumental, groups because they enjoy doing so or because they have friends that do so. However, it is argued that at least part of the reason for this kind of participation is likely to be because they derive some other meaning, related to a sense of civic engagement, from the act.

The focus here is on participation in local, or neighbourhood, civil society organisations. These organisations can be very diverse, reflecting as they do the specific needs of myriad local communities. However participants should be characterised by a shared commitment to furthering the interests of their local communities through voluntarism and other forms of active participation such as attending local meetings. Such engagement is likely to be predicted by neighbourhood attachment and interpersonal trust. It is argued that the development of such attitudes and networks is temporal rather than purely contemporary in nature and are partially developed in childhood and youth.

2.7: Participation and trust

Finally, his section relates the ideas of interpersonal trust to the reasons that people might participate. This is important because it suggests the mechanism by which trust should be related to participation in the more general participation literature. In simple terms, collective action (Olson, 1965) is an attempt to explain why and when individuals engage in group based participation and can be seen as a response to economic theories of participation which failed to address this kind of group behaviour (Reisman, 1990: 143). In other words, individuals who recognize that they have common interests should work together. From this perspective it may be reasonable to assume that anybody engaging in a form of instrumental activity in a neighbourhood group is participating in collective action of some kind. That is, as well as the other reasons that individuals might participate, it can also be assumed that they have some measure of support for the aims of the group. A good example may be a neighbourhood watch scheme which involves a regular meeting for those involved. By acting together individuals may be able to achieve a safer neighbourhood than might otherwise be possible. However, this also leads to the key problem of collective action which is that individuals who do not participate in the scheme would still benefit from it. That is, as the benefits are collective it is rational for individuals not to incur costs by actively engaging in the group, or free-riding.

The social norms of a community may foster this kind of participation and it is plausible that strong social norms may help overcome problems of collective action. However the formation of social norms is in itself a difficult sociological problem. The development of social norms was a key concern of Coleman (1964; 1990). One of the key aspects of effective community norm development is thought to be the ability to sanction non-conformists. This may arise out of the ability to exclude non-conformists from networks thereby depriving them of the benefits derived from membership (see also Hechter and Kanazawa, 1993). This argument is understandable in terms of access to markets or networks that might confer some benefit on members but is more difficult to understand in terms of neighbourhood networks and groups. In other words, exclusion from networks in a neighbourhood is unlikely to materially disadvantage non-conformists.

However, it is plausible that costs may be incurred by free riders and social capital may help enforce these. For example, if it is accepted that participation in local groups brings many benefits which are not directly related to the specific aims of the group, then those 54 who do not participate are, other things being equal, disadvantaged when compared with participants. Putnam (2000) notes that social disapproval may itself be thought of as a cost: in other words non-involvement in a neighbourhood in which it is common to be actively involved may be viewed disapprovingly by other members of the community resulting in negative interpersonal relationships. Notably this effect should be most effective in places with high levels of neighbourhood attachment. These soft social sanctions are different to the sort of sanctions envisaged by Coleman (1990). Elster (2003) for example has characterised them as being driven by a desire to avoid social disapproval rather than by an anticipation of gain.

It is worth noting that this is a somewhat reductive view of behaviour. As Kahan (2003: 71) notes, '[i]n collective-action settings, individuals adopt not a materially calculating posture but rather a richer, more emotionally nuanced *reciprocal* one. When they perceive that others are behaving cooperatively, individuals are moved by honor, altruism, and like dispositions to contribute to public goods even without the inducement of material incentives'. Consequently, and as Kahan (2003) goes on to suggest, arguments embedded in rational conceptions of human behaviour may not be enough to explain participation in many types of action. He also argues that a key component for explaining participation is trust. That is, individuals who trust their fellow citizens will be more likely to engage in collective civil actions than less trusting individuals who will be much more likely to free ride when they are likely to benefit from any general societal benefits.

As has been noted throughout research into trust has generally taken one of two positions (Kramer, 1999). The first emphasises trust as a psychological state which can be defined in terms of cognitive processes and orientations. The second has argued that the utility of trust as a concept can be found in *choice* situations where individuals with higher levels of trust would be expected to behave in certain ways, often from the perspective of rational choice. This is closely related to the notion that trust concerns the way in which an individual's actions are conditioned by beliefs regarding the actions of others. It is in this way that trust can be framed as a particular problem of collective action. As has been seen, if a group has an aim, the resolution of which requires people to work together, but has benefits which will affect participants and non-participants alike, there is a risk that many people will decide that their optimal strategy is to *free ride*

thereby keeping their own cost of participation to zero while maximising their benefits. However, if individuals *trust* other members of their neighbourhood not to defect it is more likely that they will participate. Clearly neighbourhood attachment may play a role in determining this as neighbourhoods characterised by many weak networks should be more trusting because information about non-conformist behaviour is likely to spread throughout the community. As Granovetter (1985) notes, seen in this way trust is a phenomenon which is socially 'embedded in networks of interpersonal relations.'

Irrespective of this it is clear that trust should be related to both neighbourhood attachment and participation in local groups. The next chapter will discuss the expectation that individuals who become involved and engaged in their neighbourhoods should also be more trusting, with a focus on socialisation in the household.

2.8: Summary

The overarching aim of this research is to examine the way in which different contexts can have an impact on the development of social capital across the life course. The aim of this chapter was to outline the three key dimensions of social capital to be studied here and to detail how and why they are related to one another. It also introduced notions that they may, or may not be, stable across at different stages of life, and within different contexts. Following this chapter 3 will relate these ideas more concretely to theories of socialisation and will discuss in depth how they should develop differentially over a person's life.

Section 2.2 provided a detailed discussion of three of the main theorists of social capital was provided. It was noted that while Bourdieu (1986) may have provided one of the most consistent and theoretically robust descriptions of social capital his focus on the way in which networks can be used to maintain privilege by advantaged groups does not address the focus of this research, which has as a principle aim the goal of understanding how individuals within different contexts develop norms of participation, attachment, and trust. This was then contrasted with both Coleman (1990) and Putnam (2000). It was argued that the latter has some similarities with Bourdieu (1986), in terms of a focus on the way in which social can be used by individuals and his focus on the kinds of benefits that individuals might accrue. However, his notion that social capital is a property that

may benefit a wider range of communities is important. The insight that social networks are characterised by both expectations and obligations and that trust must play a role in conditioning when these are likely to be met is also important. Another key point is the role that sanctions might play in encouraging the successful functioning of the group.

Putnam (2000) was then discussed. It was noted that his key insight was his focus on the role that social capital can play on the community, rather than, the individual level and in his focus on the role that civic organisations can play here. The notion that social capital is essentially composed of networks and values such as trust and reciprocity (a clear extension of the expectations and obligations identified by Coleman) was again noted. However, in extending his analysis to the level of the community Putnam is able to speak more directly about the importance of these norms in solving community level problems. This is of particular importance in this research because it is important to determine what the predictors of participation in local groups are. In other words the importance of participation in local groups is taken to be important at face value. Rather the mechanisms by which people become engaged, in terms of both socialisation and to some extent mobilisation, will be examined *contra* Coleman and Putnam.

Other important themes are also found in Putnam. The notion that trust can be engendered by engagement within social networks was discussed as were the implications of this line of reasoning. The fact that under this viewpoint individuals are thought to be trustworthy or not, rather than trusting is an important point theoretically because it implies that networks have an impact on trust not via the mechanism of making people more likely to trust, but by providing them with an opportunity to infer who they can trust. The logic of sanctioning defectors is also present in Putnam and does to some extent imply that more trust may be engendered on an individual level within the network because individuals who cooperate because of the threat of sanctions will be perceived by others to be more trustworthy. Once again it should be noted that this view of trust is at the level of the community. However, for the expected direction of causality to work in the way implied, membership of networks and in particular civic organisations must also increase trust on an individual level. Following this section 2.3 discussed a counter-argument to Putnam's (2000) conception of trust as strategic. Uslaner (2001; 2002) contends that trust is a moral value which conditions whether people will join civic organisations. Moreover, Uslaner (2001) argues that trust is relatively stable across the life course implying that trust may develop early in life. This will be discussed in more detail in chapter 3.

Section 2.4 then related these ideas to the specific community of the neighbourhood. It was argued that neighbourhoods may be characterised by situational networks which may be more or less likely to stimulate participation irrespective of their breadth across the community. The work of Granovetter (1973) was also introduced with a focus the notion that weak ties, which cross-cut different strong tie networks, across a community are a fundamentally important point when discussing notions of the amount of attachment that an individual is likely to feel about the place in which they live. This concept was related to the ideas of bonding and bridging social capital (Putnam, 2000), as well as to notions of mobilisation. In terms of the latter it was argued that communities characterised by weak ties should be more likely to stimulate participation in groups because the diffusion process of information should spread more widely through them. These notions were also related back to trust and it was argued that both trust and mobilisation are preconditions for participation in groups within the local community. A case was then made for developing a measure of neighbourhood attachment which should capture aspects of both neighbourhood affect and social relationships which captures to some the weak ties that are likely to exist at the level of the neighbourhood. Section 2.5 then argued for the development of a measure of neighbourhood attachment and discussed how this might done in greater depth. It also argued that social context, and in particular neighbourhood deprivation, might play a role in how people perceive their local communities.

In section 2.6 emphasis was placed on the distinctiveness that participation in groups has from the social network and neighbourhood attachment aspects of social capital. A distinction was made between informal and formal types of social capital with the former best characterising neighbourhood attachment and the latter as participation in local groups. They key distinction being that the latter represents engagement in interestbased networks that may have some shared goal or interest, whereas the latter represent generally weaker networks that people engage in for reasons of neighbourliness, and which may offer, in some instances, social support. It was argued that both types of engagement might generate interpersonal trust, although from the perspective of Putnam, the latter should generate more as the former does not necessarily imply reciprocity. It also discussed some of the key findings and theoretical frameworks from the literature on participation in order to provide a different perspective on why people become engaged in community groups. This is important because it highlights some of the key reasons that people should become engaged in the first instance. A deeper understanding of this should allow some of the tautological issues found in Putnam (2000) to be understood from an individual perspective. In the first instance the notion of costs were introduced in order to highlight the fact that different types of participation imply different costs to different groups. The problem of collective action as formulated by Olson (1965) was also introduced as a way of reframing the distinction between formal and informal groups, with the latter implying some level of cost for the participant. It was also utilised as a way of highlighting why participation may fail to take root in some areas. Finally the idea that some areas may be rich in networks characterised by membership in formal groups, and others to be rich in informal networks was returned to and the reasons why there may be differences in the likelihood that people will participate at different rates in these communities was discussed.

Finally, section 2.7 discussed the relationship between trust and collective action. The ideas of Olson (1965) in relation to problems of collective action were clearly defined and the role that trust might play in overcoming them was discussed. It is argued that trust can help overcome problems of free-riding because more trusting individuals would be less likely to believe that others will free ride. When a group network is rich in trust this should stimulate repeated participation in the group. Differences between strategic and generalized trust were also discussed and it was noted that the latter is more likely to be stimulated by effects early in life whereas it is more likely that the kind of trust generated in networks will not promote a more strategic kind of trust. The work of Uslaner (2002) is of particular note here given the way his conception of trust differs from that of Putnam (2000).

3: Pathways to social capital

3.1: Introduction

Chapter 2 discussed and defined neighbourhood attachment and formal participation in local groups and how these outcomes are related to, and bound up within, the concept of interpersonal trust. It also highlighted that different neighbourhoods may stimulate different levels of participation even if they have a similar depth of weak-tie networks. The motivations that may lead individuals to participate in different kinds of informal social engagement were also discussed and how these frameworks can be applied to participation in local groups was been elaborated. Problems of participation were also characterised in terms of collective action and the role that trust is thought to have in helping overcome these was highlighted. The following will outline the reasons that there are differences between individuals and neighbourhoods in terms of participation in neighbourhood groups and activities. In other words it will more directly addresses the key arguments that exist in terms of why the different dimensions of social capital should develop at different stages and why youth may be a key socialising point, and the household an important context.

Socialisation is the key theoretical framework adopted here as it can be used to place the other theories of participation into a common framework. It can also be argued to make different predictions regarding how and why people become engaged than social capital approaches, and in particular Putnam (2000). It is argued that exposure to some mobilizing mechanism or social context will have an impact on how individuals choose to engage in the future. This is not to de-emphasise the importance of contemporary factors which can also play a key role in conditioning whether or not an individual or neighbourhood will be engaged. For example, the absence of a local group to participate in will obviously preclude anybody from participating in this kind of group. However, other things being equal individuals who come from backgrounds characterised by high levels of neighbourhood attachment and participation in local groups should be more likely to be engaged in the local community than those who do not.

After discussing socialisation there will be a focus on other explanations of participation commonly found in the literature. Neighbourhood context as a factor that plays in role in determining the development of neighbourhood attachment as well participation in 60

local groups, and how this may affect interpersonal trust, will also be discussed. These arguments are often made from a contemporary perspective. Here they will developed and viewed from the perspective of socialisation.

3.2: An introduction to socialisation

The key question that research into socialisation seeks to answer is at what point certain environmental contexts have an influence on later behaviours and attitudes. The term *environmental context* here broadly refers to the environments that an individual experiences which will influence in some way the development of these attitudes and behaviours. In this sense socialisation does not need necessarily to study children and young people. Adults are also subject to the environmental and contextual effects of their neighbourhoods, families, and social networks (Zuckerman, 2005). Typically, however, socialisation refers to young people and children because childhood and youth is regarded as the time at which an individual is susceptible to changes in basic values, and is the point at which many key attitudes are formed (Renshon, 1975). In other words, adults already have relatively strong behavioural and social norms which may be resistant to change under many circumstances. Children and young people may not have had time to develop these and may therefore be more susceptible to these environmental influences.

An early perspective in socialisation took the view of a child as a blank slate upon which society imposes norms (Easton and Hess, 1962). Beginning in the 1950s early studies focused on the household and in particular parental influences (see Hyman (1959) and Glaser (1959) for example). However, later literature argued that many of the positive associations found between parents and children was based on oversimplifications concerning the development of both behaviours and attitudes (Niemi and Hepburn, 1995). This literature argued that what mattered were environments such as schools, which young people were exposed to at a crucial age (Hess and Torney, 1967; Jennings and Niemi, 1968; Jennings and Niemi, 1974; Jennings and Niemi, 1981). Many of these studies however had a focus on behaviours rather than attitudes. Dalton (1982) has argued that the household may not be best context in which to study *behavioural* socialisation, but that *attitudes* may be more likely to be passed from parent to child. It

is also worth noting that developmental of attitudes and behaviours are unlikely to be independent from one another. If an individual develops certain attitudes that predispose them to participation it should be more likely that they will develop a participatory norm of behaviour.

Hess and Torney (1967: 19-22; see also Beck, 1977, 115-116) suggest four ways in which socialisation is likely to occur. The first, the *accumulation model*, explicitly teaches children attitudes and values. This type of socialisation occurs within distinct settings such as families or schools, and involves active teaching. The second type, the *interpersonal transfer model*, suggests that children base later feelings towards authority figures on earlier relationships with people in power, such as parents and teachers. Third, the *identification model*, posits that children imitate the actions of significant people, such as parents and teachers. Finally, the *cognitive-developmental model*, suggests that there are cognitive limits to what a person can understand at given points in their lives. Consequently, basic values, such as interpersonal trust, are likely to develop at an earlier stage than specific attitudes towards voluntary activity which require a higher level of cognitive sophistication. To an extent the final model can be seen as encompassing the other models and, as Hess and Torney (1967: 21-22) go on to point out, each of these models is likely to have a differential impact at different stages of life.

Dalton (1982) also made an important contribution when he suggested that both attitudinal and social milieu pathways of socialisation exist. The former is predicated on the notion of value transfer and may explain core beliefs such as interpersonal trust. The latter represents the impact that shared social characteristics can have on different generations and is likely to be an influence on neighbourhood attachment. Verba et al (2005) and Jennings et al (2009) also emphasise this point and argue that certain characteristics, such as social status, are likely to be common across generations, and that this might explain many of the similarities between parents and children. It is worth noting that each of these studies emphasised the role that different contexts might have at different developmental stages with the attitudinal pathway being more likely to be influenced in the home. This is also consistent with the work of Uslaner (2002; 2008) who has argued that as trust forms part of a deeper underlying attitudinal framework there is likely to be a strong parental influence.

Given this it is important to consider at what stages individuals should be socialised into different behaviours and attitudes. It is generally accepted that orientations of engagement and citizenship are developed in adolescence and early adulthood based on the early work of Jennings and his co-authors (see for example Jennings and Niemi, 1974; 1981). Indeed, studies of citizen education in adolescence, and especially service learning – which is similar in some respects to the aim of the *Big Society* agenda in having a focus on the active participation of young people – can be important in establishing civic and participatory norms and behaviours (Galston, 2001). The beneficial effects of such programmes are likely to be emphasised when this kind of civic education emphasises skills rather than merely participating (Kirlin, 2003), and where engagement and academic learning are carefully integrated (McLellan and Youniss, 2003).

However, it can be argued that under some circumstances earlier socialisation may occur (see Sapiro, 2004). This is particularly the case for the development of moral values such as fairness, reciprocity, and trust (Sears and Levy, 2003). The earliest work in the field was the two-stage moral development model proposed by Piaget (1932), which suggested that children first develop moral behaviours through the imposition of external rules and only later develop more flexible orientations later into childhood. This work was developed by Kohlberg (1969; 1976), who proposed that as children move into adolescence they gain the ability to reason morally and become increasingly able to apply these moral rules to more abstract problems in a consistent manner. More recent work has suggested that some of these basic assumptions do not apply even for young children. For example researchers have shown that young children are able to conceptualize fairness outside of an authority/punishment framework and that this reasoning can vary with context outside of personal and social/conventional reasoning (Nucci, 1981; Turiel, 1998; Turiel et al, 1987).

The Social-Cognitive Domain model as developed by Turiel (1983) was an important development here. This specifies that the world of a child can be conceptualized into three domains: social conventions, such as traditions and customs which are non-generalizable; morality, such as fairness, reciprocity, and equality, which are generalizable; and, the psychological, which refers to personal choices based on individuals personal goals and prerogatives. These three domains act upon each other to condition the responses that children might have in terms of different moral problems.

Turiel (1983) has found that children are able to distinguish between moral rules and social conventions by the ages of 3 to 4. Because the particular context within which a child grows up has an impact on the development of the moral domain it is likely that early socialised experiences within the household should play a role in determining moral development. Indeed, this is the argument made by researchers such as Uslaner (2002) in reference to trust. Section 3.4 will discuss these issues in greater depth and with reference to the three domains of social capital. Prior to doing this section 3.3 will offer counter argument to theories of socialisation based on recent findings in the literature on genetics.

3.3: A genetic basis for attitudes and behaviour

It has been argued that one of the primary pathways for the development of attitudes and behaviours conducive to social engagement is rooted in experiences in early childhood and youth via the mechanism of socialisation. However, a counter explanation suggests that children and parents are similar not because of learning, or socialisation, but because certain behavioural predispositions have strong genetically heritable aspects (Bouchard and Loehlin, 2001). Such a view is not without controversy. Charney (2008), in response to Alford et al (2005) and their analysis of the genetic transmission of political attitudes, suggests that 'if true, it would require nothing less than a revision of our understanding of all of human history, much - if not most - of political science, sociology, anthropology, and psychology, as well as, perhaps, our understanding of what it means to be human.' Critics from both sides argue that the other has failed to properly understand the mechanisms involved in such heritability. For example Hatemi and McDermott (2012) suggest that 'many criticisms are developed as if responding to the view that political traits are simple Mendelian traits, governed by a single gene or a small set of genes', while noting that the actual genetic basis for behaviours is likely to be far more complicated.

Nevertheless, there is a growing consensus that many attitudes and behaviours are, to some extent, genetically heritable. For example social trust, (Sturgis et al, 2010; Oskarsson et al 2012), political efficacy (Klemmensen et al, 2012), political attitudes and ideologies (Alford et al 2005), as well as more general attitudes such as aggressiveness,

sociability, dependence, persistence and obsessiveness (Olson et al, 2001). The precise nature of these relationships remains unclear with most research suggesting that it is the most basic attitudes, such as a propensity to social trust which some have argued might plausibly have an evolutionary component, which then lead to similar behavioural and attitudinal outcomes.

The impact of genetic influences on similarities between parents and their offspring cannot be directly assessed here. It may therefore be reasonable to assume that at least some of the influence may be genetic rather than socialised. It is worth noting that as trust, neighbourhood attachment, and participation in local groups, will be examined at two time points, one in adolescence one in early adulthood, this may allow the question to be addressed to some extent. In other words, substantial changes between the two time points may indicate that the variable in question does not have a strong genetic basis. Clearly trust should be the most stable of these. Indeed, it should be noted that many of arguments made in favour of trust as a basic, and therefore stable, value apply equally to trust as having some genetic basis. The primary interest however is in the development of these attitudes and behaviours rather than their genesis and how they relate to one another. Therefore the inability to directly compare genetic versus socialised effects is not a serious problem given the focus of the study. Rather it offers a competing explanation for strong and stable effects.

3.4: Socialisation: neighbourhood attachment, participation in local groups and interpersonal trust

Two specific contexts have been identified as being of interest: the household and the neighbourhood. Given the arguments presented above it would be intuitive to suppose that there should be a strong socialising effect from parents to children for interpersonal trust but less so for formal participation in local groups and none at all for neighbourhood attachment.

However, as has already been discussed interpersonal trust should be related to both participation and neighbourhood attachment. It is therefore not unreasonable to expect these to have some relationships with one another. Parents who have high interpersonal trust should also be more likely to participate more and have higher levels of neighbourhood attachment and *vice versa*. The same relationship should also exist between young people and their parents. That is, it can be argued that children who live in households with positive interpersonal trust, neighbourhood attachment, and participation in local groups would also be likely to have higher levels of interpersonal trust, neighbourhood attachment, and participation in local groups would also be likely to have higher levels of interpersonal trust, neighbourhood attachment, and participation. For example, a socialised relationship may exist in terms of interpersonal trust but there may be little evidence of socialisation in terms of participation in local groups. If attitudinal socialisation to some extent explains the commonality between parents and children in terms of interpersonal trust, and to a lesser extent, neighbourhood attachment, there should also be evidence for socialisation in terms of participation in local groups because of these relationships, rather than a direct association between parent-child participation. There may also be evidence of a lagged relationship wherein adults adopt the behavioural norms of their parents.

As has been discussed the household is not the only important context within which individuals become socialised into certain values, attitudes and opinions. Previous research indicates that one of the key pathways to greater involvement is participation in voluntary or associational groups during adolescence. Kirlin (2003) reviewed the literature on the impact of extracurricular activities in youth on political and civic engagement and concluded that 'there is a strong correlation between adolescent extracurricular participation and adult political and civic behaviours' (Kirlin, 2003: 13). Elsewhere, Beck and Jennings (1982) demonstrate that involvement in extra-curricular activities in youth is better at predicting participation later in life than a range of other factors, such as parental civic orientations, and parental participation. Stolle and Hooghe (2004) also find some evidence of youth participation being a more important factor than parental participation. In other words these studies suggest that active engagement in youth is strongly related to participation in adulthood. That is, adults do not simply mimic their parents in terms of participation but may learn to be participatory in adolescence.

Figure 3.4.1 shows the potential way in which any of the dimensions of social capital may be related to itself at different points in time. The broad term social capital reflects this. The top section of this figure suggests that socialisation should work by parents influencing the behaviours and attitudes of their offspring which should then effect those

Figure 3.4.1: Parental influence



same people as adults. The lower section shows a more nuanced view insofar as it allows parental effects to have an impact directly in adulthood as well as via an effect in youth. This is the most basic approach to the socialised relationships that might be hypothesised. In other words it negates to address more complicated relationships that might exist *between* the three dimensions at different points in time.

Given this it is useful to consider why individuals might participate during youth in the first place. In terms of the discussion above regarding socialisation it is plausible to suggest that each of the models discussed has an impact upon the development of participation and attitudes associated with participation in civil society organizations. Under the accumulation model it is not unreasonable to suggest that parents and other significant figures have explicitly taught and emphasized certain values and attitudes that predispose young people to participate. It can be argued that as a child develops over the course of their lives parents will consciously and unconsciously instil certain values and attitudes into their children which will have an impact later in life. It has also been argued that it is reasonable to expect that adolescents will be more likely to participate when their parents participate. Theoretically it is possible to think of this as being close to the mobilisation model of participation proposed by Rosenstone and Hansen (1993). Briefly, parental involvement in local groups may stimulate participation in adolescents purely via the identification, or social learning, model. That is, adolescents observe their parents participating and copy this. It is also plausible to suggest that parental participation may lead to discussion of involvement within the household which

may lead children to adopt similar orientations to those of their parents. This may in turn lead them to being more predisposed to participation (Hess and Torney, 1967).

It may be reasonable to assume that this same logic should apply to neighbourhood attachment. That is, children and young people are likely to observe the interactions and behaviours of their parents and adopt similar behavioural norms. Moreover parents may have an impact on the social development of their children in more direct ways through determining which schools they attend and which early friendships develop. Once again this relationship may become weaker as children become more self-directing in terms of determining their own social relationships (Coleman, 1987). However, and importantly neighbourhood attachment is viewed here as being largely based on the kind of neighbourhood that people live in. That is, if the neighbourhood can be characterised as having a system of weak networks then individuals are far more likely to have higher attachment to the neighbourhood. Consequently, this should negate any existing personality predispositions and neighbourhood attachment is unlikely to be socialised.

More trusting individuals will be more likely to participate collectively (Messick et al, 1983). Two broad predictions regarding interpersonal trust have been outlined. The first suggested that trust might be a strategic attribute which individuals use to decide whether or not they should engage in any activity with others and is primarily based on a particularised notion of trust related to specific individuals (Hardin, 2002). The second suggests that trust is a largely stable moral characteristic developed early in life that is unlikely to be subject to change (Uslaner, 2002; Stolle and Hooghe, 2004). Research has suggested that either could be the case although recent longitudinal evidence has suggested that the latter is more likely (Sonderskov, 2011; Sturgis, et al, 2012). In this thesis these competing claims are examined. Of course a position closer to the middle may be correct. In other words individuals may be likely to have some inherent level of generalized trust developed early in childhood which may be affected by more proximate interactions and relationships.

Consequently more trusting individuals should be more likely to become involved in collective actions and there is an extent to which interpersonal trust is passed between parent and child. Given this a socialised propensity to engage in collective actions should be transmitted via the interpersonal trust pathway. This would be largely consistent with the finding of Stolle and Hooghe (2004) who found that interpersonal trust is likely to be

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Figure 3.4.2: The three domains of social capital: parent-child relationships

socialised from parent to child. Figure 3.4.2 shows the parent-child relationships that should be expected from the socialisation literature based on the three domains of social capital.

This suggests that, based on the social-cognitive domain model (or indeed the genetic approach) that there should be a strong relationship between parents and children in terms of interpersonal trust. Findings from the literature on civic-education suggest that the strongest relationship should occur between youth and adulthood in terms of participation and that any early parental effects are likely to be negated by the effects of friendship networks and schools, by adolescence. As was indicated above it is reasonable to expect no socialised effect in terms of neighbourhood attachment given that it has been conceptualized as being related to the external networks that exist within neighbourhoods rather than as a psychological predisposition. These are the most basic pathways into each of the three social capital dimensions in adulthood. Figure 3.4.3 shows the more complicated pathways that may exist and which will be amenable to examination.

This figure excludes relationships between parental participation and youth participation because these are not predicted to have any, or a large, effect on the later development of these for their offspring. The same argument is made for neighbourhood attachment in youth. In terms of this research generally indicates that more specific networks should play a role here. For instance schools and friendship networks may stimulate participation in youth (Dalton 1982; Gneiwosz et al, 2009; Jennings and Neimi, 1981;



Figure 3.4.3: Socialisation and the pathways into to social capital

Renshon, 1975). Essentially, this model shows the centrality of trust to the argument of the thesis. It is argued that because from, the perspective socialisation, trust should develop early in life and is viewed as being central to the other forms of participation that this should effectively condition participation and neighbourhood attachment later in life. It is notable that under this framework trust remains unaffected by other dimensions of social capital whereas in adulthood participation in local groups and neighbourhood attachment are thought to influence the other. Once again, it should be noted that from the mobilization perspective attachment should be more likely influence participation but in reality there is no reason that this should not be to some extent a reciprocal relationship. Participation in youth is thought to have an impact on participation in adulthood because it stimulates civic participatory norms in young people which should remain in adulthood. The relationship that trust has here is interesting: another way of thinking about this might be to imagine that adolescents are compelled to participate in some group. It may be likely that those who are more trusting would be expected to develop more civic attitudes because they would be more likely to view the engagement with others from a positive perspective.

3.5: Social class, education, gender and age

Sections 3.2 and 3.4 have discussed theories of socialisation and related these to the key concepts of participation in local groups, interpersonal trust and neighbourhood attachment. However, it is clear that many factors may account for key differences in each of these concepts. Particular attention will be given to the role that social class,

education, gender, and age might play in determining whether or not individuals will participate in the three dimension of social capital. It is important to note that in some instances individuals may have different relationships across the different domains of social capital discussed. For example, older people may be more likely to have higher levels of neighbourhood attachment but lower levels of participation in local groups relative to younger people. The more highly educated may be more trusting but less attached to their communities. As Verba et al (1993: 313-314) note regarding participation, 'citizens who are active and those who are not are often quite different in their demographic attributes, their economic needs, and the government benefits they receive.'

As much of the research into social capital has been conducted in the US many of the most important studies refer not to social class, but to socio-economic status which typically focuses on factors such as income, education and occupation (for more details see Verba and Nie, 1972; Verba et al, 1995). Research conducted in the UK by contrast, tends to disaggregate education from occupational status or social class. It can be argued that groups of individuals occupy different structural positions within society and that these positions constrain social opportunities and behaviour. People who occupy similar positions within this structure should be more similar to one another than those in different positions (Breen and Rottman, 1995). This, of course, does not preclude the importance of other structural constraints such as education. However, it does imply that the effects may be different. For example, a group of individuals who have received no post-16 education may be distributed across a range of social classes according to their employment position. Clearly these individuals would have different opportunities and resources in terms of their social class positon irrespective of the fact that they may have received similar levels of education.

Goldthorpe (2007: 103) has argued that class can be understood as being characterised by employment relations. The primary differentiation that can be made is between, employers, the self-employed, and workers. This broad categorisation effectively distinguishes between those who buy the labour of others, those who do not buy labour, and those who sell their labour. However, this final category comprises the vast proportion of the population in most modern societies. It is thus very broad implying that those who do sell their labour should be largely homogenous in terms of their opportunity structure. It has been argued that this classification should be disaggregated further and that this disaggregation should be predicated on the nature of the employment relations that individuals have. Goldthorpe (1982) has argued that these relations should be analysed with reference to the nature of the employment contracts that people have with their employers, based on the fact that these contracts represent 'responses to problems of work monitoring and human asset specificity' (Goldthorpe and Mills, 2008). It is suggested that individuals should be categorised as either having a 'labour' or 'service' relationship with their employers, and the latter being made up of manual or lower skilled non-manual workers, and the latter being composed of professional and managerial workers. Whereas the former may typically be employed via a basic contract under which labour is exchanged for a wage, the latter are offered greater benefits including more stable contracts and salary increments, because of the greater levels of trust and autonomy which they are afforded (Goldthorpe, 1982)⁵.

Research has demonstrated that such an approach to categorisation has a high degree of both criterion and construct validity (Goldthorpe and Mills, 2008). While the first of these points is important, insofar as it allows researchers to be confident that they are measuring what they think they are measuring (see Evans and Mills, 2000), it is the second which is of most interest here because it refers to the way in which social class relates to other outcomes, such as interpersonal trust, neighbourhood attachment, and participation in local groups. Li et al (2003) find, in their study of trends in membership across a range of organisations over the period 1972 to 1999 that social class strongly predicts participation in the kinds of civic organisation emphasised by Putnam (2000). In other words participation in this kind of activity was found to be more likely among the more advantaged classes. Hall (1999) presents similar findings when he analyses civic participation in Britain but notes that the findings for the participation in informal social activities were more mixed, with the less advantaged being more likely to involve close contacts with family and a small set of friends, and the being more likely to engage informally with a broader range of people. However, it is unclear how this should translate to neighbourhood attachment. Li et al (2005), using a definition of

⁵ Here a 7 point Goldthorpe class schema is used. However, given that a relatively high proportion of the sample have never worked, either because they are still in education or for other reasons, a separate category which measures this is included.
neighbourhood attachment very similar to the one used here, found that the less advantaged are more likely to have higher levels of attachment. Allan (1996) argues that working class people tend to have stronger situational networks in areas such as neighbourhoods. Research has also suggested that the higher classes also tend to have higher levels of trust (Li et al, 2005; Hall, 1999).

Education is also thought to condition a wide range of outcomes related to the three dimensions of social capital. A large amount of research exists into the relationship between education and different kinds of formal participation in the UK (Parry et al, 1992). Education is thought to play a role beyond class effects because of the different costs associated with different kinds of participation and engagement. These 'costs' are not simply costs in a material and economic sense, but are also related to the kinds resources, such as skills and even pro-civic attitudes that individuals may develop in high educational settings. Engagement in some kinds of activity may also require individuals to have a certain level of knowledge of the activity in question (Pattie et al, 2004). Many studies have also examined the role that civic education itself can have on participation although the findings have been mixed (Galston, 2001). Wolfinger and Rosenstone (1980) argued that as well as the material and employment based resources that are correlated with different educational levels attainment has three effects: it increases cognitive skills thereby reducing the costs involved in processing political information; education increases the likelihood that individuals will be enjoy the act of participating; and finally, by giving people an experience of dealing with bureaucratic relationships it will enable them to better manage these in the future. In effect these, relationships should be broadly similar to those of social class in terms of their relationships to participation, attachment, and trust, with the higher educated being broadly similar to the higher social classes. Indeed, these are the findings of Li et al (2005).

Returning to the discussion of participation in local groups, it is generally argued that this is driven by resources, such as time, money, skills, and attitudes (Verba and Nie, 1972), which should be expected to be held by the higher service classes and more highly educated. It is argued that disparities in levels of participation increase as the form of participation in question becomes more demanding. Pattie et al (2004) demonstrate that this is the case in the UK across a variety of activities. For example some activities may have a very low threshold for participation and therefore be more equally distributed

across class and educational groups. Other activities may require a prohibitive level of resources available only available to a small proportion of the population. However, there are many different kinds of neighbourhood social group and participation in some may be more demanding than participation in others. Given this caveat it is still reasonable to expect that the relationship described above should apply to formal participation in the neighbourhood. This should lead to more participation among those with more resources as they will have more *opportunities* to participate available to them.

There are also reasons to expect differences across both age and sex in terms of participation in local groups. Age may have a differential effect across the life course on participation. Young people, in their early 20s, are generally found to participate less than their older counterparts due their engagement in other leisure pursuits (De Hart and Dekker, 1999). Life events can also play an important role in determining not only participation but also the nature of that engagement. Here events such as marriage, during the early stages of which there may less time to participate, and having children, which can stimulate participation in the schools and the community and promote a perception that parents have a stake in the neighbourhood, may be important. As individuals become older there is reason to think that they might participate more although it is unclear whether this is an age or cohort effect. There is also evidence to suggest that for many forms of participation there is a decline after a certain age (Bhatti and Hansen, 2012). As was noted in the previous chapter people born in earlier generations may have a greater sense of attachment to communities. However they may participate differently to younger people. As Musick and Wilson (2008: 252-258) note middle aged people tend to volunteer less time to more groups than older people who prefer to concentrate more time in fewer groups. Most studies find that the oldest groups participate less and this is generally attributed to greater levels of ill health among older people. However, another argument would suggest that retired people have more free time than others and may be likely to spend more time engaging in the community as a result. Research on this is unclear and it is likely that it varies greatly by the particular type of participation in question.

In terms of neighbourhood attachment older people should be more socially embedded in their neighbourhoods than younger people. This is partially linked to the length of residence in a community which is likely to be higher among older people (Philipson et al 1998). It has also been argued that it is dependent on how social capital is measured. As Kaasa and Parts (2008) note, networks tend to decrease in size as people become older. In a sense then it seems that older people should become more reliant on local situational networks, such as the neighbourhood, as the size of their other networks decreases. In terms of interpersonal trust a positive relationship should exist following the logic of Whiteley (1999) who has argued that older people will have a greater propensity to trust as they grew up in an era when greater cooperation and support was the norm. It should be noted that it is difficult to disaggregate age, period, and cohort effects which makes this line of reasoning difficult to test (see van Ingen (2008) for a notable exception). Here it is worth noting that other studies support the finding that older people tend to have higher levels of social capital (Halman and Luijkx, 2006; van Oorschot, et al, 2006).

In their discussion of volunteering Musick and Wilson (2008) note that in the US women are marginally more likely to volunteer than men but that this relationship is the opposite in Europe. This is also shown to be the case by Pattie et al (2004) in the UK where they find that men are slightly more likely to be involved in organisational activities than women. However, it is plausible that neither of these studies can be generalized to participation in local groups. In their study of *Everyday Makers and Expert Citizens* Li and Marsh (2008) found that women were more likely to be the former. Given that this is a definition of participation which emphasises aspects of participation in the local community this might be a reasonable assumption. It should also be noted that the effect of having child can have greater impact on the participation of women than men because this may lead to them spending more time in their neighbourhood.

There has been little discussion of the differences between men and women in terms of social capital despite the fact that most studies include a variable which measures sex. One of the few studies which has examined this issue in depth found that, '[w]omen's 'social capital profile' is more strongly embedded in neighbourhood specific networks of informal sociability (Lowndes, 2004). Women are more likely than men to draw upon social capital as a resource for 'getting by'—for balancing the competing demands of home and work and for protecting their own and their families' health and well-being'. This is clearly in line with the way in which social capital is conceptualised for the

purposes of this thesis and it is therefore expected that women should have higher neighbourhood attachment than men. It will be useful to examine whether or not this has an impact on gender differences in participation in local groups. Gender differences in generalized trust have rarely been found and a significant relationship is not expected in the present research (Uslaner, 2009).

3.6: Socialisation: social class, education

There are reasons to expect that at least some aspects of social class and educational status might be related to events and contexts earlier in life. These can be related to Daltons (1982) social milieu pathway. Verba et al (2005) have argued that parental social status is related to offspring participation in adulthood. That is, parental social class to some extent determines the type of environment that a child grows up in. Indeed, higher household socio class will be correlated with a range of factors which might influence adult participation and neighbourhood attachment⁶. For instance, high social class and educational achievement is highly likely to influence offspring educational achievement and social class which are highly correlated with participation. The notion of social mobility in Britain in this sense might best be understood as intergenerational movement between classes. In other words what is the likelihood that children will grow up to have the same class position as their parents. Goldthorpe and Mills (2008) suggest that this pattern has been stable for decades, arguing that while absolute rates of change may give the impression of increasing mobility, relative rates suggest that this has not been the case. Given this it would be reasonable to expect young people to have levels of across the three dimensions of social capital because they are the same social class. In other words the same structural relationships which condition parental attachment, participation, and trust, should also condition theirs. A similar logic applies to education although it is worth noting that parental social class, status and education have been found to have differential effects on the educational attainment of children (Bukodi and Goldthorpe, 2012).

⁶ As was discussed, trust is less likely to be influenced by these variables and should also be related to the interpersonal trust of parents and their offspring.

If households with a high social class are generally found in areas which are characterised by high social class at the aggregate level it is reasonable to suppose that youths living in such areas will be more likely to participate based on each of these effects. There should be a positive relationship in terms of participation due to the shared social characteristics within households. Individuals in high status households should share a common set of characteristics and these are likely to influence social relationships in the neighbourhood as well as the types of participation engaged in by household members. It is also worth noting that high social class is likely to be highly correlated with living in an area which is characterised by less material disadvantage which will in turn influence the child's perceptions of the norms of their local community. This will be discussed in more depth for the remainder of this chapter.

3.7: The neighbourhood and the social environment

Chapter 2 described the ways in which neighbourhood attachment, participation in local groups, and interpersonal trust should be related to one another. The first sections of this chapter have discussed socialisation and identified some of the key sociodemographic variables that might have an impact on each, and the reasons that these relationships might differ across groups. This point is important when thinking about an interconnected system of relationships and is one of key questions of the thesis. For instance people who trust more tend to participate more (Putnam, 2000). However, it has also been noted that social capital may not work in the same way across individuals. For example some forms of social capital may be better at producing participatory behaviour than others and some may be more effective at inculcating norms of reciprocity and trust (Portes and Landolt, 1996). Higher status individuals may have less need to rely on social support mechanisms within their neighbourhoods but may derive satisfaction from instrumental forms of participation in local groups (Forrest and Kearns, 2001). By contrast lower class individuals may have more need to rely on social support mechanisms within their neighbourhood but are likely to have fewer opportunities and resources to participate in instrumental groups (Forrest and Kearns, 2001). Lower social class individuals, who have high levels of neighbourhood attachment, should be relatively less likely than higher social class individuals with similar levels of neighbourhood attachment, to participate in instrumental groups.

The reasons for this are likely to be partially determined by individual characteristics which have been discussed. For instance some people may be more trusting than others because they grew up in households characterised by a high level of interpersonal trust. Individuals may also differ according to their social environments. For example, people who live in an environment which is characterised by high levels of disadvantage *may* have fewer opportunities to participate in local groups because there are fewer such groups located in disadvantaged communities. However, it seems clear that part of the difference will arise out of the different propensity of different people to participate (Williams, 2003). Individuals who live in small geographically isolated communities may have higher levels of neighbourhood attachment simply because they have fewer opportunities to engage socially with others outside of the local area. In this way engagement in the community can be thought of as being structured by aspects of the community itself.

The next section will discuss the effect that the social environment might have on the individuals living within a neighbourhood and relate this to the discussion above. Close attention will be paid to the way in which social context might play a role in socialisation. There will also be some further discussion concerning the role of the household as a context. However, the main focus, in both youth and adulthood, will be on the neighbourhood.

3.8: The social environment and social context

Following Huckfeldt (1986:13), '[c]ontextual effects are environmental influences that arise through social interaction within the environment, and it is through the social interaction patterns that social contexts are created.' The social context may therefore be thought of as part of a set of more general environmental influences that structure the social environment within which people live. Other environmental characteristics may also have an influence on the social context as they are likely to condition the nature of the social relationships that occur within them. Given this there should be an impact of neighbourhood characteristics on neighbourhood attachment. Indeed, the two concepts are closely related although they are not the same. As has already discussed neighbourhood attachment is concerned with the value inherent in places characterised by deep networks of weak ties. The nature of the networks within an area is determined to a large extent by social context. But, and as Huckfeldt (1986: 2) also makes clear a neighbourhood should not be equated with 'a cohesive community of friends and acquaintances.' Rather the neighbourhood, and the neighbourhood social context is 'characterised by the composition of the people who live in the neighbourhood.' The social context in this sense refers to the overall social milieu of the neighbourhood and this may or may not be conducive to social engagement (Agnew, 1987; 2007). Understood in this way participation in local groups and social engagement in the neighbourhood occurs due to individual characteristics, such as education, which are then influenced by contextual characteristics common to all individuals.

There are therefore likely to be certain aggregate level characteristics of a neighbourhood that will help or hinder the development of norms of behaviour related to participation within the community and this can be linked to the notion that there will be an impact on the types of networks that develop within a specific community or neighbourhood (Campbell, 2006; Huckfeldt, 1979; Swaroop and Morenoff, 2006). In linking the nature of local social network development to specific contextual conditions it follows that the level of neighbourhood attachment will also be related to neighbourhood characteristics and context. This can clearly be related Granovetter's (1973) notion of weak social network ties which was described above and forms a central part of the conceptualisation of neighbourhood which inhibit the development of these ties and which thereby inhibit the development of neighbourhood attachment.

3.9: Deprivation, residential concentration and the social environment

The relationship between neighbourhood deprivation and trust, neighbourhood attachment, and participation is complex. The most common argument in the literature would suggest that deprivation is associated with higher levels of social disorganisation which in turn leads to lower levels of social capital on an aggregate level through an impact on social networks (Kawachi et al, 1999). However, it has also been argued that people in deprived neighbourhoods should be more likely to develop stronger social ties

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with their neighbours and to rely on each other more than in those in more affluent places. Most analysis suggests the former is more likely. For instance, Becares et al (2011) find that social cohesion, which is similar to the measure of neighbourhood attachment here, is negatively related to deprivation. Bailey et al (2012) also support this, finding deprivation has a much larger impact than population turnover and especially neighbourhood social mix. It is notable that both studies suggested deprivation plays a much more important role than increasing ethnic heterogeneity, which Putnam (2007) has claimed has claimed has a negative impact in both the US and Europe. It could also be argued that deprivation is likely to have some impact on interpersonal trust within communities. From the perspective of Putnam (2000) higher levels of social disorganisation should inhibit the development of social networks and the development of collective civic groups which should in turn inhibit the formation of interpersonal trust. Indeed, Sampson et al (1997) argue that deprivation can act as a barrier to mutual trust between neighbours and a willingness to become engaged for the common good. However, if trust is socialised early in life, or indeed has a strong genetically heritable component, individual level trust should be largely unaffected.

In terms of participation in the local community it is likely that deprived neighbourhoods will have fewer local groups due to the cost requirements in terms of facilities, skills, and money, that are likely to be required in order to create them (Zimmerman, 2000). Deprivation is also likely to be negatively related to participation as more unstable neighbourhoods are likely to make it less likely that strong social networks will develop (Sampson et al, 2002). Given the mobilisation hypothesis this should also lead to lower levels of participation. However, this may not be the case in some areas. For instance highly deprived areas should certainly have more need for the development of neighbourhood groups and it is plausible to suggest that in some areas residents may respond to this. That is, participation is likely to be contingent on the need to participate as well as having the ability to do so. In other words relatively more people in affluent areas may possess the particular resources needed to form a neighbourhood group. However there may be no need to do so. Conversely in a more deprived area there may be fewer people with the necessary skills to organise such a group but a much more pressing need to do so. Other things being equal this would suggest a relationship between participation and deprivation where low levels of participation are observed at the extremes of deprivation and affluence.

Neighbourhood concentration, which differentiates rural through to metropolitan places, should have a strong relationship with the three domains of social capital, as more rural areas should be more socially homogenous and stable than the most urban types of area (Beggs et al, 1996). In one of the earliest articles on the subject Wirth (1938) identifies two key effects that arise out of living in urban environments. The first concerns population size and the second population density. In many instances of course one is a function of the other, implying that places with bigger populations also have a higher degree of population density. In terms of population size he notes that, an '[i]ncrease in the number of inhabitants of a community beyond a few hundred is bound to limit the possibility of each member of the community knowing all the others personally' (Wirth, 1938: 11). When coupled with a high population density this limits the proportion of mutual acquaintances that individuals may have within what might reasonably be considered neighbourhoods. Consequently, the number of cross-cutting weak situational ties that will exist must necessarily be less dense than in smaller communities. Following this logic living in larger, denser, communities should have a negative impact on neighbourhood attachment. This has been a consistent finding in the research. As Woolever (1992: 111) notes, '[d]ensity, one of the major components of urban life..., appears to reduce feelings of neighbourhood attachment by residents'.

Wirth (1938) is also careful to note the work of Durkheim (1897) in discussing how, and why, individuals may become socially disconnected in urban areas. *Anomie*, introduced by Durkheim (1898) and later adapted by Merton (1938), originally referred to the disjuncture that occurs when societal and individual social norms and goals become mismatched. As he states,

'The superficiality, the anonymity, and the transitory character of urban-social relations make intelligible, also, the sophistication and the rationality generally ascribed to city-dwellers. Our acquaintances tend to stand in a relationship of utility to us in the sense that the role which each one plays in our life is overwhelmingly regarded as a means for the achievement of our own ends. Whereas, therefore, the individual gains, on the one hand, a certain degree of emancipation or freedom from the personal and emotional controls of intimate groups, he loses, on the other hand, the spontaneous self-expression, the

morale, and the sense of participation that comes with living in an integrated society' (Wirth, 1938: 12-13).

However, the idea that living in an urban area may increase feelings of social alienation was examined and found to be unsupported by Fischer (1973; 1976). He operationalized the concept as being composed of feelings of powerlessness and social isolation and tested whether or not these were more prevalent in urban, as opposed to rural, areas. Fischer (1973) argued that while he did find evidence of social distrust in more urban environments that this was not a result of *anomie*, but rather social structure. He also argued that while 'urbanism may not isolate individuals from social contact, it may incline them to shift that contact away from the locality' (Fischer, 1973: 324). This latter finding is clearly important for the discussion and focus on the neighbourhood. Later researchers have found evidence for anomie, once again characterised as feelings of powerlessness. Geis and Ross (1998) suggest that social disorder can have an impact on this and go on to suggest that this can be attributed to some extent to a lack of social ties with neighbours. They note that it is not population size or deprivation as such which contribute to these feelings of powerlessness. Rather, because social disorder is related to population size and deprivation these neighbourhoods tend to have higher levels of powerlessness and social isolation.

Therefore, individuals living in smaller areas from a residential perspective should also have relatively higher participation and social capital related to the neighbourhood. These expectations are consistent with the findings of Woolever (1992). It is also worth noting that she did not find evidence that living in heterogeneous areas had an impact on feelings of attachment or social interaction. It is not unreasonable to state that individuals in more metropolitan areas would have more *opportunities* to become involved outside of the particularly place which they live in. For example living in a city is likely to afford greater participatory opportunities than living in a relatively isolated rural community. In the latter the locus of an individuals' social life is much more likely to exist within the neighbourhood in which they live. It would be reasonable to expect smaller communities to have relatively denser networks of weak ties because there are more opportunities to meet people within the community. That, is the smaller the community the more likely it is that individuals who do not know one another will have mutual acquaintances. Given this, and given the greater feelings of attachment that living in such small communities should render it is reasonable to expect that participation in local groups should also be higher.

Elsewhere, it has been argued that residential turnover should also play a role in undermining social capital because it should necessarily reduce formation of social networks (Livingston et al, 2010), and in particular the weak ties emphasised by Granovetter (1973). Indeed Sampson (1988) found that interpersonal ties within neighbourhoods should necessarily be inhibited by higher levels of residential instability and noted that this also has an impact on the propensity of individuals to engage in the in their local communities. From the perspective of trust it is clear that from a socialisation perspective there should be no relationship, whereas from Putnam's (2000) social capital perspective there should be a significant relationship with trust.

3.10: The social environment and socialisation in youth

Clearly the impact of living in certain types of area and community can have an impact on social engagement in the neighbourhood. Other things being equal it might be expected that these relationships would hold for younger people. However, there may be reasons to believe that young people have a different relationship with their local community than older people. Specifically, it is argued that there is an extent to which a young person's perceptions of their local community, and the behavioural norms that they adopt in relation to it, are influenced by those of their parents. For example, from an early age the choices of parents in relation to schools and friendship formation play a determining role in early childhood social interactions, insofar as they influence with whom the child interacts (Dalton 1982; Gneiwosz et al, 2009; Jennings and Neimi, 1981; Renshon, 1975). This influence may become weaker as a child becomes more autonomous, however it can be argued that the nature of these interactions will affect the formation of the more autonomous relational decisions that a child makes beyond direct parental influences. In the same way, parents who do not engage in their local community, either in terms of formal social groups or informal social contacts, would be less likely pass these things onto the children via Daltons (1982) attitudinal pathway.

These arguments follow the standard logic of socialisation discussed above but place them within a framework in which contextual effects play a role. That is, parents who live in an area characterised by high urbanity and deprivation may be less inclined than they would otherwise be to engage in their local community. This is then transferred to their children via a process of social learning. This may work in in numerous ways: for instance Daltons (1982) attitudinal pathway is likely to act as the major route of transference for measures like interpersonal trust while the social milieu pathway should have an influence on participation in local groups, and interpersonal relationships within the community. Following on from this the arguments of Verba et al (2005) concerning the transference of characteristics such as social class and education across generations which are also likely to play a role in determining how people relate to the three dimensions of social capital. This is made even more complicated by the fact that that different outcomes are likely to be determined in different ways by these processes.

Thinking about this slightly differently: take two people with parents of the same social status, one of whom lives in a deprived area and the second of whom does not. Everything else being equal the young person living in the deprived area should have lower interpersonal trust because of a direct effect on them of living in this kind of area. This effect may be mediated through parental interpersonal trust, which is also likely to be weaker amongst people living in these areas. Other things being equal the young person should also have lower interpersonal trust than their parents. By contrast the young person living in a relatively affluent area might have higher interpersonal trust than their parents because of the cumulative effect of both socialisation and living in an environment conducive to higher levels of interpersonal trust. This is not dissimilar to a period-cohort approach to the value change. That is, using an approach based on socialisation alone it is difficult to explain inter-generational value change within families, however, when external effects are allowed to play a role this becomes much more understandable.

In the above discussion two contexts within which individuals exist and children are likely to become socialised have been identified. Specifically neighbourhood and household effects have been discussed. It has also been argued that neighbourhood context will have an impact upon the norms, attitudes and behaviours of adolescents, but in a less direct way than on parents. It has been suggested that while there may plausibly be a direct effect of community context upon adolescents there is an extent to which this might be mediated by the household. In other words, children may be less likely than their parents to engage in conversations with others in their neighbourhood, and when they do, these relationships will be of a different nature to those of their parents. However, it is more likely that they will engage in such conversations with their parents and that, over and above this, they will also have many opportunities to observe the community relationships and behaviours of their parents. Books and Prysby (1991), in their review of the literature, suggest that individuals are influenced by their social milieux directly through observation of the events and interactions of people within their communities (see also Tunstall et al, 2000).

Given this, there is an expectation that neighbourhood context will influence parental participation and it is argued that this is an indirect way of understanding how neighbourhood characteristics might affect child attitudes and behaviours. In this way it is suggested that community context may be mediated through the household to young people. For example children living in households in deprived neighbourhoods characterised by high social disorganisation might be expected to display less inclination to engage in informal and formal engagement and participation in adulthood. This is driven by the fact that parents living in these types of neighbourhood would themselves be less likely to participate and because there would be a direct effect, particularly in relation to the type of social relationships the child develops in youth. Crucially these effects should remain even when adult offspring move to a neighbourhood context with different neighbourhood level characteristics.

3.11: Adolescent social relationships: neighbourhood and household context

An argument can be made for the importance of community context in the formation and nature of neighbourhood based social relationships for adults. The relationship is less clear for adolescents. It has already been noted that the school may be an important context within which social relationships are formed (Campbell, 2006: ch.7; Hess and Torney, 1967; Jennings and Niemi, 1968; Jennings and Niemi, 1974; Jennings and Niemi, 1981). This context is likely to be different, although not unrelated to the community, or communities, from which the children are drawn. For example different schools may have different education ethos' which may instil different norms and attitudes in the children that attend them. The same argument might be made for different types of religious and secular schools, as well as private schools, which may not reflect many aggregate variables, such as ethnic or income diversity, of the neighbourhoods and communities from which the children are drawn. Clearly social relationships of children are likely to be formed within schools. However, it can also be argued that the household should have some role.

This is not to say that social relationships are not important in childhood when thinking about participation. However, the social relationship of interest is likely to be formed in a different way to that of adults. In the first instance it can be argued that parents have a direct or indirect impact upon the type of school that their child attends. That is, greater affluence is likely to give parents more options in selecting the type of school their child attends. Religion will obviously be a factor influencing the decisions of many, and in some cases higher status parents will be able to choose a school which has a similar ethos to their own. Moreover, it is likely that parents will have some influence in the development of the social relationships of their offspring, particularly for young children. As has already been noted the household itself is likely to instil children with certain norms, values, and behaviours, either directly via active promotion through conversation, or indirectly through observation. Consequently it is important to take into account both parental participation and the prevalent attitudes towards the neighbourhood within the household.

Given that outcomes such as interpersonal trust can be argued to be both theoretically and empirically related to family context (Bowlby, 1975; Erikson, 1963; Renshon, 1975; Uslaner, 2001; Uslaner 2002) it is not unreasonable to expect such a relationship to exist. Moreover there is a long literature which suggests that political interest may be passed to some extent from parent to child and it is reasonable to suggest that community values may also be transferred in a similar way. That is, parents who have strong neighbourhood relationships may also instil pro-social values into their children. Once again this may occur through parent-child interaction within the household and observations of parental behaviour. The extent to which this is likely to influence neighbourhood attachment is debateable. From the perspective developed throughout attachment is seen as contingent on the particular configuration of weak networks that exist within the neighbourhood and should therefore be entirely neighbourhood specific. However, it was pointed out that an aspect of this is attitudinal and this may be passed over to children, at least in the short term. That is, there is likely to be some degree of positive or negative enforcement of certain behaviours and attitudes within the household which will influence child development. This relationship may not be fully mediated as adolescents do reside within the community itself. This might lead to a relationship such as that represented in figure 3.11.1.



Figure 3.11.1: Relationship between community and household context on offspring norms and behaviours

There have been few studies into the way in which neighbourhood characteristics might affect children and even fewer about how parents might mediate this. One exception is Galster and Santiago (2006), who asked parents living in low income areas of Denver, Colorado, if they perceived that neighbourhoods affected their children, and found that certain groups did believe this to be the case. A key finding of the study was that many parents believed they could 'buffer' against any negative effects of the neighbourhood, which fits into the mediating argument discussed above. It is worth noting that evidence for this has also been found in qualitative work elsewhere (see for example, Furstenburg 1993; Jarrett, 1997). Once again it is not argued that this is the only important context for socialisation, but that from the theoretical perspective developed above it is of justifiable interest.

It is also worth considering *how* family context might influence youth participation. It has been suggested above that individual learning is likely to be the primary socialising mechanism but it is important to consider precisely what is transferred via socialisation. Studies have suggested that strong household effects do exist for certain actions (Verba et al, 2005; Dalton, 1982; Jennings et al, 2009). It is argued that parental social context will have an impact on parental social relationships and that this should have some impact on parents likelihood of participating in the neighbourhood. It is reasonable to argue that children learn certain values and attitudes from their parents related to social relationship development and interpersonal trust. However, and once again it is worth reiterating that most research indicates that children are likely to gain participatory norms from their schools and friendship networks. This is not to say that the participatory habits of parents will have no impact on their offspring and it is plausible that younger children will necessarily participate with their parents. However, as young people move into adolescence these effects are likely to deteriorate.

3.12: From adolescence to adulthood

It has been argued that community context is likely to be an important factor in the development of community social networks among adults. Following this it has been argued that involvement in these community social networks is likely to stimulate participation. That is, it is reasonable to argue that involvement in community social networks is likely to stimulate higher participation, and when an individual is not involved in these networks they will be relatively less likely to display attitudes associated with participation. Secondly, it has been argued that that the nature of the friendship networks and general social participation of adolescents is likely to be related, at least in part, to community context, although this will be mediated by parental attitudes and behaviours. Therefore the final argument to make is to suggest a relationship between these and the nature of adolescent social networks and general participation, and therefore participation in civil society organisations in adulthood.

There have been relatively few studies which have sought to demonstrate a relationship between community context in adolescence and participation later in life. Indeed, the majority of those studies which have been undertaken have been concerned with household and school context, and moreover, have mainly been focused on political participation and especially voting. One notable exception is Campbell (2006), where he focused on, first the role of the heterogeneity of neighbourhoods in childhood and how this has an impact upon childhood engagement. (ch.5). In particular he was interested in political, ethnic, income, and racial heterogeneity, on the basis that civic participation, or voluntarism, would be high in homogeneous communities. This hypothesis is consistent with his findings. Within this model he also takes into account parental voluntarism and education, finding strong effects for both (2006: 217). In chapter 7 he goes on to show that high-school voluntarism is related to voluntarism later in life when controlling for such things as parental education, television viewing and political interest (2006: 137). However, this second model, which links adolescent behaviours and attitudes to adulthood, does not include any of the measures of community context which have been identified previously as being important. It is therefore plausible to suggest that participation adolescence may not be a mediating factor and that the real cause of participation in adulthood is the social context, outside of the school, within which the child grew up.

From the perspective of this thesis it can be argued that community context in youth will have an impact on the three dimensions of social capital in adulthood based on the extent to which parental effects can be said to be affected by them and the extent to which they are likely to be socialised. These relationships are represented in figure 3.12.1. This figure integrates shows how context would be thought to have an impact on the three domains of social capital from the social capital (i.e. Putnam (2000)) perspective. Here it can be seen that the only pathway predicted under this framework is via participation because participation is thought to be both predicted in terms of social context and prior behaviours and attitudes. Both trust and attachment under this framework should be affected by contemporary effects and therefore no relationship is specified between trust and attachment in youth on the same dimensions later in life. It is worth noting that the relationship between context and both trust and neighbourhood attachment are thought to be mediated to some extent by the household, or parents, in this framework. The only difference between this and a socialisation perspective is that neighbourhood context should have no effect on parental or youth trust. Instead trust in adulthood should strongly be predicted by parental trust via trust in youth or adolescence. This figure is illustrative and will not be examined directly as such. However, the findings throughout each of the empirical chapters should provide evidence as to whether or not it is plausible.

Figure 3.12.1: The effect of neighbourhood context in youth on the three dimensions of social capital: Putnam's perspective



3.13: Summary

In chapter 2 the aim was to discuss the key concepts used in this research and describe how and why they are related to one another. The aim of this chapter has been to outline *why* people may be more or less likely to be engaged, participatory, and trusting and to address the fundamental claim of the thesis that different dimensions of social capital should be related to different contexts and socialising forces at different stages. As was indicated the arguments within the literature on social capital can be tautological at times: individuals are participatory because they are trusting, and trusting because they are participatory. The aim of chapter 3 has been to outline some of the key ways in which other approaches deal with this problem. The primary theory which has been discussed is socialisation. The reasons for this are twofold: the mechanisms thought to be influential within the socialisation literature often lead to competing hypotheses with the social capital literature. This was discussed to some extent in chapter 2 in terms of 90 the different conceptions of interpersonal trust. This is of course interesting in itself. It can also be argued that the fact that social capital, or at least Putnam (2000) and Coleman's (1990) conception of it, has rarely been assessed from a socialisation perspective is an important omission.

In section 3.2 the theory of socialisation was introduced more fully. It was noted that the fundamental aim of socialisation research is to understand at which point certain contexts have an influence on the development of attitudes and behaviours. Thinking about socialisation in this way allows these influences to be considered over the lifecourse as it implies that any context which impacts underlying attitudes and behaviours is a form of socialisation. However, most studies and researchers agree people are most subject to socialising effects when they are pre-adult. It was noted that early perspectives tended to view early socialisation within the household as being most influential. However, by mid-1960s and through to the early 1980s researchers such as Hess and Torney (1968) and Jennings and Niemi (1968; 1974; 1981) had begun to recognise the importance of contexts outside of the household such as schools. Dalton (1982) attempted to redress the balance to some extent and argued that households may be an important attitudinal pathway whereas schools may represent an important behavioural pathway. More recently, Verba et al (2005) and Jennings et al (2009) have again reemphasised the importance of the household in understanding the transmission of social status, which is relatively stable across generations.

Section 3.3 provided a counter-argument to theories of socialisation indicating that an increasing body of literature has suggested that various genetically heritable traits may play a role in determining a range of social attitudes and behaviours. This is based on the fact that certain behavioural predispositions have genetically heritable aspects (Bouchard and Loehlin, 2001). Because these behavioural predispositions may impact how an individual views and engages with the social world they may grow up to be similar to their parents across a range of social attitudes and behaviours. It is argued that across the key dimensions of social capital assessed in the thesis, interpersonal trust is the most likely to be genetically heritable (Sturgis et al, 2010; Oskarsson et al 2012). However, it should be noted that these arguments remain controversial. It is important to note that because genetic and parental socialisation in early childhood would be indistinguishable from one another heritability cannot be ruled out in this research.

Section 3.4 related the socialisation arguments back to the key variables of trust, participation and neighbourhood attachment. It was noted that there is evidence to suggest that trust should be socialised within the household, and to be similar to parental trust, but that participation and neighbourhood attachment should be socialised outside of the household. However, it was emphasised that because interpersonal trust is theoretically related to both neighbourhood attachment and participation in local groups that the trust pathway between parents and their offspring may provide an indirect mechanism into participation in particular later in life. It was also suggested in this section that participation in adulthood will have a strong relationship with participation in youth, but not with parental participation. However, this would not rule out some level of parental influence via the attitudinal pathway and it is plausible that both may play a mutually reinforcing role.

In section 3.5 some of the key socio-demographic characteristics thought to play a role in conditioning participation, attachment and trust were discussed. Particular attention was given to social class because of the different role that this might have in determining how people relate to the three dimensions of social capital. It was argued that individuals with a higher social class should be more likely to engage in participation in local groups because they are likely to possess more of the resources, particularly in terms of skills, required to do so. By contrast individuals from the lower social classes should have higher levels of neighbourhood attachment because they are more likely to rely on the sorts of social support located within the kinds of situational networks characterised by this dimension of social capital. Social trust has generally been shown to be higher among the more advantaged. From the perspective of Putnam (2000) this may be because they are more likely to engage in the kinds of collective civic activities that generate trust. It was argued that education should follow very similar patterns to social in relation to the three dimensions of social capital.

Turning to age and sex it was argued that younger people should be less likely participate in local groups, have high levels of neighbourhood attachment, or trust than their older counterparts. It is worth noting that the relationship between age and participation may change as people move into old age as physical limitations may begin to have an impact on a persons' ability to be involved. It was noted that evidence for gender differences tends to be limited. Generally speaking women tend to participate less than men but these differences may not exist when the focus is on purely local groups. There is evidence to suggest that women should have higher levels of neighbourhood attachment as women are more likely to rely on informal social support mechanisms (Lowndes, 2004). It was also noted that there is little evidence to suggest any differences between men and women in terms of interpersonal trust.

Section 3.6 discussed both education and social class from the perspective of socialisation. It was noted that a great deal of research indicates that offspring are likely to have similar social and educational characteristics as their parents. It was argued that if this is the case, offspring may also adopt similar characteristics to their parents in terms of the three dimensions of social capital, because it is these characteristics which condition, to some extent, social behaviour.

Following this, sections 3.7 to 3.10 discuss the relationship between social context, environment and social behaviour. Section 3.7 summarised the way in which the discussions up to this point may be placed into the context of the neighbourhood. Section 3.8 followed this by outlining the difference between the social environment and social context. It was noted that broadly speaking social context refers to the particular sets of social networks that define some environment. These networks are influenced by other characteristics of the environment and it is plausible that certain factors will inhibit or encourage the development of social networks within the neighbourhood.

Section 3.9 argued developed this argument further suggesting that two key characteristics of the neighbourhood environment are relative deprivation and residential concentration. It was noted that deprivation is likely to have a complex relationship with the three dimensions of social capital. Deprived areas are likely to be more socially disorganised that more affluent neighbourhoods and it is suggested that this can inhibit the development of social networks, and in particular the kinds of weak social ties that might lead to higher levels of neighbourhood attachment. Secondly it was suggested that deprived areas would be more likely to be lacking in terms of facilities, skills, and money that are be required for the development of local civic organisations. Moreover the reduction in mobilising opportunities due to reduced neighbourhood attachment should have an impact on the ability of local groups to recruit members. From the perspective of Putnam (2000) this should then reduce interpersonal trust, although it was noted that the socialisation perspective of Uslaner (2002) would argue

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that individual level trust should be largely unaffected. Residential concentration was argued to work in a different way. Living in a relatively small residential area should enhance the development of social networks within the community simply because people are more likely to know people from other strong networks. In other words the social networks are likely to be more concentrated, or small, but less diffuse. It was noted that residential instability should also have an impact on all three dimensions insofar as this should reduce the number of weak network ties in any given neighbourhood.

Sections 3.10 and 3.11 discussed how and why social context might influence the three dimensions of social capital should in youth. It is argued that a primary mechanism might be the household as a mediating pathway. That is parents who live in unstable communities might attempt to protect their children more. It is argued that children will also observe the behaviours of their parents in relation to their communities and that this might have some effect on them via social learning approaches to development. Finally, section 3.12 discussed which of these effects might carry through to adulthood via mechanisms of socialisation. It was suggested that from the perspective of trust as a moral value that this should be largely unaffected by social context but strongly socialised. From the perspective of trust as a strategic attribute, as advocated by Putnam (2000), it is argued that this should be largely unaffected by socialised effects but should be affected by contemporary effects in terms of both the neighbourhood and mediated by the household in youth. In reality from this perspective it may be plausible that trust in youth will have an impact on trust in adulthood but that this will still be subject to change according to the later effects in adulthood, such as social context. Under both frameworks neighbourhood attachment is argued to have no socialised effect although and to be affected by social context.

4: The key questions

As was noted at the outset, this research has the fundamental aim of assessing the extent to which different contexts can have an impact on the development of the different dimensions of social capital over the life-course. It does so by developing an understanding of the dynamics that exist between interpersonal trust, neighbourhood attachment, and participation in local groups. It was noted in the introductory section that very few studies have sought to integrate findings from the socialisation literature into the literature on social capital. This is surprising given that the two literatures often seek to address the development of similar behaviours and social norms. One of the key themes which has been developed has been the notion that trust is integral to understanding why people participate and to social capital more generally. The literature on social capital (at least from Putnam's (2000) perspective) suggests that trust should be generated by participation in social groups, and in particular those which can be characterised as being civic in nature. However, if trust is viewed from the perspective of social learning theory as a moral value then it should be a fairly stable psychological characteristic that is not subject to a great deal of change (Uslaner, 2002)⁷.

The difference stems from a fundamentally different view about the way in which trust operates. From the former perspective trust is generated through social networks insofar as they allow individuals to intuit the relative trustworthiness of others within the network. However, these networks are able to increase trust because they provide a mechanism by which sanctions can be levied on non-conformers ensuring that individuals within the network adopt norms of reciprocity and trust. It is argued that places rich in networks characterised by high levels of reciprocity and trust should encourage the development of further trust because individuals living in such communities will benefit from positive externalities of this. For example, and as Putnam

⁷ As was discussed above there is some evidence that at last part of this apparent effect has a genetic, rather than a socialised, basis. This will not have a substantive impact on the interpretation of the findings presented here as the primary concern is on the nature of the relationships between neighbourhood attachment, participation, and trust. How the latter develops should not change this. For example, if trusting young people are shown to be more participatory adults it does not matter whether the basis of trust is socialised or genetic.

(2007) argues, a neighbourhood rich in social capital should allow individuals to be confident that they will be protected from crime and social disorder more generally even if they rarely engage with others in the community. By contrast, the moral approach to trust would suggest that individuals who engage in social networks would already possess higher levels of trust and that much of the cross-sectional evidence suffers from an endogeneity bias. Indeed recent research has indicated that this may be the case by employing longitudinal designs which can account for such concerns (Sonderskov, 2011; Sturgis et al 2012).

Similar arguments can be made for and against the other dimensions of social capital. Participation in local groups has been conceptualised as engagement in some kind of formal group within the neighbourhood and can be contrasted with neighbourhood attachment insofar as the latter is effectively a measure of the kinds of weak networks that characterise how many cross-cutting ties there are on the level of the community (Granovetter, 1973). The latter should therefore be generated at the level of the community rather than the individual. Given this, high or low neighbourhood attachment should be highly context specific. That is, individual predispositions, or socialised effects, are unlikely to influence neighbourhood attachment as much as contemporary community contexts. Participation is likely to be some mix of the two. There are good reasons to suppose that participatory norms can be socialised into individuals at a relatively early age and that people who live in areas with very low rates of participation may still become engaged in groups (Janoski and Wilson, 1995; see also Campbell, 2006). However, this may not be true of all forms of participation: for instance voting is a largely individual activity which should be very dependent on individual norms and values. By contrast, an individual who wishes to keep their neighbourhood tidy would be unlikely to be able to do so unless they are joined by other like-minded people. The absence of participatory norms within the community may therefore preclude this kind of participation, and the hypothetical participant may participate outside of the neighbourhood.

Most interesting is how the three dimensions relate to one another across time. As has already been argued two basic hypotheses can be developed for trust. The first implies it is a function of networks / participation. The second suggests that it is intrinsically moral in character and developed at a relatively early stage in life. If the first is true then both participation in local groups and neighbourhood attachment should predict trust. If the latter is true then trust should predict participation in local groups because more trusting individuals should be more likely to engage in groups characterised by problems of collective action. It should also predict neighbourhood attachment because more trusting individuals should be more open to the kinds of informal social interaction which characterise weak situational networks.

From a mobilisation perspective neighbourhood attachment should predict participation because knowledge about neighbourhood groups should spread more easily through the communities with many weak situational networks (Rosenstone and Hansen, 1993). It is also important that individuals who may wish to participate would be more likely to know of other people (via strong or weak ties) who participate in communities characterised by weak situational networks. In short it has also been shown that individuals who identify with their neighbours and community should be more willing to engage in efforts to improve it (Minkler and Wallerstein, 2003). It is also likely that participation in local groups should have the function of increasing the number of ties, both weak and strong, that an individual has within their neighbourhood.

Chapter 3 in particular focused on the role that socialisation should play in determining when the three dimensions of participation develop. It was argued that trust should develop early and may even be genetic in origin. In either case trust in offspring will be strongly related to the trust of parents. If trust works in this way individuals who grow up in more trusting households should be more likely to have higher levels of interpersonal trust in adulthood (Uslaner, 2002; 2008; Stolle and Hooghe, 2004). By contrast there should be little effect of socialisation in terms of neighbourhood attachment because it is believed to be contingent on more proximal factors. Participation in local groups should be unrelated to parental participation but predicted by participation in youth because the development of norms related to participation happen at a later stage, in schools and amongst peers, than more basic moral values (see Kirlin (2003) for a summary of this research).

This leads to one of the key contributions of the thesis. If trust is developed early in life this may be predictive of both participation and to some extent attachment later. The effect on participation is intuitive and is because more trusting individuals should participate more based on theories of collective action and the relationship that trust and reciprocity have with them (Kahan, 2003; Purdue, 2001). In terms of neighbourhood attachment the argument is more nuanced. It has already been argued that attachment should be based on largely contemporary effects concerning the weak situational ties present in the neighbourhood (Granovetter, 1973). However, after accounting for this effect it is reasonable to argue that some individuals should be more predisposed to the effects of living in such communities than others. For example it would be unreasonable to expect all individuals living in the same community to have the same level of attachment. Rather they should simply be expected to be more similar to one another than with people from outside of their communities. It is reasonable to argue that one of the differentiating mechanisms will be a general propensity to trust others. In other words those who are more likely to trust others should be more amenable to the impact of living in communities characterised by weak situational networks.

Other pathways may also exist. If Putnam's (2000) conception of social capital as generating trust is correct then individuals who participate in adolescence should be more trusting, as well as more participatory, in adulthood. The same logic may apply in terms of participation and attachment. However, as has been argued attachment is largely predicated on contemporary conditions at the neighbourhood level implying that this is unlikely. Once again, following the logic of Putnam (2000), it would be reasonable to expect that higher levels of attachment in youth should predict higher trust in adulthood even if attachment in adolescence is not related to attachment in adulthood. Obviously if trust is viewed as moral and immutable then no effect should exist. The expected relationships described in this section are summarised in figure 4.1

This figure demonstrates the two theoretical frameworks that have been discussed. The broken arrows are labelled social capital (based on Putnam (2000)) whereas the unbroken arrows represent socialised relationships. Clearly the focus here is on the different expectations that exist between the theoretical relationships which have been outlined. In other words where there is no competing arrow it is reasonable that this relationship should exist. For example the fact that participation should be socialised between youth and adulthood is not unreasonable from the perspective of social capital. Nor is it a problem that participation and attachment are thought to predict one another. The fundamental questions arise out of the conception of interpersonal trust as either a



Figure 4.1: Relationships between the three dimensions of social capital

moral or strategic attribute. Here it can be seen that effectively the direction of causality is the opposite: interpersonal trust in youth is thought to predict both participation and attachment in adulthood as well as trust itself. Contrasted with this are the broken arrows which indicate that participation and attachment should cause trust.

The parental relationships are also important here. No relationship for participation is included in figure 4.1.1 because it is argued that youth participation should be based on either school or peer effects rather than parents⁸. Parental neighbourhood attachment should have an impact on youth attachment because it is argued that parents may mediate certain neighbourhood characteristics. Interpersonal trust is predicted under the socialisation approach to be strongly related to parental effects. Here it is suggested that trust may be one of the key pathways into both attachment and participation which is one of the arguments within the thesis. However, a second argument would suggest that participation and attachment in youth are potential pathways into trust in adulthood.

These arguments are important because the way in which each of these dimensions is related to the other both temporally and contemporarily has implications for the way in which social capital may be stimulated in terms of public policy. If it is found that trust is largely moral and socialised, and that this is the only variable to strongly predict the other two dimensions, this would imply that policy which seeks to stimulate greater social capital within individuals and communities may be inherently flawed. In other words, if

⁸ It is worth noting that this will be tested empirically.

trust is socialised very early, or is indeed genetic, then it is hard to envisage policy that might stimulate it. By contrast, if the view of Putnam (2000) is correct then encouraging participation in youth, and indeed adulthood, may be a very effective way of generating greater levels of trust, participation and neighbourliness within communities.

5: Data and methods

5.1: The British Household panel Survey

Data from the British Household Panel Survey (BHPS) is used throughout this research. Only data for England and Wales is used due to the inability to match contextual information, and in particular deprivation data, against Scottish data. The BHPS was conducted between 1991 and 2008⁹ and followed individuals within households on an annual basis over this period. In 1991 the study sampled 5,550 households incorporating a total of 10,300 individuals. The initial design was a stratified, multi-stage random sample of households. One of the primary aims of the study was to collect information on households and household relationships and therefore information was collected on all individuals aged over 16 within selected households. All members included in the original sample are considered Original Sample Members (OSMs) as are all children of OSMs. OSMs are followed as they move into new households in the UK and information on these new household members is also collected. These new members are referred to as temporary sample members (TSMs). They are followed as long as they live in the same household as an OSM. If they have a child with an OSM they become Permanent Sample Members (PSMs) and are also followed for the duration of the study. This design makes the study ideal for this research as it contains information about the parents of the young people who are the focus of the research¹⁰.

In each of the following chapters use is made of different subsets of the data. In chapter 6 the aim is to assess the nature of the relationships between interpersonal trust, neighbourhood attachment, and participation in local groups in the full sample. Using data from 3 occasions a longitudinal model is developed in which relationships between the 3 dimensions of social capital are examined. In chapter 7 the predictors of youth

⁹ It is worth noting that post-2008 the BHPS has been incorporated into the Understanding Society sample. At the time of researching this thesis the data was not readily available to incorporate into the sample. However it should be straightforward to incorporate into future studies which require longitudinal data.

¹⁰ For detailed information on the BHPS see the project website: <u>www.iser.essex.ac.uk/bhps</u>. For an overview of the study see Lambert (2006).

participation in the local community are assessed. Data is taken from all 16 to 18 year olds across the sample and combined with parental information from the same point in time. The 16-18 range was chosen for a number of reason: in part it has been used to maximize the number of responses available while still examining individuals who are not adults (i.e. many are most likely to still be attending some form of formal education). It was also not possible to assess these questions before 16 because they were not all available in the BHPS youth sample. For instance a question on trust is available before the age of 16. However, it can also be justified substantively: Niemi and Hepburn (1995) for instance have described the period between the ages of 14 through to the midtwenties as 'the period of maximum change' from both a social and a psychological perspective. The data is therefore treated as though it is cross sectional although it has been sampled across multiple years for different respondents. In chapter 8 the same observations from chapter 7, excluding those taken in 2008, are matched against 2008 observations. Therefore the sample is of individuals between the ages of 16 and 18 between the 1998 and 2007 who have been resampled in 2008. Section 5.5 describes each of these analytical samples in more detail. Prior to doing this it is important to establish how the key variables are used throughout the thesis.

5.2: Measuring participation in local groups, neighbourhood attachment, and interpersonal trust

Table 5.2.1 shows the questions used in order to measure the three dimensions of social capital: neighbourhood attachment, participation in local groups, and interpersonal trust. Notably, neighbourhood attachment includes a set of questions related to feelings that people have about their neighbourhood. Neighbourhood attachment will be measured using a latent variable modelling approach, which will be discussed in much greater detail in section 5.5. Basically, this approach seeks to explain the relationships between a set of related variables with reference to some unobserved, theoretical, variable (Brown, 2006). For example, it has been argued throughout that neighbourhood attachment should be a reflection of the level of weak situational ties that exist between networks in the local community (Granovetter, 1973). Technically, of course this is measureable using social network data (Borgatti et al, 2009). However, such data is

comparatively rare and would be difficult to collect across a representative set of neighbourhoods. Instead a latent variable approach suggests that the correlations between a set of *indicator* variables may imply the existence of common explanation, or latent variable, which would account for this correlation. This variable should then behave according to the theoretical expectations. For example, higher levels of attachment should predict greater participation, because information about the activity should spread easily through such neighbourhoods, and should be negatively related to higher levels of deprivation, because social disorder is likely to inhibit the formation of weak ties.

Table 5.2.1: Full question wording

Neighbourhood attachment

I'm going to read out some statements about neighbourhoods. Please look at this card and tell me how strongly you agree or disagree with each statement: The friendships and associations I have with other people in my neighbourhood mean a lot to me. I feel like I belong to this neighbourhood. If I needed advice about something I could go to someone in my neighbourhood. I like to think of myself as similar to the people who live in this neighbourhood. I regularly stop and talk with people in my neighbourhood.

Participation in local groups

Please look at the card and tell me how frequently you: Attend meetings for local groups/voluntary organisations.

Interpersonal trust

Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?

All five neighbourhood attachment indicator variables are measured along a five point likert scale, ranging from 'strongly disagree' to 'strongly agree'. Each of the questions concerns feelings about the neighbourhood and might be thought of as a measure of how embedded an individual is within their local community. It is argued that individuals living in areas with more weak situational social ties between will be more likely to feel embedded in their communities. It is worth noting that initially a larger battery of questions was analysed. These were asked in the same way as the neighbourhood attachment variables in table 5.2.1: briefly they asked whether people felt able to borrow things from their neighbours, planned to stay in the neighbourhood, and were willing to improve the neighbourhood. Factor analysis suggested that these did not fall within the 103

same factor as the other variables and a two factor model was highly correlated and unstable. These variables were therefore excluded from further analysis.

Table 5.2.1 also provides information about the other key dimensions of social capital. Participation in local groups is also measured on a 5 point likert scale ranging from 'never / almost never' to 'at least once a week. Interpersonal trust is measured on a binary scale where 0 equals 'can't be too careful' and 1 'most people can be trusted'. Individuals also had the option to select 'don't know' and have been coded as missing¹¹. It is worth considering how these variables are measured. There are potentially many different kinds of trust, ranging from generalized to particularized, with others falling on a continuum between these extremes. There is less interest here in particularized trust as an outcome although it may be an unmeasured aspect of neighbourhood attachment. That is, social embeddedness may be a good indication of this kind of trust. It may also speak more generally to community trust which was also discussed briefly above. Generalized trust is the most likely to be socialised via a parental attitudinal pathway and which captures and general disposition to trust others. As has already been noted it may also have some genetic basis. It is therefore reasonable to ask how well the question in table 5.4.1 captures this. In the UK Sturgis and Smith (2010) have cautioned that at least some of the apparent heterogeneity between groups in terms of this question may be the result of different interpretations of the question itself. However in their crossnational study Delhey et al (2011) find that the same question is understood by most people to denote out-groups, albeit with substantial differences between countries. They also comment that their results may differ to those of Sturgis and Smith (2010), for the UK, because they asked respondents directly, while Delhey et al (2011) approached the question indirectly. Irrespective of this it seems clear that some caution should be taken in interpreting what differences between groups in terms of this question might mean.

The question concerning participation is less difficult and it is hoped that the question scale would be intuitive to respondents. In terms of the question itself it is worth noting that the specific reference to *local* groups and / or voluntary organisations should

¹¹ This figure was very low across most measurement occasions and including this response as part of the 'can't be too careful' responses did not make a substantive difference.

capture some aspect of what individuals consider to be their neighbourhood. This may not fall within the geographical area of the census ward. However, this may also be an advantage of using a larger geographical unit in that it is more likely that we will capture the place where an individual participates than using lower level units. It is also worth noting that *local* and *neighbourhood* are obviously not synonymous and care should be taken to use the appropriate language when making inferences. The choice of geographical unit will be discussed in more depth in section 5.3.

Table 5.2.2 shows those years in which the key questions are asked in the BHPS. It should also be noted that not all of these variables appear in the same waves. Notably measures for the neighbourhood attachment variables are only available at 3 occasions. This will

Table 5.2.2: Waves in which neighbourhood attachment, participation in local groups,and interpersonal trust, appear

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Neighbourhood											
attachment											
Local friends mean a lot	\checkmark					\checkmark					\checkmark
Belong to neighbourhood	\checkmark					\checkmark					\checkmark
Advice obtainable locally	✓					✓					~
Am similar to others in neighbourhood	\checkmark					~					\checkmark
Talk regularly to neighbours	✓					✓					~
Participation in local groups	✓		✓		√		✓		√		✓
Interpersonal trust	\checkmark		\checkmark			\checkmark		\checkmark		\checkmark	\checkmark

limit any analysis which includes neighbourhood attachment as either an outcome or a predictor variable. However, not all analyses require all variables and use will be made of the most responses available in any given analyses. Clearly those analyses which include neighbourhood attachment and youth analyses will have the lowest sample sizes.

5.3: The neighbourhood

As well as measuring information at the level of the individual there is also a need to consider neighbourhood level characteristics. There are difficulties in defining what is, and is not, a neighbourhood. This arises from the fact that a neighbourhood can be defined as both a physical and a social place. In a sense a neighbourhood can best be conceptualised as being specific to individuals and two neighbours may have different perceptions about what constitutes their neighbourhood. However, this data is not generally available and was not collected in the BHPS. There is much debate in the literature as to what constitutes an appropriate measure of neighbourhood. In other words what one person considers their neighbourhood may not be the same as their neighbour (Weiss et al, 2007). For this reason some have argued for the adoption of bespoke neighbourhood measures (Johnston et al 2004; Macallister, 2001).

The BHPS has two options for studying relatively small areas: the census ward and the lower super output area (LSOA). Given the caveats above this may be a less than ideal in terms of capturing what is meant by a neighbourhood. Administrative geographies tend to be arbitrary and not to reflect the real experience of individuals (Lupton, 2003). However, they are both convenient geographies against which contextual information from the census, such as levels of deprivation and neighbourhood type, can be matched. Census wards have the advantage that they are the basis of local government elections, and a great deal of public service delivery and are likely to have some general meaning to most residents and to be one of the primary interests of the government in its focus on local participation and engagement, given that a key aspect of this is aimed at local service provision. By contrast LSOAs tend to be smaller meaning that they may be more likely to capture the real neighbourhoods that individuals relate to.

Perhaps more important however is that the focus is not on neighbourhood effects *per se*. That is, the data is such that it will not be possible to take a meaningful measure of neighbourhood attachment at any level above the individual because the *N* is too low even in the full sample. Data at the ward level will therefore be used in order to attach contextual census data, which is more likely to be common within wards, and the use of multilevel modelling will be done for statistical reasons (non-independence of observations (Snijders and Bosker, 1999) rather than to estimate effects at the level of the neighbourhood as such. The second reason for using neighbourhood level data 106

however is that it can help to avoid the 'atomistic fallacy' whereby differences between higher level groups such as neighbourhood are drawn using individual level data (Schawrz, 1994). In other words it is assumed that the impact of deprivation might work differently in different places and that some contextual measure may explain some of the variance between individuals in similar places. Finally, and most importantly, group level covariates are taken as a proxy of the kinds of situational networks that might develop in the neighbourhood. For example, more socially unstable areas should be related to lower levels of neighbourhood attachment and an effect from, for example deprivation, will indicate that this variable has a construct validity.

Previous research has used both LSOA and census ward to examine the impact of deprivation. For instance Li et al (2005) using the BHPS, and data at the ward level, find that individuals living in less deprived areas are more likely to report higher levels of neighbourhood attachment and civic engagement. Elsewhere, Bailey et al (2012) assess the impact of deprivation on neighbourhood attachment at the LSOA level and report similar findings to Li et al (2005) insofar as deprivation is found to be negatively related to attachment. It is worth noting that the measure of deprivation preferred here, the Townsend index (Townsend, 1987), was originally designed for use at the ward level. Moreover, it can be argued that the use of a measure of population density might be better suited to ward level analysis because wards vary in terms of both their population and geographic sizes allowing a more realistic assessment of density of the area in which a person lives. Therefore, and given that previous research has not indicated there should be large differences between estimates from the either LSOAs or census wards the baseline level clustering for the neighbourhood level analysis will be census ward.

It is also worth noting that studies which examine neighbourhood, and contextual effects more generally, need to address the problem of selection bias. That is, the direction of causality between effects at the neighbourhood level on the individuals living within them is often unclear. For example unemployed people may move to deprived areas because there is social housing available. A study which then assessed the impact of deprivation on unemployment might find that deprivation causes unemployment even though the real causal mechanism is very different (see Ionnedes and Zabel (2008) for example). These problems are pervasive and difficult to overcome. Indeed as Hedman and van Ham (2012) point out, they should not simply be seen as statistical problems but

rather as the key to understanding neighbourhood effects more generally. There is a clear problem of selection bias in this thesis and for the most part it is not addressed directly. However, it can be addressed in two ways. In the first instance it is argued that children do not select their neighbourhood and any impact that is seen on them is likely to be due to the neighbourhood or the fact that their parents chose the neighbourhood. In a sense this might itself be evidence of a neighbourhood effect, albeit an indirect one. Secondly in assessing the impact of moving to a new neighbourhood on each of the key variables some of this effect may be seen. Of course this would not preclude a selection effect but it can be argued that if this move results in some change in trust, neighbourhood, social capital, or participation, then this is evidence of a neighbourhood effect.

5.4: Neighbourhood characteristics

Neighbourhood characteristics in this research have been discussed throughout, and in particular in sections 3.8 and 3.9. It has been argued that the neighbourhood environment may have an impact on the formation of networks and it was suggested that effects of deprivation, population turnover, and urbanity may be particularly important in determining the formation of such networks, and in particular, the weak situational networks which have been emphasised throughout and will be measured by the latent variable neighbourhood attachment. It has been noted that neighbourhood ethnic heterogeneity, emphasised as being of particular importance by Putnam (2000; 2007), is generally not found to be of particular importance in the UK (Woolever, 1992; Becares et al, 2011). This is particularly the case when used in the presence of a measure of deprivation and this was not assessed in the analysis.

Secondly, it is important to note that these contextual variables are not necessarily meant to capture all of the variance that can be accounted at the level of the neighbourhood. Rather, and as was noted in section 5.3 they are primarily used in order to ensure that the some neighbourhood level variance is accounted for and to test that neighbourhood attachment in particular has validity as a measure. An effect in terms of interpersonal trust and participation in local groups may also be expected. It should be noted therefore that the aim of the thesis is not to consider all of the effects that might
exist at the level of neighbourhood and it is not claimed that the estimates of deprivation are true effects *per se*. Rather, both deprivation and population density represent theoretically important concepts that should allow neighbourhood effects to be inferred. The research focuses on two distinct characteristics of the neighbourhood that should be theoretically related to neighbourhood attachment, participation in local groups, and interpersonal trust¹². Both are measured at the census ward level and capture distinct aspects of the places that people live in. The first is deprivation; the second is a measure of urbanity, ranging from 'Urban >10k' to 'Village, hamlet & isolated dwellings'. Figure 5.4.1 describes deprivation and table 5.4.1 describes urbanity.





Table 5.4.1: Percentage of urban / rural categories, 2001

	Percent
Urban >10k	76.46
Town and Fringe	12.78
Village, hamlet & Isolated dwellings	10.75
Total	100

¹² It should be noted that population turnover was also initially included as it should have a direct impact on the density of weak ties which develop in the neighbourhood. However, this did not predict the outcomes well and caused instability due to a high covariance with deprivation. Given the key theoretical importance of deprivation population turnover was excluded from the analyses presented here.

It should be noted that both measures are taken using data from the 2001 census. Using data from 2001 is less than ideal for measures that were not taken in 2001. For example the earliest date is 1998 and the latest is 2008 and there is reason to believe that individual neighbourhoods may have changed in terms of their overall level of deprivation and urbanity. However, given that changes in deprivation and, in particular urbanity, are likely to change relatively slowly in aggregate terms this may mitigate the problem to some extent. Over a 10 year period it is unlikely that large relative changes in deprivation will have occurred. This is also the case for population density wherein the most populous and least populous areas are likely to be the same between the two time points. Given that 2011 census data was unavailable at the time of analysis, and given that this would, in any case, have been around 3 years later than the 2008 BHPS sample the analysis proceeded using 2001 data only. Finally, it is worth noting that the way in which environment interacts with the types of social networks within particular places may occur over a prolonged period of exposure. A fruitful area of future study might be to examine the ways in which this interacts with individual outcomes from a longitudinal perspective.

Deprivation is measured using the Townsend Index of deprivation (Townsend, 1987). This is a composite score based on the number of unemployed residents aged over 16; the amount of overcrowding defined as the number of households with 1 person per room and over as a percentage of households; non-car ownership as a percentage of households; non-home ownership as a percentage of households. Here zero is average deprivation and the highest score is equivalent to higher deprivation¹³. Finally residential environment is divided into urban, towns, and rural, using Office for National Statistics urban / rural categories.

¹³ 2001 census ward Townsend deprivation scores are available from at the Census Dissemination Unit at The University of Manchester: <u>www.cdu.census.ac.uk/related/deprivation.htm</u>

5.5: Analysis samples

As was noted at the beginning of this chapter data for all the key variables are taken from the BHPS. It is also important to note that the analysis conducted throughout is only conducted for individuals located in England and Wales. This is because deprivation data in particular tends to have a different meaning in Scotland, and matching this is not straightforward. In order to answer all of the key questions each of the three empirical chapters uses different samples from within the BHPS. For example, chapter 6 seeks to establish how the three dimensions of social capital are related to one another over time and uses data from 1998, 2003/4, and 2008 (see table 5.2.2). Chapter 7 has the aim of assessing the extent to which relationships between neighbourhood attachment, participation in local groups, and interpersonal trust are related to parents, as well as in establishing the extent to which the three are related to one another at this time. For this chapter a sub-sample of young people, aged 16 to 18, are analysed. Finally, in chapter 8, the young people included in this sub-sample are assessed again in 2008. This section will discuss how these samples have been constructed, how they relate to one another, and the limitations of them.

The data to be used in chapter 6 uses the full sample of individuals who answered the key questions in 1998, 2003/4, and in 2008. This yields a potential sample size of 5,264 although this is reduced according to the number of missing responses for each variable at the different measurement occasions. The age range of this sample runs from 16 year olds (the age at which BHPS sample members are asked to complete the adult survey) through to individuals who would have been in their late 80s during the 1998 survey. The sample is skewed towards women who constitute approximately 55% of respondents. The sample itself is reasonably stable and has been chosen because, with the exception of participation, all key variables are measured at the same time. Figure 5.5.1 shows the adult sample by year of birth in 1998. The oldest individual in this sample is aged 90 and the youngest is 16.

Figure 5.5.1: Adult sample: Year of birth, 1998



The youth sample used in chapter 7 has a potential sample size of 1,462 respondents. Here the analysis is restricted to individuals between the ages of 16 and 18 and the data is pooled across years. This bandwidth was chosen in order to maximize the sample size within theoretically justifiable limits. Much of the socialisation literature suggests that a key stage in development, particularly in relation to participation, are between these ages (for example Jennings et al (2009) suggest that late adolescence is key stage in the development of political behaviours and attitudes) These years are shown in table 5.5.1.

Year	%
1998	21.75
2000	27.43
2003/4	22.23
2005	13.61
2007	4.17
2008	10.81
Total	100
N	1462

Table 5.5.1: Percentage of years used in youth sample

This figure conveys a number of important points. In the first instance because only 16 to 18 year olds are included in the sample, the two year gap between the years 1998 and

2007 means that the same individuals cannot by definition be included twice. This accounts for the reduction in number included from 2007. Referring back to table 5.2.2 the reason for the two year gap is apparent: all questions have at least a two year gap between them. The exception here is in 2003 and 2004 in terms of the participation question. This was dealt with by including participation in 2004 in the sample for 2003. Secondly there is obviously an overlap between the years 2007 and 2008 insofar a number of individuals must fall within both. Here data from 2008 is preferred because more key variables are available (see table 5.2.2). Given this however the variables do vary in terms of *N* according to the years in which they were asked. For example there are 1,296 observations for young people in terms of interpersonal trust, but only 840 for participation and 746 for neighbourhood attachment.

Pooling the data in this way may be objected to because it might imply the existence of period effects. However, period effects would seem unlikely given the nature of the questions asked. There is little reason to suppose that period effects should have an impact on any of the three dimensions of social capital. By contrast relatively large period effects might be expected if one of the outcomes of interest was *political* engagement due to the well documented drop in political support from 1997 to the present day. However, sensitivity checks were conducted by including a variable indicating the survey year in the regression models. No significant results were found suggesting that results do not vary systematically by survey year.

A second, important source of potential bias in this sample arises from the fact that including parental information in the models reduces the number of observations further, because fathers in particular tend to be missing. Given the overall research questions it was felt that it was important to include information for both parents in models of parental influence. Indeed this can be seen in models which include a parameter for combined parental effect. However, this reduction in the sample size is likely increase the possibility of type 2 errors. Secondly, and more importantly, it means that inferences can only be based on two-parent households. This means that effects cannot be tested for individuals who had absent fathers. This may be important because those individuals left in the sample will obviously not be entirely representative of the population of young people in the UK at the time of the survey. However, it is worth noting that a number of models were run in which mother only data was used and the

results did not change substantively. Even so, it is important to keep this data limitation in mind.

The third sample, used in chapter 8, is constructed using the same data from the youth sample used in chapter 7. Given this many of the same caveats apply. That is, reductions in data occur according to which year the data is taken from and when parental variables are included this is only for the households in which both parents were present. The data differs in that the 2008 sample is now used as the outcome point. All individuals above the age of 18 and who had been included in the same sample. This information is summarised in table shown in figure 5.5.2. A clear problem that arises here comes from the fact that there is no fixed range between the 'youth' sample and the 'young adult' samples. The minimum difference here is 1 and the maximum is 10.

Table 5.5.2 shows the full sample available in this analysis. As an illustration of the above points there are 86 19-year olds in the sample. Of these, 81 have a three year difference between their age in 2008 and the youth sample. This means that these individuals were 16 years old at the time of the sample which was taken in 2005. By contrast there are 202 individuals with a 10 year gap in the surveys and their ages range between 26 and 29 (with the latter category being made of only 14 people whose birth date fell between the difference in the timing of the surveys at the two waves). Of these individuals 59

Difference in years between youth and adult sample points											
Age 2008	1	2	3	4	5	6	7	8	9	10	Total
			-		-	-		-	_	-	
19	4	1	81	0	0	0	0	0	0	0	86
20	0	2	19	105	0	0	0	0	0	0	126
21	0	0	4	15	113	0	0	0	0	0	132
22	0	0	0	1	12	93	0	0	0	0	106
23	0	0	0	0	1	11	90	0	0	0	102
24	0	0	0	0	0	4	10	91	0	0	105
25	0	0	0	0	0	0	4	9	80	0	93
26	0	0	0	0	0	0	0	3	26	59	88
27	0	0	0	0	0	0	0	1	16	55	72
28	0	0	0	0	0	0	0	0	6	74	80
29	0	0	0	0	0	0	0	0	0	14	14
Total	4	3	104	121	126	108	104	104	128	202	1,004

Table 5.5.2: Age in 2008 and the number of years since the youth sample

were 16 at the time of the survey. This obviously leads to a potential concern in terms of an effect from the different time lags. That is the different lags may have differential effects between a sample that is spaced 1 year apart and a sample which is 10 years apart. This was assessed by examining the impact of the time lags on difference scores between the different dimensions of social capital and no effect was found. This is likely to be due to the fact that the difference in lags within the sample is not sufficient to capture an effect over this time period. In other words it is likely that an analysis which sought to compare the impact of time lags over a longer period would find evidence of this.

The primary problem in terms of the analytical samples in chapters 7 and 8 arises when data is used that was not included in many waves and is combined with parental information. For instance the neighbourhood attachment variables when combined with parental information, and in particular fathers, can lead to sharply reduced sample sizes. For instance, in the youth only sample there is a maximum sample size of 746 for youths, 721 for their mothers, and only 414 for the fathers. When combined this is reduced further due to just over 340 because of the different patterns of missingness between these groups. Other reductions in sample size can occur when data from different waves are combined particularly if different key variables are used. This may be particularly problematic in the youth-adult sample used in chapter 8, because the sample is reduced further by removing 2008 wave. This means that, for example, when using the neighbourhood attachment indicators only two waves (1998 and 2003) can be drawn on for the youth sample. Throughout, cross-tabulations and other descriptive statistics will be given before analysis is conducted which should make clear why the sample size is reduced in any given model. Below section 5.10 discusses some other reasons that sample size may appear to inconsistent between models in relation to the particular way in which MPlus treats missing data.

5.6: Other key variables used in the multivariate analysis

A number of other variables are used throughout the analysis. The following will briefly describe how these are used. Any differences that exist within the particular analysis chapters will be noted at during these. At each wave of the BHPS respondents are asked

whether they lived in the same address last year. This is binary variable with 0 indicated 'no' and 1 indicated 'yes'. They are also asked whether they own their residence or not and are given a range of options. Here this data is collapsed into a binary variable indicating whether they own their home or rent it. Here 0 indicates they are a home owner (either with a mortgage or not). 1 indicates they rent either privately, through an employer, housing association, or in some other way. These two variables approximate the general extent to which a person might be socially embedded in their communities. For example, individuals who have lived in their communities for over a year should have had time to begin to build relationships with other residents. Home owners may be even more socially embedded and committed to the community.

Education is measured on a 7-point scale ranging from 'no qualifications' through to 'higher degree'. It would be possible to treat this variable as being categorical. However, analysis indicated that it behaved in a linear manner across all variables of interest. For example, a higher level of education consistently showed that an individual should be more likely to participate than an individual with a lower level of education. This variable was therefore treated as continuous. Sex is a binary variable where 0 indicates female and 1 indicates male. A higher age indicates that a person is older. The Goldthorpe class schema is used throughout and was described in detail in section 3.5. Here a measure which classified people according to their most recent job was used in order to accurately represent people experiencing temporary unemployment and the retired. For some analysis, and in particular those in chapter 6 which include many young people still in education, a separate category indicating never had a job is also used. This variable did not approximate a continuous variable and it is therefore treated as a set of dummy variables with the highest category, 'service class higher', used as a dummy. In chapters 6 and 7 a reduced 3-point scale is used following Li et al (2003) due to the reduced nature of the data.

5.7: Structural equation modelling

The analyses are conducted within a framework of structural equation modelling (SEM) ¹⁴. SEM can be thought of as a generalized statistical framework, special cases of which include latent variable modelling, path analysis, and regression. It generally takes a confirmatory approach to the development of statistical models within which causal processes predicated on theory are explicitly tested (Bentler, 1988). SEMs are typically represented diagrammatically allowing researchers to explicitly represent the hypotheses to be examined. This confirmatory, rather than exploratory, emphasis draws together these otherwise potentially diverse approaches and is the *raison d'etre* of SEM.

For instance, latent variable modelling can be undertaken using a number of different approaches, the most common of which is exploratory factor analysis (EFA). Typically, although not exclusively, latent variable modelling within SEM is conducted under a confirmatory factor analysis (CFA) framework whereby the factor structure of a set of observed variables is pre-specified by the researcher. In other words the researcher has some underlying theory or hypothesis concerning the covariance structure between these observed variables and applies a confirmatory model in order to test this. By contrast, under EFA the researcher will typically use the approach to explore the covariance structure of the observed variables without necessarily having any expectations regarding the factor structure underlying the measured variables. More obviously path analysis operates under a causal framework for testing directional hypotheses insofar as it necessarily represents a structural model of the phenomena in question. These two techniques represent the structural (path analysis) and measurement (factor analysis) aspects of SEM. The simultaneous estimation of these is another distinguishing characteristic of SEM.

Use will be made of each of these aspects of SEM throughout the thesis. The following sections will discuss latent variable modelling, path analysis, and the approaches to estimation that will be applied in the thesis. It will also introduce multilevel modelling (MLM) which is also used and can easily be applied in an SEM framework. Those who would like a more detailed introduction to SEM are particularly encouraged to consult

¹⁴ It should be noted that the MPlus 6 software was used in this thesis.

Byrne (2012) and Kline (2004). More advanced treatments can be found in Skrondal and Rabe-Hesketh (2004).

5.8: Latent variable modelling and confirmatory factor analysis

Generally speaking factor analysis is a means by which the covariance structure between a set of observed variables can be assessed. From a substantive perspective factor analysis is used when there is some theoretical foundation for expecting the covariance of a set of observed, or indicator, variables to be explained by some unobserved variable or variables. Imagine a series of indicator variables $y_{1...6}$ which, under EFA, are found to load onto two factors η_1 and η_2 . This can be written as,

$$y_1 = \lambda_1 \eta_{11} \eta_{12} + \theta_1$$
$$y_2 = \lambda_2 \eta_{21} \eta_{22} + \theta_2$$
$$y_3 = \lambda_3 \eta_{31} \eta_{32} + \theta_3$$
$$y_4 = \lambda_4 \eta_{41} \eta_{42} + \theta_4$$
$$y_5 = \lambda_5 \eta_{51} \eta_{52} + \theta_5$$
$$y_6 = \lambda_6 \eta_{61} \eta_{62} + \theta_6$$

where, $y_{1...6}$ denote manifest indicator variables. $\lambda_{1n...6n}$ denotes the unique factor loading associated with each of these indicators. η_1 and η_2 denote the two factors and $\theta_{1...6}$ represents the unique variance associated with each manifest variable. In matrix form this may be rewritten as,

$$\begin{pmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \\ y_5 \\ y_6 \end{pmatrix} = \begin{pmatrix} \lambda_{11} & \lambda_{12} \\ \lambda_{21} & \lambda_{22} \\ \lambda_{31} & \lambda_{32} \\ \lambda_{41} & \lambda_{42} \\ \lambda_{51} & \lambda_{52} \\ \lambda_{61} & \lambda_{62} \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \end{pmatrix} + \begin{pmatrix} \theta_1 \\ \theta_2 \\ \theta_3 \\ \theta_4 \\ \theta_5 \\ \theta_6 \end{pmatrix}$$

in which the same notation applies. Each manifest variable has been allowed to load onto both factors, which is the standard procedure in EFA. Estimation will provide an optimal solution based upon the best fitting model given the specific covariance matrix for the 118 variables in question. Hence, the *exploratory* nature of EFA: the procedure finds the best fitting set of loadings for the number of factors with the only input from the researcher being the choice of variables. Consequently, it is plausible that EFA may find a solution that is optimal but which is theoretically difficult to justify. Indeed if such justification is carried out *post hoc* this may lead a researcher to rationalise the inclusion of certain factors and/or loadings. As has already been mentioned, CFA is a confirmatory approach which rests on relatively strong theoretical justifications for the factors. That is, the researcher would specify prior to the analysis which variables will load onto each factor. This would be written as,

$$\begin{pmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \\ y_5 \\ y_6 \end{pmatrix} = \begin{pmatrix} \lambda_1 & 0 \\ \lambda_2 & 0 \\ \lambda_3 & 0 \\ 0 & \lambda_4 \\ 0 & \lambda_5 \\ 0 & \lambda_6 \end{pmatrix} \begin{pmatrix} \eta_1 \\ \eta_2 \end{pmatrix} + \begin{pmatrix} \theta_1 \\ \theta_2 \\ \theta_3 \\ \theta_4 \\ \theta_5 \\ \theta_6 \end{pmatrix}$$

Here, the manifest variables $y_{1...3}$ have been forced to load onto factor η_1 and manifest variables $y_{4...6}$ have been forced to load onto η_2 . In a sense EFA and CFA can be seen as the two extremes of factor analysis with the former being entirely exploratory and the latter entirely confirmatory. However, the apparent distinction is not entirely accurate as it is possible to combine different aspects of each. It is possible to fix the number of factors estimated under EFA. It is also possible to allow manifest variables to load onto more than one factor in a CFA. Consequently *factor analysis* can be thought of as a fairly flexible framework for understanding the covariance structure of a set of variables.

An equivalent way of representing each of these models is via a path diagram as shown in figure 5.8.1. The different specifications are easily shown in this figure. From this point path diagrams will generally be used in favour of equations, particularly when describing models, as they are commonly used in SEM and can often convey the same information in a more intuitive way. In the language of path diagrams used in SEM it is worth noting that variables represented by squares are measured variables whereas ovals are latent, or unmeasured, variables. The bi-directional curved arrow represents a correlation between two variables, here the two latent variables η_1 and η_2 , and is a common feature of SEM, particularly when multiple latent variables are estimated. The arrows between Figure 5.8.1: Path diagram of EFA and CFA models



two variables are regression parameters with the variable being point to as the outcome. In other words the arrows between in η_n and y_n specify that the former is predicting the latter. The arrows pointing towards y_n represent measurement error in the observed variables.

Readers who would like a more detailed discussion of CFA are recommended to consult Brown (2006).

5.9: Neighbourhood attachment and latent variable modelling

An important aspect of this study is to understand the ways in which individuals view the relationships they have in their neighbourhood. This is done utilising a latent variable, and CFA, approach akin to that described above. The aim is to measure the perceptions of the relationships that people have in their neighbourhoods. This should clearly be amenable to latent variable modelling because it is difficult to conceive of a single question that might accurately capture the different aspects of the relationships that an individual might have in their neighbourhood. The following will briefly illustrate latent variable modelling and CFA from a more substantive perspective.

Taking the example of neighbourhood attachment it can be argued that the concept captures something about the nature of a person's social networks within their local community. According to the level of their social capital they may or may not be disadvantaged relative to someone else and those with a higher level may be more likely to display certain neighbourly characteristics and orientations. It is these characteristics and orientations that are captured by the indicator variables and explained by the latent variable. In practical terms this means that an individual with a high level of neighbourhood attachment would be more likely to report strong neighbourhood ties and a sense of belonging. By contrast an individual with a low level of social capital would report relatively lower scores on both of these variables. Importantly, because neighbourhood social ties and a sense of belonging should covary it is unlikely that in this case an individual would have *weak* neighbourhood social ties and a *strong* sense of belonging. If these variables did behave independently from one another they would not load together on the same factor, or, in other words, the factor would be poor at explaining any relationship between them.

5.10: Structural modelling

As was discussed above, SEM is a statistical method which comprises aspects of both latent variable and path analysis in a general framework. SEM allows for the simultaneous estimation of both latent variable and path analytic models, commonly referred to as the *measurement* and *structural* parts of the model respectively and it is this which differentiates SEM from either path analysis or CFA. Sections 5.7 to 5.9 discussed latent variable measurement modelling at length. This section will discuss the structural part of SEMs and how measurement models can be incorporated into these. A very simple SEM, incorporating both measurement and structural aspects is shown in figure 5.10.1.

The latent, or measurement, comprises the latent variable η and the measured variables $y_{1...n}$. This is the same basic specification as that outlined in section 5.8 except that only one latent variable is shown. It should be noted that for parsimony the factor loading parameters and residuals are not shown here. The model differs however insofar as it includes the structural part of the model comprising the exogenous, or independent, variable *x* the endogenous, or dependent, variable *Y*, and the latent variable η which is

Figure 5.10.1: SEM including manifest and latent variables



also endogenous¹⁵. The parameters $\beta_{1...3}$ represent structural pathways. It is worth noting that all y variables in this model represent outcome variables. The uppercase Y represents a standard dependent variable whereas the lowercase y's are indicators of the latent variable.

Once again, it is useful to discuss the model above from a more substantive perspective. Taking Y to be participation in local groups and x to be a variable such as education the pathway β_1 represents a direct relationship between x and Y and suggests that education predicts participation in local groups and that as education changes the likelihood of participation also changes. If η is a latent variable representing neighbourhood attachment it can be argued that a higher level of this will also predict participation in local groups. Excluding the parameter β_2 would lead to a standard regression model, albeit one which simultaneously estimates the latent variable, where neighbourhood attachment and education both predict participation. However, it may also be plausible that the impact of education may be contingent to some extent on the impact that it has on neighborhood social capital. In other words some of the impact that education has on participation is due to the fact that people with higher education are more likely to have higher levels of neighbourhood attachment and it can be hypothesized that this is causal in nature. An interesting research question might be to ask the extent to which

¹⁵ Exogenous and endogenous here simply refer to those variables which are predicted by the model and those which are not. Here x is not predicted by any other variable in the model and is therefore exogenous, whereas all other variables are. This means that each will have residual variance which is unexplained by the model, but are not shown here.

the impact of education on participation is mediated by neighbourhood attachment. SEM provides a framework within which these kinds of question can be rigorously assessed under the modeling framework of mediation analysis.

Turning again to figure 5.10.1: if β_1 is excluded from the model then the regression equations β_2 and β_3 imply that the relationship between *x* and *Y* is fully mediated by η . In other words the variance in *Y* due to *x* is fully accounted for by the relationship of *x* on η . Thus any increase in education would lead to an increase in social capital which would then lead to an increased likelihood of participation and there would be no independent effect of *x* on *Y*. In reality such relationships are rare in the social sciences and the full model specified in figure 5.10.1 is more likely. In cases when this is a research question methods have been established to assess these relationships. The causal-steps approach of Baron and Kenny (1986) is the most commonly used. However, this has been criticized as failing to provide sufficient evidence of a relationship. Here the bootstrapping approach suggested by MacKinnon (see MacKinnon et al, 2002), which is itself an adaptation of the overly sensitive¹⁶ Sobel test (Sobel, 1982), is preferred.

5.11: Multilevel modelling

It was noted above that SEM is a very general framework within which other classes of model can be specified. Of particular use in this thesis is the ability to specify and estimate multilevel models (MLMs)¹⁷. Multilevel data is data which is clustered within higher level units. For instance pupils might be clustered within classrooms and schools,

¹⁶ For a more detailed discussion of these issues including the Baron and Kenny steps see appendix1.

¹⁷ These are sometimes referred to as hierarchical models, or random effects model, among others. MLM is preferred here because it accurately reflects the fact that the data has a nested structure unlike the latter, which can be used to refer a wide range of models in which random effects are estimated (interested readers can refer to Rabe-Hesketh and Skrondal (2005) for a thorough discussion of these differences). The term hierarchical modelling is used specifically to refer to *models* which are nested within one another and will be elaborated upon when measurement invariance is discussed in section 5.13.

and individuals can be clustered within households and neighbourhoods. As well as the natural clustering that might arise when collecting data, national surveys typically employ a clustered sample design which can reduce costs relative to a random population sample¹⁸. A visual representation of this type of clustering is shown in figure 5.11.1.





Figure 5.11.1 shows data which is comprised of 3 neighbourhoods in which there exist five households. Residing in these five households are a total of 11 individuals. It should be noted that the data is not balanced within either neighbourhoods or households. For example neighbourhood 3 only contains 1 household, whereas neighbourhoods 1 and 2 contain 2. There is even greater variation within households themselves with only 1 person living in households 2 and 5, and 4 people living in household 4.

This implies a number of important features which may have an impact on how the data should be treated. It may mean that observations will be non-independent from one another. In practical terms this may mean that individuals in neighbourhood 1 are more similar to one another than individuals in neighbourhood 2. This may be because they share similar characteristics and have a common environment or be because they interact with one another on a regular basis. The same argument can be made for

¹⁸ The BHPS followed such a design with sectors based on the Postal Address File (PAF) and stratified across a range of geographic and social characteristics. These sectors where then sampled and within each a selection of addresses was also sampled. For a detailed description of the sampling procedure see Buck et al (2006).

individuals who live in the same households, and indeed there has been some debate as to which scale it is most appropriate to model (Cutts and Fieldhouse, 2009). Independence of observations is a standard statistical assumption and when it is violated this can lead to smaller standard errors and a concomitant increase in type 1 errors (Snijders and Bosker, 1999). Perhaps more importantly it is also clear that some of the common variation within units may be explained by variables at this level. For example it has been argued that certain neighbourhoods may be more or less conducive to the development of neighbourhood attachment and that characteristics such as deprivation may in part explain this.

Given this it is clear that clustered data might be thought of as both a nuisance, or as a substantive issue of interest in itself, depending on the aims of the research. There is a clear substantive reason that this research may benefit from the use of MLM insofar as some of the key questions are related to neighbourhood level effects. However, MLM is not used in all analyses because clustering is not sufficient to warrant this. In other words as the average number of individuals in any given unit approaches 1 the utility of MLM is decreased relative to standard, single level, estimation techniques. This is because when the average cluster size is exactly 1 the clustering is hypothetical as every individual also represents the mean score for the cluster in question. In these instances it is possible to treat the data as having a single level. When MLM is used this will be discussed in the specific chapter. In order to determine whether or not analyses should be conducted using MLM researchers typically utilise statistics such as the intraclass correlation coefficient (ICC) and design effects. The ICC can be defined as,

$$\rho = \frac{\sigma_b^2}{\sigma_b^2 + \sigma_w^2}$$

where, σ_b^2 represents the between unit variance and σ_w^2 represents the within unit variance. The former represents the amount of variance that can be accounted between units, such as neighbourhoods, whereas the latter measures the amount of variance that is accounted for within units. If the ICC is relatively small (e.g. <0.05) then it is safe to ignore the clustering because clustering does not account for much variance (Heck and Thomas, 2009). The design effect can be defined as,

$$DEFF = 1 + (m-1)\rho$$

where, m is the average cluster size and p is the ICC. Generally speaking, if the design effect is greater than 2 then MLM may be appropriate (Muthen and Satorra, 1995). Whereas the ICC provides a measure of the amount of variance that is accounted for at the higher level, the design effect provides information about how underestimated the standard errors are (Kish, 1965).

The latent variable modelling aspect of SEM presents a particular problem in the context of MLM. This is because typically within groups variables are simply the mean of the cluster unit. For example the within group age of a neighbourhood would simply be the mean age of the individuals who have been sampled in the neighbourhood. It is not preferable to take the mean of the latent variable. Rather the means of each of the observed variables are taken and used to measure the latent variable at the between unit level.

Figure 5.11.2 shows how this can be approached from a multilevel perspective via a path diagram. The standard multilevel model (MLM) is one in which we have predictors on both the within and between levels i.e. at the individual and neighbourhood levels respectively. y_{11} represents a measured variable such as participation or trust. In order to regress the neighbourhood level variables onto this a latent variable is estimated shown by y_{12} where 2 represents the second, neighbourhood, level. As noted this is simply the mean and variance of all the individuals within the neighbourhood. It is latent because it is not observed directly, but is, instead estimated, from the within unit information.

The multilevel latent variable model is clearly more complicated. Here η represents the latent measure of neighbourhood attachment with y_{ij} indicators, and x_{ij} represents a set of independent variables at both the individual *i* and neighbourhood level *j*. The model includes both endogenous, *y* and η , variables and exogenous, *x*, variables. Using standard SEM notation the oval indicates a latent variable and the rectangles observed variables described in section 5.8. The circles represent the intercepts of the measured variables at the group level. $x_{11.n1}$ are simply regressed onto η , indicating that η is the dependent variable. The latent variable is estimated on both levels one and two and is estimated using the mean of the observed indicator variables. In order to establish that this variable is measuring the same variable on level 2 as on level 1 it is necessary to carry out tests

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Figure 5.11.2: Two-level model in an SEM framework

of measurement invariance. These will be discussed in depth below. Briefly however, it is worth noting that this involves specifying a series of increasingly restrictive models in order to establish that the parameters are statistically equal across groups. In this instance these groups are level 1 and level 2 units.

A detailed discussion of MLM can be found in Snjders and Bosker (1999). One of the few introductory treatments of MLM from the perspective of SEM can be found in Heck and Thomas (2009).

5.12: Estimation and model fit

In terms of the CFA model all variables are ordinal. MPIus offers a number of different estimators which can be used in analysing this type of data. Until relatively recently researchers would analyse ordinal data using estimators designed for continuous data, such as Maximum Likelihood (ML) estimators. Given a sufficient number of response categories (Dolan (1994) recommends at least 7), non-skewed data, and equality among 127 thresholds the ML may obtain good results. By contrast when any of these criteria are not met this can lead to biased estimates of both model fit and factor loadings. This is often the case when ordinal data is being modeled. For this reason Lubke and Muthen (2004) recommend using categorical estimators such as weighted least squares (WLS).

There are three assumptions which underlie the use of categorical estimators (Byrne, 2012: 131). The first is that a normally distributed continuous latent variable underlies the categorical data. This is likely to be the case as the number of categories increase. However, in many instances it is unlikely. For instance likert scale data, as is used in the present analysis, may not follow a normal distribution as individuals often cluster towards one end of the scale causing kurtosis and skewness. This is certainly the case with many of the variables used in this analysis. Secondly, sample size needs to be sufficient to reliably estimate the correlation matrix. Finally, parsimony in terms of the indicator variables is important when modeling categorical data. Given these restrictive assumptions researchers have developed a number of robust categorical estimation methods. As Byrne (2012: 131-133) notes the means and variance adjusted WLS (WLSMV) estimator has been shown to perform best in CFA with categorical data. Like the WLS estimator this uses an estimation technique based on a diagonal weight matrix, with robust standard errors and a robust mean and variance adjusted χ^2 statistic. This estimator has been developed in MPlus and is the method used here.

A number of goodness of fit indices are calculated when using the WLSMV estimator. Following Brown (2006: 81-88) these can be characterized as falling into three categories. The first are absolute fit indices: these assess the actual fit between the model implied and actual covariance matrices such as the χ^2 statistic and SRMR. A general cut point of .08 and below has been recommended for the SRMR (Hu and Bentler, 1999). A second class of fit index take model parsimony into account. By far the most widely reported of these is the root mean square error of approximation (RMSEA). This type of measure penalizes less parsimonious models. The RMSEA can be thought of as an error of approximation as it tests the extent that a model fits the data *reasonably* well given that the fit of the model is unlikely to be perfect. It is therefore different to χ^2 which assesses the *exact* fit of the model to the data and is therefore sensitive to *N*. A well-fitting model is one which tends towards 0, with values of <.05 said to be close fitting (Brown, 2006: 83-84). The third category are comparative, or incremental, fit indices. The two most commonly reported are the comparative fit index (CFI) and the Tucker-Lewis index (TLI). Both of these measures of model fit assess the overall fit of a model by comparing the hypothesized model with a less restricted baseline model in which all the covariance among indicators is fixed to 0. The difference between the two models is then assessed. There are no absolute guidelines as to what constitutes a well-fitting model under CFI as it does not conform to any known distribution (Cheung and Rensvold, 2002). Initially it was suggested that a CFI of >.90 (Bentler, 1992), however, more recently it has been argued that values of >.95 should be considered well fitting (Hu and Bentler, 1999). The TLI is non-normed insofar as it is possible for values to fall outside of the range 0-1. Like the RMSEA it also penalizes models with more freely estimated parameters which do not improve overall fit markedly. The same cut-off criteria can be applied to the TLI as the CFI. In this thesis each of the measures of fit will be provided at times although special attention will be paid to RMSEA and CFI which are the most widely reported in the literature.

It is also worth noting the way in which MPlus deals with missing data given that this is an issue throughout. By default MPlus will estimate missing data under WLSMV in order to maximize the information available using pairwise deletion with respect to the independent variables in the model. In other words missing data is allowed to be a function of the observed covariates but not the observed outcomes. This has been shown to provide consistent estimates under certain missing data assumptions and has also been shown to outperform estimates based on listwise deletion (Asparouhov and Muthen, 2010). It is less efficient than the full-information maximum likelihood (FIML) approach implemented under maximum likelihood estimation (ML) and it cannot be used to model data which is not missing at random (NMAR). Consequently N may vary between two sets models based on which data is treated as a Y variable. As an example, mediation models will be examined in which results will be shown from a standard regression model and a mediation model. In this instance a covariate in the standard regression will be treated as an outcome in the mediation analysis which may increase N in the mediation model. In most instances this should not be a problem because it is likely the missingness in the mediating variable will not be systematic as such and will instead be based on the lack of an observation on particular wave. Large discrepancies in terms of the parameter estimates between the two models will obviously imply that treating the data is problematic. The only instance when data is purposefully excluded comes when data for parental, and in particular fathers are missing on the neighborhood attachment items. In this instance MPlus treats the indicator variables as outcomes and will estimate a model using the full data. However, the WLSMV treatment of missing data is not necessarily appropriate when the amount of missing data is high or is thought to be systematic. In instances where fathers data is used this often accounts for a large proportion of the sample. Moreover, it is plausible that the missingness is systematic and based on many single parent households. There are strong reasons to think that such households may differ in terms of the way in which they relate to the three dimensions of social capital and therefore chapters 7 and 8 do not estimate models based on data which uses large amounts of missing data from fathers. It is worth noting that some sensitivity checks were undertaken with respect to single parent households in mother only households and no systematic differences were noted between either the two parent or single parent estimates in terms of mothers. For a full discussion of the MPlus approach to missing data under WLSMV estimation see Aspaourhov and Muthen (2010).

5.13: Measurement invariance

Measurement invariance forms an important part of this thesis and is used in different ways and at different times in each of the analytical chapters. This is important because there is a need to construct neighbourhood attachment in different groups, or time points, and in order to make comparisons between these groups it is important to establish the same underlying latent variable is being looked at. It was noted above that it is also used when establishing that level 1 and level 2 latent variables measure the same variable. The following provides a brief overview of the approach here. More detailed information will be provided in the relevant chapters as and when these procedures are utilised.

Measurement invariance concerns the need to establish the consistency of the latent variable at different time points. This involves establishing whether or not the variable is

invariant in different groups¹⁹. The first step is to establish configural invariance which can establish whether the factor has the same basic structure at the different time points. Following this metric invariance needs to be established. This makes it possible to test whether or not the factor loadings are equivalent at the different time points. Finally scalar invariance establishes the equivalence of thresholds, which can be thought of as similar to means when using continuous data. Taking the following regression equation,

$$Y_{ijt} = \tau_{jt} + \lambda_{jt}\eta_{jt} + \varepsilon_{ijt}$$

 Y_{ijt} represents the score of individual *i* on the observed variable *j* at time *t*. τ_{jt} represents the intercept of the observed variable *j* at time *t*. $\lambda_{jt}\eta_{jt}$ specifies the latent variable where λ_{jt} represents the factor loading of the manifest variable *j* at time *t*, and η_{it} specifies the latent variable estimate of individual *i* at time *t*. ε_{ijt} represents the residual error for individual *i* on the observed variable *j* at time *t*.

Following Widaman et al (2010: 12-13), and adapting work from Widaman and Reise (1997), it is possible to identify a number of levels of factorial invariance. In the first instance it is important to establish *configural invariance*: that is, it is important to ascertain whether or not the pattern of indicator variables actually loads in the same pattern at different time points. For instance a six variable, two factor, model might load across the two latent variables such that the same variable loads onto the first factor at time point one but the second at time point two. In this instance the models would obviously be describing two different latent variables and there would be very little need to compare them further. This means specifying a CFA in which λ_{jt} load freely at the different time points and assessing measures of goodness-of-fit in order to establish that each is appropriate. This initial configural invariance model is best thought of as a baseline model against which other more restrictive models are compared.

¹⁹ It should be noted that groups here may refer to either distinct groups within the population such as men or women or to different measurement occasions. The principles underlying each are the same and will be discussed generally.

Metric invariance involves establishing whether or not the models have the same factor loadings λ_{it} . These are restricted to equality across the different time points and this model is then compared to the configural model. In essence this establishes that the factor is explaining the same amount of the variance of each indicator variable at the different time points. That is, even after it has been established that the same set of variables load onto the same set of factors it is still possible that the strength of the relationships at the different time points is very different. Once again, this may imply a different latent variable between the two time points because the way in which the variables are related to it are very different. Following this scalar invariance needs to be established. This entails setting the intercepts, or thresholds, to equality. It should be noted that here the test for metric and scalar invariance is done simultaneously following general recommendations when analysing the threshold and slopes for ordinal data. It is also possible to test other parameters in a model and it is important to note that structural parts of models are also assessed.

When testing for invariance the results can be compared using a χ^2 difference test $(\Delta \chi^2)$. It should be noted that a standard $\Delta \chi^2$ is not appropriate when using the WLSMV estimator as the χ^2 is not actually distributed as a χ^2 . This is because the WLSMV is mean and variance adjusted (see Asparouhov and Muthen, 2006, for a technical discussion of how WLSMV is implemented in MPlus). It is therefore not possible to compare the χ^2 statistics directly. However, the $\Delta \chi^2$ is meaningful when using the Satorra-Bentler scaled chi-square statistic (Satorra and Bentler, 2001). If the difference is large it may not be possible to accept the assumption of metric invariance (Widaman and Reise, 1997: 292-293).

It should be noted at this point that use of the χ^2 and the associated $\Delta \chi^2$ is not without problems. Because complex models with many parameters have more degrees of freedom than more restricted models, and as χ^2 is sensitive to reductions in the degrees of freedom, good model fit may be the result of an over parameterized model. Most important to the discussion here, χ^2 is highly sensitive to sample size. For example χ^2 will become larger as sample size increases and smaller as it decreases. Consequently, it is plausible that models with a large *N* may be rejected due to relatively minor differences in the model implied covariance matrix and the population covariance matrix (see Schermelleh-Engel and Moosbrugger, 2003: 31-33, for a more comprehensive discussion of these issues). It is for this reason that a great deal of effort has been placed into developing alternative fit indices which are not sensitive to these shortcomings. The limitations of χ^2 , particularly with reference to *N*, are well known. However, much published research still makes use of the $\Delta\chi^2$ for model comparison even though many of the same limitations apply. In this research use is also made of Δ CFI and Δ RMSEA.

6: Individual and community level predictors of participation in local groups, neighbourhood attachment and interpersonal trust

6.1: Introduction

The aims of this first empirical chapter are to set the scene for the analysis which follows. The basic question at the core of the thesis is the extent to which different social contexts can have an impact at stages of life on the three key dimensions of social capital. This chapter sets the scene by outlining the relationships that the each has with the others in an adult population. For example, does trust cause participation and attachment, or is the converse more likely. This is important because it will allow the findings in chapters 7 and 8 to be viewed from this perspective. In other words, if trust does cause participation then this should hold true in a younger population and across time and any differences may be important.

It has been argued in chapters 2 and 3 that the three dimensions of social capital (participation in local groups, neighbourhood attachment, and interpersonal trust) may be related to one another in a number of complex ways. A distinction can be made between those relationships that should be expected from the perspective of social capital and those which should be expected from a socialisation perspective. Following Uslaner (2002) it has been argued that interpersonal trust in particular should play a role in conditioning the other dimensions over the life course. However, if Putnam's (2000) conception of trust is correct then it should be dependent on both participation and neighbourhood attachment. This chapter does not examine the root of these relationships. Instead the aim is to assess how these three dimensions relate to one another in an adult population. It will provide a baseline for the analysis conducted in chapters 7 and 8 which explicitly seek to assess socialised relationships.

The chapter will proceed in two sections. In the first instance cross-sectional models of the three dimensions of social capital will be developed. These will include both individual and neighbourhood level effects. It is suggested that this model will be consistent with the social capital literature in suggesting that each of the three dimensions will be strongly predictive of the others. In other words, participation and neighbourhood attachment will predict trust and each other. Trust will also predict both attachment and participation. In other words the relationships will appear reciprocal in the manner shown in figure 6.1.1. However, this kind of relationship, in and of itself, may not be as theoretically interesting as it might first appear. From one perspective it implies that each should lead to the other and that one way in which more participatory, engaging, and trusting communities might be developed would be to stimulate participation and neighbourhood attachment within them. This is intuitively appealing

Figure 6.1.1: Reciprocal relationships between interpersonal trust, neighbourhood attachment, and participation in local groups



because it suggests that creating communities with higher levels of social capital should be comparatively straightforward because policy interventions which, for example, seek to establish civic groups should be much more straightforward to implement than attempting to stimulate social trust early in life.

However, as was indicated above cross-sectional analysis of these kinds of relationships is often beset by problems of endogeneity bias (Berry, 1984; Hausman, 1978) whereby apparent relationships are due to the omission of some other relationships. Both Sonderskov (2011) and Sturgis et al (2012) suggest that this is the case for the relationship between trust and participation. For example, trust and participation may be correlated with one another but this does not necessarily mean that the relationship between the two is causal. For example, participation at time t may be caused by trust at time t-1 which may account for the relationship between both trust and participation at time t. Moreover, if the trust is a stable *moral* characteristic, as argued by Uslaner (2002), trust at time t is most likely to be 'caused' by trust at t-1 (see also Claibourn and Martin (2000) and Stolle and Hooghe (2004)) . The same arguments can be made for both participation and attachment although from a theoretical perspective it would be reasonable to expect these to be weaker. For example participation is likely to be inherently less stable than trust from a socialisation perspective because of the costs involved in participating and because people may be more likely to participate at different stages of life. Neighbourhood attachment should also not be socialised because it is argued to be predicated on the kinds of neighbourhood that people live in as opposed to some set of socialised attitudes. It is worth noting however that there may appear to be relationship between neighbourhood attachment at time t and t-1 if an individual has not moved between the two time points because the same set of weak networks which neighbourhood attachment reflects may be present at both times.

6.2: Hypotheses

It is worth noting that at least some of the hypotheses in this chapter have been addressed before. Indeed, and as has been highlighted throughout, there is strong evidence to suggest that trust does not work in the way suggested by Putnam (2000). Claibourn and Martin (2000) found only a weak relationship between membership of groups and interpersonal trust and found no relationship in the opposite direction. More recently Sturgis et al (2012) demonstrate that trust is unlikely to result from membership of either formal or informal social networks. They go on to argue that trust is likely to developed early in life and that the apparent effects found in the cross-sectional literature are likely to be caused by trusters selecting into networks rather than networks causing trust. Sonderskov (2011: 426) reaches a similar conclusion arguing that '[t]he alleged positive effect of membership on trust is partly or solely caused by self-selection of trusting citizens into public good producing associations.' They also make the important point that more trusting people are more likely to join public good (or civic) organisations, and that it is not related to participating in purely instrumental groups.

This chapter extends these previous analyses by including a measure of neighbourhood attachment into the framework. This is useful because attachment should not be related to underlying attitudinal factors as such, although more trusting and participatory people, for example, may be likely to have higher levels of attachment. Instead it should be related to the external structure of social networks within a neighbourhood following the logic of Granovetter (1973). This is both useful and interesting because it provides a slightly different way of thinking about the relationships that should exist. In other words there are strong socialisation arguments to suggest that trust, and to a lesser extent participation, should be based on prior attitudes and behaviours. By contrast attachment should be influenced by proximal neighbourhood related effects. This leads to the expectation that under a socialisation framework neighbourhood attachment should be predicted by both participation and trust. Moreover, it should predict participation via the effects of mobilisation.

Based on these arguments it is therefore possible to specify a number of hypotheses regarding the three dimensions of social capital: (1.i) Using cross-sectional data trust should be predicted by higher levels of participation and attachment; (1.ii) however, when controlling for prior measures of trust this should no longer be the case (because trust is a relatively unchanging moral characteristic). (2.i) Participation should be related to trust and higher attachment in the cross-sectional model; (2.ii) this effect should be remain when prior levels of participation are accounted for (because participation is to some extent habitual but should also be influenced by proximal factors). (3.i) Neighbourhood attachment should be related to both trust and higher participation in the cross-sectional model; (3.ii) this effect should remain when prior levels of attachment are accounted for (because participation is based on proximal neighbourhood related factors). In other words, the two sets of models are set up as competing. The existence of a relationship in the cross-sectional models may confirm previous findings but it cannot be taken as evidence for the existence of a causal relationship. However, if relationships remain in the longitudinal analysis this will provide support for a social capital, rather than a socialised, view of each of the three dimensions.

6.3: A measure of neighbourhood attachment

Prior to testing the hypotheses outlined it is necessary to create a measure of neighbourhood attachment. As was discussed in chapter 5 this will be done using a battery of questions about how people feel about their neighbourhoods. Table 6.3.1 shows a correlation matrix for these variables in 1998. It should be noted that both 2003,

and 2008, show similar correlations. This will be formally tested in section 6.12. Because factor analysis is effectively a way of assessing and explaining the correlations between some set of variables this table is strongly indicative of the factor structure that is likely to be found. No clear pattern arises out of this other than that all variables are reasonably highly correlated with one another and none are so highly correlated that they are would be effectively measuring the same thing (a correlation of above .9 would generally be concerning in this kind of analysis). If two distinct groups of variables had been identified,

	Belong to neighbour- hood	Local friends mean a lot	Advice obtainable locally	Similar to others in neighbour- hood	Talk regularly to neighbours
Belong to neighbourhood	1				
Local friends mean a lot	0.566	1			
Advice obtainable locally	0.464	0.628	1		
Similar to others in neighbourhood	0.531	0.500	0.432	1	
Talk regularly to neighbours	0.485	0.535	0.452	0.459	1
Ν	5,127				

Table 6.3.1: Correlation matrix of indicator variables of neighbourhood attachment,1998

in other words if two sets of two or more variables had been correlated with one another but not the others, this may suggest that a two factor solution would be preferred.

There are clear substantive reasons that a factor model should be used here. Neighbourhood attachment is conceptualised as a measure of the kinds of place that people live in, in terms of their relationships with others in the community. It is argued that individuals who live in communities characterised by dense weak situational networks should have higher levels of neighbourhood attachment. This implies that within such neighbourhoods they should also score more highly on each of the indicator variables shown in figure 6.3.1. This makes sense insofar as these variables ask about the neighbourhood or local community. Scoring highly on these variables should also imply a sense of embeddedness within the neighbourhood. For instance individuals who say that 'local friends mean a lot' are likely to feel greater ties to the local community. However, in order to establish the validity of this concept it will also be necessary to determine the extent to which it predicts and is predicted by other key concepts. For instance, neighbourhoods characterised by high levels of social disorder (here deprivation will be used a proxy for this (Sampson et al, 1997)) should have lower levels of attachment among individuals. Individuals with higher levels of attachment should participate more frequently following the logic of mobilisation (Rosenstone and Hansen, 1993). If both of these are correct this implies a degree of construct validity insofar as the factor will be explaining theoretically meaningful relationships.

From a technical perspective it should be reiterated that these variables are both ordinal and skewed towards positive answers. In other words individuals are more likely to answer that they 'belong to their neighbourhood', or 'talk regularly to their neighbours' than that they do not (see table 6.3.2). Given this the WLSMV estimator is used as outlined in section 5.10.

Table6.3.2:Row percentages for responses to indicators of neighbourhoodattachment, 1998

	Strongly disagree	Disagree	Neither	Agree	Strongly agree	%	N
Belong to neighbourhood	2.08	8.43	20.34	54.12	15.02	100.00	5181
Local friends mean a lot	1.74	10.70	22.53	50.29	14.73	100.00	5166
Advice obtainable locally	4.74	19.49	12.58	50.14	13.05	100.00	5173
Similar to others in neighbourhood	4.90	13.78	22.65	49.48	9.19	100.00	5166
Talk regularly to neighbours	2.64	11.56	12.37	58.18	15.25	100.00	5182

Table 6.3.3 show the results of the single level confirmatory factor model. These results are fully standardised²⁰. It is worth noting *N* is slightly higher in this model than in the correlation matrix shown in table 6.3.1. This is because MPlus implements missing data

$$b^* = \frac{bSD_x}{SD_y},$$

where, b^* represents the fully standardised factor loading, b the unstandardised factor loading, SD_x represents the standard deviation of the predictor, and SD_y represents the standard deviation of the indicator. See Brown (2006: 136) for more information.

²⁰ Fully standardised results are presented for the measurement part of the models following Byrne (2012: 142-144). For the purposes of identification the loading for 'local friends mean a lot' is fixed to 1 and the y^* variance of the observed covariates is standardised to 1, where y^* represents the underlying latent distribution of y. This is computed as:

assumptions based on pairwise deletion of covariates when using the WLSMV estimator (see Asparouhov and Muthen, 2010). All indicators load strongly onto the model and all have R^2 values above .5. This implies that the latent variable explains over 50% of the variance in all variables. The CFI in this model is .987 and the TLI is .974 indicating that the model has a good fit as they are above the .95 threshold suggested by Hu and Bentler (1999). RMSEA is above the recommended threshold of .08 at .116. However, RMSEA may be inflated in models with low degrees of freedom (*df*), which is the case here (*df*=4) (see Kenny et al, 2012). The correlated residuals for this model are below the <.10 threshold used when assessing local areas of strain. The model is well-fitting at the individual level.

As well as fitting a latent variable of neighbourhood attachment on the individual level, it is also necessary to fit a model on the neighbourhood level. Once again this is important as it allows for an examination of predictors of neighbourhood attachment at the neighbourhood level. This will allow the kind of model shown in figure 5.9.2 to be established. As has already been discussed this will provide an important insight into the validity of neighbourhood attachment in terms of the way it has been conceptualised. It will also provide important information about how this dimension of social capital

Table 6.3.3 Confirmator	y factor ana	lysis of	neighbour	hooc	lattac	hment,	1998
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	Coef.	Std. err.	R ²	
Local friends mean a lot	0.871	(0.005)	0.759	***
Belong to neighbourhood	0.769	(0.007)	0.591	***
Advice obtainable locally	0.764	(0.007)	0.583	***
Am similar to others in neighbourhood	0.708	(0.008)	0.501	***
Talk regularly to neighbours	0.730	(0.008)	0.533	***
Ν	5,188			

* = p<.1, **=p<.05, *** = p<.001

Notes: Link function = probit. Estimator = WLSMV. Coefficients are standardised.

behaves relative to trust and participation. However, it cannot provide estimates of neighbourhood attachment at the level of the neighbourhood *per se* because the mean *N* within neighbourhoods is low. In other words the neighbourhood estimate of neighbourhood attachment cannot be used here as a predictor of, for example participation, at the neighbourhood level. Table 6.3.4 shows the two-level latent variable model. The model building process follows a similar strategy to that described in section

5.11 meaning that a series of hierarchical models are specified in which increasingly restrictive parameter specifications are made in order to establish whether or not the variables are can be interpreted in the same ways as on both levels.

The model has strong fit indices with a CFI and TLI of .981 and .974. The RMSEA is adequate at .059. Notably the SRMR, which takes into account the average of the magnitude of residuals, provides evidence of good model fit, and is the only statistic

Table	6.3.4:	Confirmatory	factor	analysis	of	neighbourhood	attachment:	two-leve
partia	lly inva	ariant model, 1	.998					

	Coef.	Std. err.	R ²	
Individual				
Local friends mean a lot	0.851	(0.007)	0.724	***
Belong to neighbourhood	0.753	(0.008)	0.726	***
Advice obtainable locally	0.754	(0.009)	0.569	***
Am similar to others in neighbourhood	0.681	(0.010)	0.463	***
Talk regularly to neighbours	0.714	(0.009)	0.509	***
Neighbourhood				
Local friends mean a lot	1.000	NA	NA	
Belong to neighbourhood	0.788	(0.042)	0.621	***
Advice obtainable locally	1.000	NA	NA	
Am similar to others in neighbourhood	0.809	(0.045)	0.654	***
Talk regularly to neighbours	0.899	(0.058)	0.808	***
Ν	5,188			
Cluster N	1,405			
Am similar to others in neighbourhood Talk regularly to neighbours N Cluster N	0.809 0.899 5,188 1,405	(0.045) (0.058)	0.654 0.808	***

* = p<.1, **=p<.05, *** = p<.001

Notes: Link function = probit. Estimator = WLSMV. Coefficients are standardised.

which does so for both levels, having a within level SRMR of .034 and a between level SRMR of .075²¹. In the final model the metric between the within and between level parameter loadings are set to be invariant. Specifying an equal metric on both levels allows the same latent variables to be established on both, which in turn allows the calculation of an ICC, and to make meaningful comparisons between levels 1 and 2.

²¹ There is debate concerning the appropriate cut-points for these descriptive statistics in much of the literature and there has been even less research concerning the appropriateness of such measures in multilevel models. However, the fit statistics above do seem to fall within the relatively broad restrictions suggested by Hu and Bentler (1999) for acceptable fit.

Examination of the factor loadings suggested that the within level model is estimated well but the neighbourhood level of the most restricted model was problematic. This was reflected in the poor fit statistics in terms of SRMR on the neighbourhood level. Following Byrne et al (1989) a partially invariant model was specified. This freed the 'advice obtainable locally' allowing it to be estimated unrestricted on both levels. It was also necessary to set the error residual variances for 'advice obtainable locally' and 'local friends mean a lot' to zero due to small negative residual variances. The ICC for neighbourhood level. This model suggests that neighbourhood attachment is measuring the same variable on the individuals and neighbourhood levels. It is worth noting that standardised scores are higher on the neighbourhood level. This is due to the fact that the data is aggregate rather than individual level which necessarily contains less measurement error (Byrne, 2012: 365).

The model does not show complete measurement invariance. What are the implications of this? In multilevel CFA the interest is in testing whether or not the structure of the variance is statistically the same on the within and between levels. In the analysis above for 'advice obtainable locally' it is not. This variable therefore has a larger impact on the factor on the between level than on the within level. This is not uncommon, as in practice it is rare to find full measurement invariance in multilevel CFA models. However, broadly speaking and following the literature it is possible to be confident that the two concepts are close enough to being statistically equivalent to estimate parameters at the between level and to infer that the variable is basically the same as on the within level. Without establishing measurement invariance this may not have been possible.

6.4: Cross-sectional analysis

Hypotheses 1.i, 2.i, and 3.i suggest that interpersonal trust, neighbourhood attachment, and participation in local groups, should all be strongly related to one another based on insights from the social capital and mobilisation literatures. The results from this section will be compared and contrasted with a longitudinal model in which different effects are expected for the three dimensions of social capital based on theoretical reasoning from the socialisation literature. This section will examine whether or not the cross sectional expectations are correct. This is an important baseline analysis given the theoretical importance of the longitudinal analysis which will follow. Table 6.4.1 shows a cross-tabulation of participation and trust.

This suggests that, as would be expected, individuals who say that other people cannot be trusted are far more likely to say that 'never / almost never participate in local groups'. Of the 3,723 people who state that you 'can't be too careful' when asked if 'other people can be trusted' just over 63% say they almost never participate. By contrast, just under 55% of those who participate 'at least once a year or less', through to 'at least once a week' or more are trusting. In the first instance this implies that trust

		Trustworthiness of others				
			Most			
		Can't be too	people			
		careful	can be	Total		
s II.	Never / almost never	63.85	36.15	100		
tes oup	Once a year or less	46.03	53.97	100		
cipa I gre	Several times a year	44.79	55.21	100		
artic oca	At least once a month	44.70	55.30	100		
Pa	At least once a week	45.55	54.45	100		
	Ν			5,104		

 Table 6.4.1: Cross-tabulation showing row percentages of participation and trust, 1998

does seem to be related to participation although the direction of causality is impossible to infer. Neighbourhood attachment is a continuous factor variable with a minimum of -2.53 a maximum of 1.841 and a mean of very close to 0. However, the mean for individuals who trust is .092 and for those who do not it is -.072. This suggests that individuals with a higher level of neighbourhood attachment tend to trust more. Figure 6.4.1 shows a boxplot of participation in local groups over neighbourhood attachment. This suggests that individuals who participate more tend to have higher levels of neighbourhood attachment. Figure 6.4.1: Boxplot: Participation in local groups over neighbourhood attachment, 1998 (N = 5164)



A number of other key variables will be used in the multivariate analysis. These are shown in table 6.4.2. The majority of respondents lived in the same address last and own their residences. These individuals should be more embedded within their local communities and it would be reasonable to expect them to have higher levels of neighbourhood attachment, participation. Trust may depend on how it is formed: socialised trust would unlikely to be unaffected by ownership and length of residence. A social capital view of trust should be. Women are overrepresented in the sample relative to men. They should have higher levels of neighbourhood attachment whereas it may be reasonable to expect men to participate more. There should be no sex difference in terms of trust. The mean age of the sample is approximately 45.

It is reasonable to expect older people to have higher levels of both attachment and trust, because they should be more socially embedded in their communities and because older generations tend to be more trust (see Whiteley, 1999). They may participate less although this relationship is often curvilinear with the middle aged participating most. It should be noted that a squared age variable was included in the appropriate models but was not found to be predictive of any of the three dimensions of social capital. Deprivation should be negatively related to neighbourhood attachment because it should be linked to more socially unstable communities. The more highly educated
Variable	Categories		N
Same address last year	0 = No: 641	1 = Yes: 4,523	Total = 5,164
Tenure	0 = Owned: 4,113	1 = Rented: 1,091	Total = 5,204
Sex	0 = Female: 2,882	1 = Male: 2,362	Total = 5,244
Age	16 - 90, mean = 45		Total = 5,244
Deprivation	-4.79 - 15.9, mean = .372 (higher = deprived)		Total = 5,244
Education	1 = None		1,454
	2 = CSE		315
	3 = O-level		1,435
	4 = A-level		949
	5 = HNC, HND, teaching		369
	6 = First degree		503
	7 = Higher degree		121
		Total =	5,146
Social Class	0 = Never had a job		137
(most recent job,	1 = Service class higher		748
inc. never had a job)	2 = Service class lower		1,425
	3 = Routine, non-manual		774
	4 = Self-employed / small owner		376
	5 = Lower technical / and manual supervisor		348
	6 = Skilled manual		354
	7 = Manual non-skilled / agriculture		1,038
		Total =	5,200
Rural / Urban	1 = Urban >10k		4,010
	2 = Town and fringe		670
	3 = Village, hamlet, isolated dwellings		564
		Total =	5,244

Table 6.4.2: Frequencies of variables used in the cross-sectional analysis, 1998

should participate more but be less reliant on neighbourhood attachment than the less educated. This relationship should be the same for social class. Here it should also benoted that an extra category has been included which measures those who have never worked. The majority of these are under the age of 21. Finally, the majority of the sample live in urban areas. Urbanity should be negatively related to participation and neighbourhood attachment. It should only have an impact on trust if the social capital view of trust as being affected by strategic decisions is correct.

6.5: Cross-sectional models

Table 6.5.1 shows multilevel regressions of the predictors on neighbourhood attachment²². Model 1 shows the individual level covariates and models 2 includes the neighbourhood level variables. The basic form of the model is shown in figure 6.5.1 where η represents neighbourhood attachment on the between neighbourhood and within neighbourhood levels. x_{n1} represent individual level covariates including the key variables participation and trust. x_{n2} are only estimated in model 2 and represent the neighbourhood level covariates deprivation and neighbourhood type.



Figure 6.5.1: Multilevel model for latent variable

²² It should be noted that random effects are not reported in tables 6.5.1 to 6.5.3 for parsimony, as substantive interest is in interpreting the effects of the neighbourhood level variables. ICC statistics suggest that MLM is necessary to account for clustering within the data.

Table	6.5.1:	Single	and	multilevel	linear	regression	models	on	neighbourhood
attach	ment, 1	1998							

		Mode	el 1		Mode	el 2	
		Coef.	Std. err.		Coef.	Std. err.	
	Individual Level						
Participation in local groups	1 = Never / Almost never,						
Farticipation in local groups	5 = weekly	0.137	(0.022)	***	0.132	(0.022)	***
Trust:	0 = Can't be too careful	0.345	(0.055)	***	0.337	(0.056)	***
Same address last year	0 = No	0.311	(0.080)	***	0.314	(0.081)	***
Tenure:	0 = Owner	-0.454	(0.066)	***	-0.409	(0.067)	***
Education:	0 = none, 7 = higher						
	degree	-0.070	(0.019)	***	-0.076	(0.019)	**
Sex:	0 = Female	-0.371	(0.059)	***	-0.376	(0.059)	***
Age:	higher = older	0.026	(0.002)	***	0.026	(0.002)	***
Social class:	Reference = Service class higher						
	Never had a job	0.255	(0.174)		0.306	(0.180)	*
	Svc. class lower	0.267	(0.089)	**	0.285	(0.090)	**
	Routine non-manual	0.276	(0.103)	*	0.307	(0.104)	**
	Self-employed / small						
	owner	0.382	(0.126)	**	0.370	(0.129)	**
	Lower technical / manual	0.367	(0.127)	**	0.399	(0.129)	**
	Skilled manual	0.672	(0.135)	***	0.712	(0.137)	***
	Non-skilled manual	0.615	(0.103)	***	0.650	(0.104)	***
	Neighbourhood Level						
Townsend deprivation					-0.037	(0.010)	***
Neighbourhood type:	Reference = City					. ,	
	Town				0.163	(0.107)	
	Village				0.399	(0.116)	**
R ²		0.157			0.152		
Ν		4,961			4,941		

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

The model is estimated using the WLSMV estimator. The latent variable estimates, not shown here are generated using a probit model, and the estimates of the *x* variables on η are linear regression coefficients. There are no discrepancies between the models in terms of the signs and magnitudes of any of the coefficients. Both participation in local groups and interpersonal trust are strong positive predictors of neighbourhood attachment. This was expected and is consistent with the hypotheses.

Living at the same address as last year and tenure suggest that social embeddedness in a neighbourhood is related higher levels of neighbourhood attachment. Sex and age suggest that women and older people are likely to have higher levels of neighbourhood attachment. Both education and social class are consistent with expectations insofar as they suggest that the lower classes and least educated are likely to have higher levels of neighbourhood attachment. In other words, and has been suggested throughout, more disadvantaged individuals will be more likely to rely on social support mechanisms with the neighbourhood than the advantaged who should have recourse to more networks outside of it. This is also consistent with other research (see Li et al (2005) for example) In terms of the individual level variables, therefore, neighbourhood attachment works as was expected.

The neighbourhood level variables also behave in the expected ways. Deprivation has a negative sign indicating that more deprived areas have a negative effect on neighbourhood attachment. More rural areas have higher levels of neighbourhood attachment compared with the most urban areas. Towns cannot be distinguished from cities in terms of their relationship with neighbourhood attachment. Overall, these results suggest that neighbourhood attachment is a valid measure in terms of the theoretical framework surrounding it. They also imply that neighbourhood attachment is predicted by trust and participation. These expectations were outlined in hypotheses 3.i and suggest that a social capital interpretation of these relationships (i.e. that, they are reciprocal) is likely to be valid.

Table 6.5.2 repeats this analysis for participation in local groups and addresses hypothesis 2.i which stated that a cross-sectional analysis should find that it is predicted by both neighbourhood attachment and interpersonal trust. This model is shown in figure 6.5.2. The model is similar to figure 6.5.1 insofar as the between part of the model represent neighbourhood level variance whereas the within part of the model represents within level variance. The individual level part of the model also includes a latent variable of neighbourhood attachment which is estimated simultaneously. Because the outcome here is ordinal a probit regression is estimated. As in table 6.5.1 model 1 shows the multilevel results excluding the neighbourhood level covariates and model 2 includes these. Both models are consistent and neither shows large differences in terms of the signs and magnitudes of the estimates.





Hypotheses 2.i suggested that both attachment and trust should be positively related to participation and this is the case. Once again this was expected and is supported by the mobilisation and participation literatures more generally. The other variables in this model also conform to the general findings and expectations in the existing literature. In particular living in less dense areas in terms of population seems to be predictive of higher levels of participation. People who live in the same address last year are more likely to participate although there is no effect of owning a home. This implies that participation is more likely to be contingent on the kind of networks and awareness that arise out of living in an area for a length of time rather than making a commitment to purchase a home in the area. This also has implications in terms of the relationship between attachment and tenure in table 6.5.1 because it suggests that individuals who own their home may feel more attached to their local communities. However, the line of causality here is not clear and it is plausible that people own a home in communities

that they feel more attached in. Women are also clearly more likely to participate in their local communities than men. This is the opposite of much of the participation literature,

Table 6.5.2: Single and multilevel probit regression models on participation in localgroups, 1998

		Model 1			Mod		
		Coef.	Std. err.		Coef.	Std. err.	
	Individual Level						
Neighbourhood							
attachment		0.076	(0.012)	***	0.072	(0.012)	***
Trust:	0 = Can't be too careful	0.258	(0.042)	***	0.249	(0.043)	***
Same address last year	0 = No	0.202	(0.067)	**	0.206	(0.067)	**
Tenure:	0 = Owner	-0.006	(0.052)		0.011	(0.053)	
Education:	0 = none, 7 = higher						
Education.	degree	0.124	(0.014)	***	0.123	(0.014)	***
Sex:	0 = Female	0.213	(0.047)	***	0.210	(0.047)	***
Age:	higher = older	-0.018	(0.001)	***	-0.018	(0.001)	***
Social class:	Reference = Service class higher						
	Never had a job	0.273	(0.125)	**	0.288	(0.125)	**
	Svc. class lower	0.001	(0.068)		0.008	(0.068)	
	Routine non-manual	0.050	(0.079)		0.061	(0.079)	
	Self-employed / small						
	owner	0.021	(0.092)		0.004	(0.092)	
	Lower technical / manual	-0.316	(0.107)	**	-0.301	(0.107)	**
	Skilled manual	-0.280	(0.103)	**	-0.284	(0.103)	**
	Non-skilled manual	-0.344	(0.08)	***	-0.333	(0.081)	***
	Neighbourhood Level						
Townsend deprivation					-0.009	(0.008)	
Neighbourhood type:	Reference = City						
	Town				0.080	(0.083)	
	Village				0.194	(0.082)	**
R ²		0.177			0.171		
Ν		4,968			4,948		

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

although was not unexpected in terms of participation in local groups, as it has been argued that women are more likely than men to be engaged in their local communities.

Age is positively related to participation which is consistent with most literature into this topic. Not shown here is a squared term for age which was non-significant when tested. In much of the participation literature this indicates that older people tend to participate less. That this is not the case here suggests that this does not apply for participation in

local groups, although there may be some variation in the *types* of local group that older and younger people get involved in. Consistent with the literature the more highly educated tend to participate more and the lower social classes tend to participate less. Once again this is in contrast to the relationship that class has with neighbourhood attachment where the lower classes tend to have higher levels. It is worth noting that those people who have never had a job tend to participate in local groups *more* than any other group. This may be a function of the fact that this group is by and large still in education.

Table 6.5.3 shows the cross-sectional model for interpersonal trust. This is the same basic model as shown in figure 6.5.2. Once again a probit linking function is used because trust

		Model 1			Mod	el 2	
		Coef.	Std. err.		Coef.	Std. err.	
	Individual Level						
Neighbourhood attachment		0.079	0.012	***	0.077	(0.012)	***
Participation in local groups	1 = Never / Almost never, 5 = weekly	0.095	0.015	***	0.095	(0.016)	***
Same address last year	0 = No	0.078	0.057		0.070	(0.061)	
Tenure:	0 = Owner	-0.227	0.045	***	-0.201	(0.05)	**
Education:	0 = none, 7 = higher	0.424	0.012	***	0 4 2 7	(0.01.4)	***
Sex.	degree	0.131	0.013	*	0.127	(0.014)	*
Sex:	U = Female	0.080	0.045	***	0.083	(0.046)	***
Age: Social class:	Reference = Service class higher	0.009	0.001		0.009	(0.001)	
	Never had a job	-0.097	0.126		-0.083	(0.133)	
	Svc. class lower	-0.029	0.063		-0.014	(0.066)	
	Routine non-manual	-0.104	0.072		-0.084	(0.075)	
	Self-employed / small	0 1 0 0	0.000	**	0.205	(0,00)	**
		-0.190	0.086	**	-0.205	(0.09)	**
	Lower Lechnical / manual	-0.268	0.092	***	-0.255	(0.096)	***
	Non-skilled manual	-0.414 -0.319	0.093	***	-0.393 -0.317	(0.098) (0.074)	***
	Neighbourhood Level						
Townsend deprivation					-0.017	(0.007)	**
Neighbourhood type:	Reference = City						
	Town				0.118	(0.07)	*
	Village				0.186	(0.077)	**
R ²		0.144			0.139		
Ν		5,115			5,095		

	Table 6.5.3: Single and multilevel	probit regression models on inter	personal trust, 1998
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* = p <.1, ** = p <.05, *** = p <.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

is a binary variable. Hypothesis 1.i suggests that trust should be positively predicted by both participation and attachment and this is the case. This is consistent with Putnam's (1995; 2000) conception of trust as being generated via involvement in both formal and informal groups. Throughout it has been stressed that this is one of the key questions of the thesis insofar as the difference between the Putnam (1995; 2000) conception of the way in which trust is generated is so different to the socialisation perspective, and in particular that advocated by Uslaner (2002). It has been noted that a weakness of crosssectional models is the inability to account for selection bias. Therefore this result was certainly expected. However, as trust is thought to be strongly socialised these effects should disappear when prior levels of trust are accounted for.

The impact of the neighbourhood level variables on trust is noteworthy here. They suggest that both deprivation and living in a less urban area, relative to living in the most urban areas, are related to interpersonal trust. The former has a negative relationship whereas the latter is positive. These results are opposed to a highly socialised view of trust. However, the effect may once again be due to selection bias. For example, more trusting people may prefer to live in less urban areas and less deprived areas, and even if the difference is not a result of preference it may be the result of other kinds of selection. It is reasonable to suppose that most people would prefer to live in less deprived areas but that the ability to do so may be related to the costs of doing so. If, as is clear in table 6.5.3, higher education and a higher class position are also related to trust this may explain the apparent selection of trusting people into less deprived and less urban areas. This kind of selection effect will be addressed to some extent in chapter 8 when difference models are estimated between youth and early adulthood. However, it will not be addressed directly and is an important counter-explanation for many of the observed neighbourhood effects.

Tenure is a strong and positive predictor of trust but living in the same address as last year is not. This may imply that trust is less contingent on proximal factors than either participation or attachment. That is, trust may be predicted by the kind of stability represented by owning a home whereas simply living in a place may not be enough to change whether or not a person is likely to be trusting. In other words this lend some support to the socialisation view of trust. It is also worth noting that the lack of an effect of sex on trust is supported here given that the sample is large and non-significant at p<.05.

Overall, and as was expected, the cross-sectional models presented here lend support to the notion that the three dimensions of social capital work in a virtuous circle, where participation, attachment and trust, all cause one another. As was noted at the outset of section 6.4 these results are a baseline against which the more rigorous models developed in the rest of this chapter can be assessed.

6.6: The relationships between interpersonal trust, neighbourhood attachment, and participation in local groups, over time

In section 6.5 it has been shown that cross-sectional models might be taken as evidence for relatively strong relationships between neighbourhood attachment, participation in local groups, and interpersonal trust. Specifically tables 6.5.1 to 6.5.3 address hypotheses 1.i, 2.i, and 3.i, and demonstrate that in each there is evidence that the three dimensions of social capital are related to one another. It has been argued that this may be due to omitted variable bias rather than a causal relationship. For example, if trust at t-1 predicts participation at t this could account for the apparent relationship between trust and participation at t. This section addresses these questions and in particular hypotheses 1.ii, 2.ii, and 3.ii. These stated that: (1.ii) there should be no effect of participation and attachment on trust when including prior measures of trust in the model; (2.ii) both attachment and trust should positively predict participation even when including prior measures of participation; (3.ii) both trust and participation should predict attachment in the presence of a prior measure of attachment. It is worth noting that, with the exception of trust, hypotheses are not made about the relationship that attachment and participation will have on themselves across time. That is, it is implied that the strength of the relationship between trust at t and t-1 will account for most of the variance in trust, meaning that neither participation nor attachment will predict trust when trust at t-1 is included. Thus, (1.iii) trust at t will be predicted by trust at t-1. Participation should be predicted by participation at *t*-1 as the behavioural approaches to socialisation imply that participation is to a large extent habitual (it should be noted that this does not preclude contemporary effects). Therefore, (2.iii) participation at t will *be predicted by participation at t-1*. Finally, neighbourhood attachment should not be predicted by neighbourhood attachment at t-1 because it should be primarily affected proximate events. This leads to: (3.iii) *neighbourhood attachment at t will not be predicted by attachment at t-1*.

In order to examine this an autoregressive cross-lagged model is developed which allows an analysis of these effects by including lagged estimates of the three dimensions of social capital, taking into account previous effects of each. This establishes a relatively stringent test of the impact of the cross-lagged parameters as it includes the impact of a variable on itself at a previous time point. For example, taking participation at time point two, the impact of social capital and trust at time point one are analysed when including the coefficient of participation at time point one. Consequently any variance explained by trust or social capital in this situation can be attributed to these variables rather than covariance with participation at the same time. In other words, by controlling for the variance explained by participation at an earlier time point it is possible to make stronger claims about the impact of other parameters in the model. Prior to doing this however it is necessary to ensure that neighbourhood attachment means the same thing from one time to the next. It is theoretically plausible that the loadings will be different at different time points and it is therefore necessary to test the assumption that it is stable using measurement invariance.

6.7: Measurement invariance and neighbourhood attachment

It was established in section 6.3 that the cross-sectional CFA model had strong goodness of fit (GFI) statistics²³ in 1998. The first three models shown in table 6.7.1 shows fit indices for 1998, 2003 and 2008. These factors are estimated separately in order to establish goodness-of-fit. In subsequent models they are estimated simultaneously. Here each model has a good fit in terms of both the CFI and TLI statistics. No model is particularly strong with respect to the RMSEA or WRMR statistics although as has been

²³ Both the CFI and TLI were strong. Notably the RMSEA was low although this was likely to be due the sensitivity of this statistic for models with low degrees of freedom (Kenny et al, 2012).

discussed neither of these statistics is particularly reliable under certain conditions²⁴. Therefore, configural invariance appears to hold, indicating that the same set of indicator variables load onto the factor at the three different points in time. This is an important first step in testing for factorial invariance.

After establishing that each time point has similar loadings in terms of the factors the three time points are estimated simultaneously in one model in order to establish a

Figure 6.7.1: Longitudinal confirmatory factor model specification and notation for testing longitudinal measurement invariance



baseline against which more restrictive models can be compared. This is done using the framework outlined in figure 6.7.1.

In the first instance all parameters are freely estimated except λ_{11} , λ_{21} and λ_{31} which are set to 1. Latent means α_t , the latent variances σ_t and the covariances among the latent variables $\psi_1 - \psi_9$ are freely estimated. The residuals θ_{11} ... θ_{tn} of the manifest variables y_{11} ... y_{tn} are allowed to covary at the different time points as it is reasonable to expect that the residual variances will not be independent due to the fact the same questions have been asked of the same individuals at each time point. This is shown in model 5 in table 6.7.1 and has a χ^2 value of 1145.748 with 72 degrees of freedom. This result is

²⁴ Studies have suggested that the WRMR statistic does not perform well in some instances, and in particular when longitudinal models are being estimated (Yu, 2002).

Model		N	χ²	$\Delta \chi^2$	Df	∆df	Р	CFI	∆CFI	TLI	RMSEA	∆RMSEA	WRMR
1	1998	5168	355.412		5		0.000	0.987		0.974	0.116		2.325
2	2003	5124	451.512		5		0.000	0.982		0.963	0.132		2.618
3	2008	4938	388.372		5		0.000	0.986		0.971	0.125		2.376
4	Unrestricted	5217	4175.044		87		0.000	0.945		0.933	0.095		4.033
5	4 + correlated residuals	5217	1145.748		72		0.000	0.986		0.979	0.053		2.099
6	5 + invariance: metric & scalar	5217	1246.950	314.809	120	48	0.000	0.985	0.001	0.987	0.042	0.011	2.525
7	6 - λ_{t1} free	5217	1267.083	305.042	112	40	0.000	0.984	0.002	0.985	0.044	0.009	2.509
8	6 - λ_{t2} free	5217	1155.519	202.064	110	38	0.000	0.986	0.000	0.987	0.043	0.010	2.372
9	6 - λ_{t3} free	5217	1232.663	256.929	110	38	0.000	0.985	0.001	0.986	0.044	0.009	2.438
10	6 - λ_{t4} free	5217	1188.196	227.715	110	38	0.000	0.985	0.001	0.986	0.043	0.010	2.405
11	6 - λ_{t5} free	5217	1278.104	300.646	110	38	0.000	0.984	0.002	0.985	0.045	0.008	2.500
12	$6 - t_1$ free	5217	1125.382	67.883	92	20	0.000	0.986	0.000	0.984	0.046	0.007	2.180
13	6 - t ₂ free	5217	1258.558	254.461	96	24	0.000	0.984	0.002	0.983	0.048	0.005	2.479
14	6 - t ₃ free	5217	1127.304	129.572	96	24	0.000	0.986	0.000	0.985	0.045	0.008	2.277

Table 6.7.1: Measurement invariance in 1998, 2003 and 2008

highly significant suggesting the model differs from the model implied covariance matrix. χ^2 is highly sensitive to N, which is 5217 in this model, and too much weight should not be given to this statistic, although it should be noted that this does indicate that the two models differ significantly and that the unconstrained model has a better fit. Following, Schermeller-Engel and Moosbrugger (2003) it can be informative to examine changes in the descriptive fit indices. In the first instance it can be noted that by correlating all the residual variances as described above the model fits the data much better. This is clearly reflected in all fit indices, and can be seen in comparing models 4 and 5. The following models are all nested in model 5 which is the baseline against which the others are compared. Model 6 shows the fully invariant model: $\Delta \chi^2$ indicates that the two models differ significantly from one another and the less restricted model is a better fit. However, both the Δ CFI and Δ RMSEA indicate that the two models do not differ in a meaningful way. 7 to 11 shows the effect of freeing different parameters in the model. χ^2 statistics here are not directly comparable however it is worth noting that freeing these parameters does not result in non-significant $\Delta \chi^2$ statistics. 12 to 14 shows the impact of freeing the parameters at one point in time. Here much smaller changes in $\Delta\chi^2$ occur which is due to a large reduction in the number of parameters that have been held equal in models 7 to 11. Based on the small change in the Δ CFI and Δ RMSEA the fully invariant model will continue to be estimated.

From a substantive perspective it is worth considering what this means. In effect it has been argued that neighbourhood attachment fits the covariance matrix of the indicator variables reasonably well. The results above indicate that the measure is stable over time. Therefore the way in which the patterns of loadings are related to each other is same across different points in time. In other words the ways in which these variables are related to one another is statistically equivalent at the three different time points for the same individuals. This implies that the neighbourhood attachment has the same meaning at the three different time points and that any changes in individual scores on the observed variables can be attributed to a change in the latent variable.

6.8: Stability in neighbourhood attachment, interpersonal trust, and participation in local groups, between 1998 and 2008

Prior to assessing the simultaneous relationships between the three dimensions of social capital between 1998 and 2008 it will be useful to establish what level of change might be expected between the three variables over the time period in question. Table 6.8.1 shows cross-tabulations of trust between the three periods.

This clearly shows that, as expected, trust is relatively stable across the three time points. For example, even in the period 1998 to 2008 approximately 75% the sample are do not show any change. These figures are very similar for 1998 to 2003, and for 2003 to 2008. In terms of those who do change there is no clear pattern: the range across all years is

Table 6.8.1: Cross-tabulation showing row	percentages o	f trust between	1998,	2003,
and 2008				

		Can't be too careful	Most people can be trusted	Total
1008 2002	Can't be too careful	75.54	24.46	100
1998 - 2003	Most people can be trusted	25.35	74.65	100
	Ν			4,817
2003 – 2008	Can't be too careful Most people can be trusted	82.83 30.90	17.17 69.10	100 100
	Ν			3,926
1998 – 2008	Can't be too careful	78.93	21.07	100
	Most people can be trusted	32.04	67.96	100
	Ν			3,917

Lowest year = left column

between 11% and 14% for moving from trusting to non-trusting, and approximately 10% and 14% for those moving in the opposite direction (these figures not shown here). However, this does imply that of the approximately 25% of people do change meaning that at least some of this variance *may* be explained by either participation or attachment.

Table 6.8.2 shows a similar set of analyses for participation in local groups. Once again this appears to indicate a relatively high degree of stability across all measurement

occasions: 84% of those who reported that they never/almost never participated in 1998 reported the same in 2004. This had dropped slightly to 79% between 2004 and 2008 and 1998 and 2008 suggesting that people may be slightly more likely to participate as they age. However, there is less stability across the other categories suggesting that greater change occurs in terms of the regularity of participation: for example 34% of those who stated they participated at least once a week in 1998 did so in 2004, and between 2004 and 2008 this figure drops to 22%. Finally, table 6.8.3 shows a correlation which demonstrates a relatively high stability over the three time points. As would be expected this is weakest over the longer time period although this remains at just under 60%. This indicates that the expectations outlined in hypothesis 3.iii may not hold. This may be the case for two reasons: neighbourhood attachment may well be more stable than was

Table 6.8.2: Cross-tabulation showing row	percentages of	participation in	local group
between 1998, 2004, and 2008			

		Never / almost never	Once a year or less	Several times a year	At least once a month	At least once a week	Total
	Never / almost never	83.79	4.61	4.37	4.45	2.78	100
1009 _	Once a year or less	53.11	14.94	14.94	10.79	6.22	100
2004	Several times a year	45.37	10.19	17.90	17.90	8.64	100
2004	At least once a month	33.03	5.66	14.93	35.97	10.41	100
	At least once a week	37.87	2.66	7.97	17.28	34.22	100
	Ν						5,016
	Never / almost never	78.67	3.58	3.27	2.20	12.29	100
	Once a year or less	61.94	5.97	6.72	5.60	19.78	100
2004 -	Several times a year	66.27	4.14	5.62	4.44	19.53	100
2008	At least once a month	58.50	5.08	4.19	7.73	24.50	100
	At least once a week	64.04	3.77	3.42	6.85	21.92	100
	Ν						4,900
	Nover / almost nover	77.04	2 5 4	2.00	2.40	12 72	100
		77.64	3.54	3.60	2.49	12.73	100
1998 – 2008	Once a year or less	58.47	3.81	5.93	6.78	25.00	100
	Several times a year	64.67	4.73	5.05	3.79	21.77	100
	At least once a month	66.28	4.62	3.93	5.54	19.63	100
	At least once a week	65.99	5.78	2.04	7.48	18.71	100
	N						4,894

Lowest year = left column

	1998	2003	2008
1998	1		
2003	0.695	1	
2008	0.596	0.751	1
N	5,217		

Table 6.8.3: Correlation matrix of neighbourhood attachment 1998, 2003, and 2008

predicted and be less a function of the weak situational networks within the neighbourhood than a relatively stable psychological orientation; or, the stability observed here is a result of stability within neighbourhoods. In other words the high correlation may be capturing the fact that many individuals have not moved to a new neighbourhood. It was noted in the cross-sectional analysis that living in the same residence for more than a year was a strong predictor of attachment²⁵. Using this data it is possible to examine this more closely: for those who moved to a new home in the last year in 2003 the correlation between attachment in 1998 and 2003 is 47%. For those who stayed it is 71%. In the period 2003 to 2008 the correlation is 58% for movers in the past year in 2008, and 76% for those who stayed. This is notable and suggests that at least some of the apparent stability in neighbourhood attachment is due to neighbourhood stability rather than a very stable psychological orientation. These questions will be analysed further in chapter 8 when socialisation from youth to adulthood will be assessed. A lack of a relationship between youth and adulthood will suggest that attachment is not socialised. If it is found to be stable in the modelling in the present section it will not be possible to rule out the notion that attachment is a more stable orientation than has been discussed above.

6.9: Longitudinal models

In the following sections a structural over time model is specified and tested. This takes the form of figure 6.15.1. This model will allow hypotheses 1.ii, 1.iii, 2.ii, 2.iii, 3.ii, and 3.iii to be tested insofar as it allows for a simultaneous estimation of lagged effects, such as

²⁵ It should be noted that obviously moving home is not the same as moving neighbourhood.

trust at t-1 on trust at t, to be estimated alongside cross-lagged effects such as participation at t-1 on trust at t.





 η_n represents neighbourhood attachment, x_n interpersonal trust, and Y_n participation in local groups. Lines between the same variables, such as β_{η_1} are autoregressive relationships which should be the strongest predictors in each model. For instance, from a socialisation perspective the strongest predictor of trust at time *t* should be trust at *t*-1. The absence of cross-lagged effects in the presence of a strong effect from, for example, trust at *t*-1 would imply that hypothesis 1.iii is incorrect. By contrast, a finding that the cross-lagged relationship of participation on trust was significant would lend support to hypothesis 1.ii. This interpretation can be applied to all relationships in the model.

In order to conduct the modelling of the autoregressive cross-lagged model described above a number of steps need to be taken. In the first instance a model is estimated which includes only the autoregressive, or lagged, variables followed by a freely estimated model including the cross loadings. Finally measurement invariance in the structural parameters is tested for. This final step demonstrates whether or not the relationships in question are equivalent at the different time points. For instance is the relationship between trust in 1998 and 2003 equivalent to the relationship between trust in 2003 and 2008. As well as the structural lagged and cross-lagged parameters these models also estimate correlations between the three dimensions of social capital at the same time point. This is particularly important for the purposes here because these correlations represent contemporary relationships in the presence of variables measured at t-1. These parameters cannot indicate the likely direction of these relationships and it is plausible that they would be reciprocal.

Table 6.9.1 shows three models. Model 1 shows the freely estimated model without including a correlation between the residuals of the lagged parameters of the key variables between 2008 and 2003/4. This done in model 2 although it is not shown in figure 6.9.1. However, it is a key advantage of using more than two time points in the model because doing so helps account for omitted variable bias. In other words some of the common variance between the variables may be caused by a common omitted variable which may be causing both variables simultaneously. Including a correlation between the residuals can help account for this and should lead to a less biased model (Anderson and Williams, 1992). Model 3 in this table shows the impact of testing for measurement invariance in the structural parameters of the model. Details of the invariance testing are given in appendix 2.

Model 1 in table 6.9.1 is a baseline against which the other models can be assessed in terms of how reasonable the extra restrictions placed upon them are. However, and as has been noted model 2 introduces the correlation between the lagged variables and is therefore more reliable. Model 3 is the most parsimonious and invariance testing does indicate that the data fit the restrictions placed upon them. However, these restrictions may be unrealistic in practice and the parameters will therefore be assessed in relation to model 2. The model is estimated using WLSMV estimation. The regression coefficients on neighbourhood attachment are linear whereas the estimates for both interpersonal trust and participation in local groups are via probit.

In the first instance it can be noted that all three dimensions of social capital are predicted by lagged estimates. This confirms hypotheses 1.i, and 1.ii, which argued that both trust and participation should be relatively stable over time. The latter because it is a deep moral characteristic and the former because participation is habitual and socialised. However, hypothesis 3.iii was not confirmed because there are strong autoregressive parameters between *t* and *t-1*. Some of the reasons for this were

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Table 6.9.1: Autoregressive cross-lagged model of interpersonal trust, neighbourhood

	Model 1			Model 2			Model 3		
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Attachment 2008									
Attachment 2003	0.696	(0.012)	***	0.853	(0.023)	***	0.662	(0.010)	***
Trust 2003	0.110	(0.022)	***	0.076	(0.024)	**	0.084	(0.016)	***
Participation 2004	0.012	(0.007)	*	0.009	(0.008)		0.016	(0.005)	**
Attachment 2003									
Attachment 1998	0.610	(0.012)	***	0.572	(0.012)	***	0.662	(0.010)	***
Trust 1998	0.069	(0.022)	**	0.076	(0.021)	***	0.084	(0.016)	***
Participation 1998	0.010	(0.007)		0.010	(0.007)		0.016	(0.005)	**
Trust 2008									
Trust 2003	1.280	(0.025)	***	2.137	(0.055)	***	0.570	(0.008)	***
Attachment 2003	-0.001	(0.024)		-0.049	(0.025)	*	0.033	(0.009)	***
Participation 2004	0.127	(0.015)	***	0.036	(0.015)	**	0.040	(0.005)	***
Trust 2003									
Trust 1998	0.527	(0.008)	***	0.488	(0.008)	***	0.570	(0.008)	***
Attachment 1998	0.026	(0.008)	**	0.021	(0.008)	**	0.033	(0.009)	***
Participation 1998	0.025	(0.005)	***	0.027	(0.005)	***	0.040	(0.005)	***
Participation 2008									
Participation 2004	0.156	(0.015)	***	0.212	(0.033)	***	0.357	(0.014)	***
Attachment 2003	-0.057	(0.025)	**	-0.066	(0.025)	**	-0.022	(0.015)	
Trust 2003	0.268	(0.039)	***	0.242	(0.041)	***	0.178	(0.027)	***
Participation 2004									
Participation 1998	0.451	(0.016)	***	0.441	(0.016)	***	0.357	(0.014)	***
Attachment 1998	0.065	(0.021)	**	0.067	(0.021)	**	-0.022	(0.015)	
Trust 1998	0.231	(0.033)	***	0.162	(0.032)	***	0.178	(0.027)	***
Correlations 2008									
Attachment and participation	0.026	(0.015)	*	0.019	(0.015)		0.109	(0.011)	***
Attachment and trust	0.065	(0.014)	***	0.060	(0.014)	***	0.031	(0.005)	***
Trust with participation	0.082	(0.021)	***	0.099	(0.021)	***	0.066	(0.006)	***
Correlations 2003/4									
Attachment and participation	0.078	(0.014)	***	0.078	(0.014)	***	0.109	(0.011)	***
Attachment and trust	0.013	(0.005)	**	0.020	(0.005)	***	0.031	(0.005)	***
Trust with participation	-0.009	(0.007)		0.020	(0.007)	**	0.066	(0.006)	***
Correlations 1998									
Attachment and participation	0.158	(0.018)	***	0.158	(0.018)	***	0.109	(0.011)	***
Attachment and trust	0.046	(0.007)	***	0.046	(0.007)	***	0.031	(0.005)	***

0.095 (0.009)

Trust with participation

attachment, and participation in local groups, in 1998, 2003/4, and 2008

0.066 (0.006)

0.095 (0.009)

Ν

* = p<.1, **=p<.05, *** = p<.001

Notes: Probit model for trust and participation and linear for neighbourhood attachment. Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables.

discussed in section 6.8 when it was noted that the correlation between any of the two time points is lower when looking at people that have moved home in the past year.

However, even here the correlation was high suggesting that attachment seems to be relatively stable from one time to the next. It is also plausible that individuals are more likely to select into neighbourhoods that they feel attached within and this may also be a source of bias.

Of course there may be other reasons that attachment is stable based on individual orientations. In other words some people may be more likely than others to have higher or lower attachment within their neighbourhoods. It should be noted that the problem of selection into neighbourhoods is likely to be very difficult to overcome in an adult sample. Chapters 8 and 9 will attempt to address the problem by asking whether or not attachment is socialised from youth to adulthood, either by parents or the growing up within a certain kind of neighbourhood environment. It will be suggested that the presence of an effect will provide evidence that attachment is predicated to some extent at least on individual environments rather than being contingent on contemporary contextual effects.

Both the cross-lagged parameters and the correlations can be used to assess the predictions made in hypotheses, 1.ii, 2.ii, and 3.ii, which addressed the relationships between the three dimensions of social capital. These suggested that, (1.ii) trust should not be related to either participation or attachment in the presence of autoregressive parameters. (2.ii) Participation should be related to both participation and trust even in the presence of autoregressive parameters. And, (3.ii) there should be strong effects of both trust and attachment on neighbourhood attachment. The presence of cross-lagged effects will indicate that there is some relationship between any given variable and another at time t-1 and t. The presence of a correlation between two variables may indicate more a more proximate relationship although the direction of causality cannot be established. In terms of 1.ii there does appear to be an effect of both participation and attachment on frust which lends some support to Putnam's interpretation of trust

as being generated out of networks. However, the sign between model 2 and model 3 for attachment on trust changes which may indicate that this parameter is unstable and has been forced to be positive in model 3. In terms of the correlations trust seems to have some relationship with both attachment and participation and both are reasonably consistent across both models. Consequently hypothesis 1.ii does not hold, as both participation and attachment can generate trust.

Hypothesis 2.ii suggested participation should be predicted by higher levels of attachment and trust. Here there is evidence that attachment at t-1 does not generate participation. In model 2 there is a negative effect between 2003 and 2008. The overall effect shown in model 3 is therefore very low and non-significant because the positive effect between 1998 and 2004 is cancelled out. This may make sense if attachment really is a largely proximal phenomenon. In other words attachment at t-1 may predict participation at t-1, which may in turn cause participation at t. There is some evidence that this is the case in terms of the correlation between participation and attachment which, in model 2, become progressively weaker from 1998 to 2008. However, this may also imply that some common unobserved variable accounts for both higher levels of both. As expected interpersonal trust is a strong and consistent predictor of participation. Finally, hypothesis 3.ii suggested that attachment should be predicted by both participation and trust. Both the lagged parameters and the correlations suggest that this appears to be the case for trust which is consistent across all models. However, the lagged relationship of participation on attachment is at best not consistent. Model 2 indicates that there is no relationship. The same reasons as those given for the converse relationship apply here.

It is also worth considering the impact that including lagged effects on the model has on the parameter estimates when viewed in conjunction with the cross-sectional models shown in tables 6.5.1 to 6.5.3. It is worth noting that a reduction in these relationships should be expected across all parameters both due to the inclusion of autoregressive effects and the fact that the predictor variable is lagged to the previous measurement occasion. In terms of neighbourhood attachment both trust and participation appeared to be strongly predictive with coefficients of .345 and .137 respectively. In the autoregressive cross-lagged model with measurement invariance (model 3) both effects have reduced, to .016 for participation and .084 for trust. In terms of trust the effect of both attachment and participation are also reduced from .077 and .095 to .033 and .040 respectively. Finally, in terms of participation, attachment had a coefficient of .072 and trust of .249 in the cross-sectional models which dropped to .033 and .178 respectively. The apparent relationship between participation and attachment in the cross-sectional models is at best weak in the longitudinal model. Attachment is also a relatively poor predictor of trust. By contrast trust remains a reasonably strong predictor across all models and in particular for participation. Participation retains a modest relationship with trust.

Overall, it can be concluded that lagged estimates of trust are positively related to both neighbourhood attachment and participation in local groups. This supports all of the hypotheses related to trust insofar as it seems to be the case that trust is highly stable and causes both participation and neighbourhood attachment. However, there is also evidence to suggest that both attachment and participation can generate trust supporting Putnam's (1995; 2000) contention that involvement and engagement in formal and informal networks can cause interpersonal trust. Indeed, there is evidence to suggest that both conceptions of trust may be accurate: trust may be a relatively stable moral characteristic. However, this does not necessarily preclude social interactions from having an impact. In other words simply because a phenomenon is a deeply ingrained moral conception of the world does not mean that it cannot be subject to change and that these changes should not be related to the social world that individuals inhabit. By contrast the relationships between attachment and participation have been shown to be less robust. It appears to be the case that, at least under this model specification, the two are not related to one another in terms of the lagged effects and it is plausible that a common unobserved variable causes both.

6.10: Discussion and conclusions

The cross-sectional analysis confirmed the expectations that the three dimensions of social capital should all strongly predict one another. This was obviously expected and is consistent with much of the literature. However, it was argued that in particular the relationship that both participation an attachment have on trust be the result of selection bias insofar the most trusting should be likely to select into participatory activities and to engage with others in their community. Section 6.9 assessed this claim finding that there is evidence to suggest that both participation in local groups and neighbourhood attachment are related to trust even in the presence of controls and a model specification which should account for this selection bias. It was found that for trust hypothesis 2.ii was not supported. By contrast evidence was found to suggest that both hypotheses 2.i and 2.iii are supported. These stated that (2.i) trust arises out of networks and is relatively contemporary nature, and that (2.iii) trust is a stable moral characteristic. This seems paradoxical because trust cannot reasonably be both strategic and moral (i.e. a way in which an individual generally views the world) in nature. However, even though trust is relatively stable it is not entirely stable. Indeed, the descriptive statistics shown in table 6.8.1 demonstrate that while many people do not change between time points, a relatively large minority do. Section 6.9 suggests that at least some of this variance may be explained by engagement in local groups and having higher levels of neighbourhood attachment at an earlier time.

It may be plausible that even though trust is stable and moral certain behaviours may still have an impact over time. For example, a generally distrusting person may come to view the world from a more trusting perspective through engagement with others. It is beyond the scope of this study but an interesting line of research might consider those life events that are related to moving between trust and non-trust. For example, nontrusters may become more trusting through engagement and participation with others in their communities but the converse need not be true. For example, once a person becomes trusting through engagement and participation they would not necessarily become non-trusting if they stopped.

Neighbourhood attachment was found to be predicted by autoregressive effects which contradicted hypothesis 3.iii. It was argued that this may not be evidence that attachment is a stable psychological orientation *per se*, but that this stability may be approximating stability of staying within the same neighbourhood. For example, an individual may have a given level of attachment at *t*-1 that accurately represents the kind of neighbourhood they live in in terms of the depth of the weak social ties that exist within it. If they remain in the same area at time *t* and the neighbourhood has not be subject to a great deal of change then it is likely that they would report a similar level of attachment at *t*-

1. Hypothesis 3.ii was rejected in terms of the relationship of participation on attachment although trust was found to be predictive and was therefore supported. The latter point is obviously reasonable and was consistent with the expectations. The former is more difficult to explain although two suggestions were made: it may be plausible that participatory norms to lead to attachment, and *vice versa*, but that this relationship is already established relatively early in life. That is, because participation seems to be highly socialised most people may develop norms of participation earlier which then generates higher levels of neighbourhood attachment which makes it appear to be unrelated when assessing autoregressive and cross-lagged relationships.

The same relationship was specified in hypothesis 2.ii for the relationship that attachment should have on participation and similar arguments can be made for the reasons for this. The relationship of trust on participation however was expected and is consistent with the majority of the literature and the theoretical reasoning which underlies much of the work into solving problems of collective action. Hypothesis 3.ii was supported for participation insofar as it was expected that participation is to some extent habitual.

Chapter 7 will begin to address some of these problems by directly addressing the level to which the three dimensions of social capital are socialised within households. It is argued that evidence of socialisation may explain the genesis of many of these behaviours and attitudes and may help to determine which, if any, precedes the others. For example, if trust is highly socialised but neither participation nor attachment are it may be plausible that trust is related to the development of these in later life. Given, the finding that attachment and participation may to some extent cause trust this would not preclude the development of trust later in life. However, it would suggest that for many people the key pathway into engagement and participation is growing up in a trusting environment.

7: Parental influence

7.1: Introduction

The primary purpose of chapter 6 was to establish the ways in which the three dimensions of social capital, neighbourhood attachment, interpersonal trust, and participation in local groups are related to one another. It has been argued that, broadly speaking, two distinct views of the development of social engagement (defined to include both formal and informal participation in networks) and interpersonal trust can be made: the first argues that phenomena such as interpersonal trust and reciprocity arise out of social networks, and in particular formal collective action, because such networks provide 'an opportunity for more intensive face-to-face interaction between people, thus creating a setting for the development of trust in others' (Stolle and Hooghe, 2004: 425). Attachment too, when conceptualised as being a function of weak situational social ties, is argued to be fundamental to the development of generalised trust in modern societies. As Newton (1999: 14) notes in relation to thin trust, which is distinguished from the *thick* trust that develops in families and close friendship groups, which is 'is based on looser, more amorphous, and more sporadic social contacts... is the product of weak ties which, according to Granvetter's celebrated article (1973), constitute the strong and enduring basis for social integration in modern large-scale society'.

By contrast socialisation research suggests that basic values are acquired at an early age and are relatively stable over the life course life (Sapiro, 2004). Interpersonal trust in particular has been argued by Uslaner (2002) to have a basis in experiences rooted early in childhood and to be moral in character, meaning that it conditions how people view the world, rather than being shaped by it. Participation too has also been argued to have roots in youth, although this is thought to be based on later experience such as involvement in youth, and in particular in school related, activities (Galston, 2001; Jennings and Niemi, 1974; Jennings, et al, 2009). The basic argument within studies of 169 youth socialisation suggests that individuals are exposed to different experiences throughout the course of their lives. These experiences lead individuals to adopt different values, attitudes, and behaviours, which in turn become increasingly stable as people move into adulthood. Some, like trust may be socialised very early (Renshon, 1975; Uslaner, 2001), or have a genetic basis (Sturgis et al, 2010; Oskarsson et al 2012), whereas others, like participation, are more likely to be established in late adolescence and early adulthood (Jennings and Niemi, 1974; 1981; Galston, 2001; Kirlin, 2003).

These two different conceptualizations of behaviour and attitude formation suggest different mechanisms for the generation of social capital more generally. If basic values, such as interpersonal trust, are largely generated in childhood it seems clear that some of the potential benefits of social capital may be mitigated. If promoting social participation and engagement within communities does not generate norms of reciprocity and trust, then spill-over effects will not generate norms of trust within the wider community, and large societal benefits such as better functioning democracies (Putnam, 1993) may be unlikely to arise. Chapter 6 assessed the relationships between interpersonal trust, neighbourhood attachment, and participation in local groups and found that to some extent both frameworks are supported. That is, it was found that by far the strongest predictor of any of the three dimensions of social capital was the same variable measured at an earlier occasion. However, evidence was also found that both participation and attachment are related to interpersonal trust. This is notable insofar as it contradicts some recent findings (see for example, Sonderskov, 2011; Sturgis et al, 2012). This discrepancy may due a more specific measure of participation being used here or the fact that a different modelling framework has been adopted. As was expected the converse was also found to be true insofar as trust was consistently found to predict participation and attachment. A relationship between participation and attachment was found to be weak at best and it was argued that this is likely due to either an omitted variable which causes both such as development of one or the other at an earlier time point causing a lack of an association in the presence of autoregressive effects.

With respect to the relationship of participation and attachment with trust, and *vice versa*, this may lead to the circular, reciprocal, logic outlined at the beginning of chapter 6, where all three dimensions are thought to cause one another. The present chapter

will address these issues by focusing on the relationship between parents and children and the socialising processes involved in each of the three dimensions of social capital. It is argued that by establishing which, if any, of these relationships precedes the others may help to determine the level of trust, participation and attachment, later in life. For example if participation causes trust then people who participate in youth should be more likely to trust later. If, by contrast, trust causes participation then people who grow up in environments more conducive to trust should participate more in adulthood. Chapter 8 will focus on the relationships between youth and adulthood whereas the present chapter will seek to establish the extent to which children are similar to their parents across the three dimensions of social capital.

7.2: Hypotheses

The primary aim of this chapter is to develop an understanding of the relationships that exist between interpersonal trust, neighbourhood attachment, and participation in local groups for a group of young people between the ages of 16 and 18. This age category has been chosen for a number of reasons: the first is because much research has identified that late adolescence and early adulthood is the point at which individuals are likely to be socialised into participatory activities (Jennings and Niemi, 1974; 1981; Kirlin, 2003). By contrast, and as has been argued throughout, a socialised view of trust suggests that it is formed very early in childhood (Uslaner, 2002; Renshon, 1975) and may have some genetic basis (Sonderskov, 2011; Sturgis et al, 2012). In either case a strong correspondence between young people and their parents should remain in adolescence if interpersonal trust develops very early in life. That is, if trust is deep rooted and conditions the way in which people view the world around them, rather than being conditioned by it, it should not be subject to a great deal of change between childhood and late adolescence. Given this both trust and participation in late adolescence should be predictive of trust and participation in adulthood.

In some respects however this time point is not ideal for a study of the development of trust: it would be preferable to take a measure of the correspondence of parental trust with child trust at an earlier time point and to assess this stability in both over a longer period. However, the BHPS is not amenable to an analysis of this kind given the particular

questions used in this analysis. Generalized trust was first asked in 1998 which is the first year of the sample used and is also the point at which the neighbourhood attachment questions are also available. Importantly, the trust question only appears in the adult sample which means that only individuals aged 16 and over have information on this variable²⁶. Therefore, although it is theoretically reasonable, and supported by research (Dohmen et al, 2006; Erikson, 1963; Newton, 1997; Renshon, 1975), this relationship cannot be determined directly using this data, because correspondence between parents and their offspring at time *t*, may be caused by some external factor which influence members of the same household to be trusting or not. In other words, the correspondence may not be due to socialised, or indeed genetic, factors, but may instead be due to some other external event affecting all members of the family. Indeed, this problem will be the present if an association is found between parents and offspring for both participation and attachment.

This is likely to be the case for neighbourhood attachment because families will obviously occupy the same neighbourhood and will therefore be affected by the depth of the weak social ties within the area. Given the findings regarding the apparent stability of neighbourhood attachment in chapter 6 this would not be surprising. It is worth noting however that that young people may have a different kind of relationship with their local community than adults. There has been very little research into this topic. On the one hand young people in late adolescence and early adulthood should be exposed to the same influences as older people in terms of weak situational networks. On the other, they may not engage with others in the community in the same way and may be more influenced by networks and contexts such as schools and colleges which many still attend. It has also been argued that young people may be indirectly affected by the neighbourhood environment via their parents. The type of neighbourhood may condition parental behaviours towards the neighbourhood which their children may then adopt following the social learning model. Parents may also influence children in more direct ways by exerting a greater amount of social control over their children in areas which they perceive to be less safe (Furstenburg, 1993; Jarrett, 1997). Moreover,

²⁶ It is worth noting that the BHPS includes a youth sample which does ask about social relationships and participation.

this makes sense given the way in which neighbourhood attachment has been conceptualised. It is argued that weak situational networks develop between stronger networks located within some community. Obviously an important strong network that young people are likely to inhabit is the family and it is therefore plausible that the weak networks that exist within a neighbourhood will influence children via this pathway.

Therefore this chapter can only provide cross-sectional evidence of socialisation across the three domains of social capital. Chapter 8 will extend these models by assessing how the relationship between youth participation, engagement, and neighbourhood attachment develops into adulthood. If there is a relationship between any of the three variables at this point over time then this might be taken as strong evidence for socialisation. If interpersonal trust in adulthood is associated strongly with parents and adolescence this would provide some evidence of a socialised, or genetic, relationship from parent to child. If participation is not related to parents but is related to participation in adolescence this would provide evidence of socialisation in youth. In this chapter therefore the aim is to establish this first set of relationships in terms of parental influence.

Following these arguments it is possible to specify a number of hypotheses regarding the relationships that should occur between parents and adolescents in terms of socialisation. Prior to doing this it is first useful to specify how and why the three dimensions of social capital should be related to one another for younger people. This will be done in the light of the findings from the previous chapter. (1.i) Trust should predict participation in local groups and neighbourhood attachment. This was found to be a strong and consistent predictor in chapter 6. Moreover, the underlying logic should be consistent for young people. That is, trust should make people more predisposed to participate and engage with others in their communities. However, it is worth noting that trust may not be related to either for young people. Neighbourhood attachment may not be salient for young people or they may derive their feelings about this in response to something other than informal interactions with others in the neighbourhood. It has been suggested that at least part of this may be derived from their parents. It may also be argued that schools and colleges may represent something akin to the neighbourhood for young people. The importance of educational institutions may also play a role in determining the participation of young people, and in a sample of children still attending

high school it might be one of the primary mechanisms into participation. However, young people who have left compulsory education, as most of the sample have, should display more autonomy and it is reasonable to suggest that when selecting into groups or not trust should be a key predictor. Therefore, (1.ii) *participation in local groups should predict interpersonal trust and neighbourhood attachment*. Following the logic of Putnam's (2000) argument greater levels of participation should predict higher levels of interpersonal trust. This was supported to some extent in chapter 6. If this is not found to be the case *and* trust is not found to predict participation, then this may suggest that young people become involved in local groups for different reasons than adults. Finally, (1.iii) *higher neighbourhood attachment should not predict either trust or participation*. This is based the findings from chapter 6, when this relationship found to be weak at best for adults, and the notion that young people should be less embedded in their neighbourhoods than older people because they have access to many networks outside of neighbourhood, in particular in educational establishments.

The second set of hypotheses relate to the nature of the socialised relationships. As has been outlined trust should be strongly socialised (or have a genetic basis): (2.i) there will be a strong relationship between parental and youth trust. By contrast participation should not be related to parental participation because young people are more likely to engage due to peer and school effects: (2.ii) there will be no relationship between parental and child participation. In terms of neighbourhood attachment this is likely to be related to attachment within the household because both parents and children are exposed to the same context: therefore, (2.iii) children will have higher levels of neighbourhood attachment when parents have higher neighbourhood attachment. Once again, it is important to reiterate that omitted variable bias is potentially major confounding problem when assessing these relationships. That is, the common physical location of young people and their parents, within the same household and the same neighbourhood, will make it difficult to establish whether or not a true causal relationship exists. A further set of tests will examine these relationships further by assessing the relationship between the social environment variables, deprivation and density, and how they relate to parents and young people. It will be argued that the presence of mediated effects via the parents will constitute evidence of parental influence within the household. For instance, deprivation may have a negative influence on both parental and youth neighbourhood attachment which would be seen in a direct

effect on both. However, it may also work via an indirect pathway which would suggest that lower parental attachment leads to lower child attachment. Clearly this will not overcome the problem of confounding. However, it will suggest evidence of parental influence to some extent thereby providing an argument that such a relationship is plausible.

7.3: Neighbourhood attachment: young people and their parents

It is important to examine neighbourhood attachment in the different groups under analysis. In chapter 6 these groups were the three different times points. In this chapter they are mothers, fathers, and young people. The logic behind this is effectively the same as for different years, in that neighbourhood attachment is argued to be a latent variable, underlying the correlation structure of a set of variables which may differ in different groups. For example, men and women may have a different relationship to their neighbourhood which will lead to a different meaning of the latent variable. In the most extreme case this difference may lead to a different number of factors in the two groups. Table 7.3.1 shows correlation matrices for the three different groups analysed in this chapter. For all groups a one factor solution is likely to be reasonable given that all variables are reasonably highly related to the others. It is difficult to draw further conclusions about differences between the groups based on this kind of analysis other than that they appear similar. Mothers have a high correlation between 'advice obtainable locally' and 'local friends mean a lot' which is reasonable given that it has been suggested the women tend to rely on social support mechanisms within the neighbourhood more than men (Lowndes, 2004) and these variables may capture this aspect of neighbourhood attachment.

A slightly different specification in order to test for measurement invariance is required here, although it follows the same logic as that outlined in chapter 6. Because the data in the previous chapter were longitudinal it was necessary to allow the residuals of the indicator variables at the different times points to covary within a simultaneous model. Here a multi-group CFA (MGCFA) approach is adopted which is appropriate for this kind of group (for an introduction to MGCFA see Byrne, 2012, ch.7; see also Jöreskog, 1971). This follows a framework where each sample is estimated separately in order to establish configural invariance. The data is then estimated simultaneously, but in separate groups, in order to establish whether or not the model is invariant. In doing this different

Table 7.3.1: Correlation matrix of indicator variables of neighbourhood attachment:youths, mothers, and fathers

		Local		Similar to	Talk
	Belong to	friends Advice		others in	regularly
Vouths	heighbour-	Interna	locally	heighbour-	10 neighbours
Belong to neighbourhood	1000	101	locally	noou	neighbours
Local friends mean a lot	0 459	1			
	0.438	0 620	1		
Similar to others in neighbourhood	0.381	0.030	0 410	1	
	0.498	0.403	0.410	0 402	1
	0.454	0.512	0.490	0.405	1
Ν	738				
Mothers					
Belong to neighbourhood	1				
Local friends mean a lot	0.551	1			
Advice obtainable locally	0.446	0.691	1		
Similar to others in neighbourhood	0.545	0.467	0.341	1	
Talk regularly to neighbours	0.439	0.511	0.453	0.431	1
Ν	714				
Fathers					
Belong to neighbourhood	1				
Local friends mean a lot	0.579	1			
Advice obtainable locally	0.447	0.595	1		
Similar to others in neighbourhood	0.492	0.458	0.371	1	
Talk regularly to neighbours	0.477	0.583	0.521	0.425	1
Ν	413				

restrictions can be placed upon the data in a hierarchical manner is described in chapter 5.

It is worth reiterating here that the aim is to establish whether or not the factor structure is the same rather than in determining whether or not mean levels of neighbourhood attachment differ between the groups. Indeed, this has already been shown to be the case in chapter 6 when it was found that women have higher levels of neighbourhood attachment than men. As has been argued in sections 7.1 and 7.2 young people may have a specific relationship to their neighbourhoods which is different to their parents. They may be less affected by that depth of weak situational networks within their neighbourhoods because they have access to other networks outside of the neighbourhood. It is worth noting that of the three groups it is least important that young people show measurement invariance. This is because the primary focus of interest will be on the relationship of parents on their children. If young people do not display invariance then this will be evidence for the argument that attachment to the neighbourhood works differently for people in late adolescence than for adults. If this is the case, then attachment for young people might be thought of as a form of preneighbourhood attachment related to, but not the same as, the attachment of adults. Once again how this relates to adult attachment will be assessed in chapter 8.

Appendix 3 shows the full tests of MGCFA measurement invariance. Both fathers and mothers are structurally equivalent in terms of neighbourhood attachment. However, as suggested, the analysis does not support evidence of measurement invariance for young people. As was suggested, mothers and fathers differed in terms of the advice obtainable locally variable. When this was allowed to freely load between the two groups a significant adjusted χ^2 difference test was obtained at *p*<.05. Table 7.3.2 shows the results of this analysis. As in the tables in chapter 6 standardised results are shown here as they highlight were differences between the three groups exist. This is useful for the parameters which have been held constant or which are set to 1 for identification purposes. It is also worth noting that this model is not multi-group and is instead estimated simultaneously which makes it possible to estimate the covariance between the three factors. In other words the MGCFA analysis established where differences exist and is used as the basis for the estimation of this simultaneous model.

As has been discussed the finding that mothers and fathers are partially measurement invariant in terms of neighbourhood attachment is both statistically and substantively important because it demonstrates that the concept is not different for either men or women: if this had not been then it would not be possible to compare the two groups. It also allows latent means to calculated and for the difference to be interpreted as men having a lower average level of neighbourhood attachment. This cannot be done for youths as they differ in terms of the underlying configuration of the latent variable. Once again the source of the inequality is also substantively interesting insofar as it suggests women may be reliant more on social support mechanisms within the neighbourhood than men. The covariance between the three factors suggests that mothers and fathers resemble one another more closely than their offspring. This model has a CFI of .970 and a TLI of .971, and an RMSEA of .058. These fit statistics indicate that the model fits the data well. R^2 values are all above acceptable thresholds, which is not surprising given the

Table 7.3.2: Confirmatory factor analysis of neighbourhood attachment: youths,mothers, and fathers

	Coef.	Std. Err.	R ²	
Youth neighbourhood attachment				
Local friends mean a lot	0.836	(0.025)	0.699	***
Belong to neighbourhood	0.683	(0.036)	0.466	***
Advice obtainable locally	0.768	(0.030)	0.589	***
Am similar to others in neighbourhood	0.665	(0.036)	0.442	***
Talk regularly to neighbours	0.716	(0.034)	0.513	***
Mother neighbourhood attachment				
Local friends mean a lot	0.910	(0.018)	0.828	***
Belong to neighbourhood	0.754	(0.025)	0.568	***
Advice obtainable locally	0.827	(0.024)	0.684	***
Am similar to others in neighbourhood	0.652	(0.028)	0.426	***
Talk regularly to neighbours	0.689	(0.025)	0.475	***
Father neighbourhood attachment				
Local friends mean a lot	0.910	(0.019)	0.828	***
Belong to neighbourhood	0.753	(0.024)	0.567	***
Advice obtainable locally	0.723	(0.031)	0.522	***
Am similar to others in neighbourhood	0.652	(0.028)	0.425	***
Talk regularly to neighbours	0.689	(0.024)	0.474	***
Covariance				
Attachment : mother and youth	0.359	(0.056)	***	
Attachment : father and youth	0.377	(0.055)	***	
Attachment : father and mother	0.444	(0.045)	***	
Means				
Mother neighbourhood attachment	1.561	(0.837)	*	
Father neighbourhood attachment	1.392	(0.863)		
Ν	362			

* = p<.1, **=p<.05, *** = p<.001

Notes: Link function = probit. Estimator = WLSMV. Coefficients are standardised.

findings in the previous chapter. In section 7.4 structural parameters will be estimated by regressing the parental scores onto the child measure of neighbourhood attachment.

7.4: The relationship between parental and child neighbourhood attachment

Section 7.3 had two primary aims: the first was to assess differences in neighbourhood attachment for the three groups. The second was to establish a framework under which it would be possible to make meaningful assessments of the relationship that parental neighbourhood attachment has on their children. This will allow hypothesis 2.iii to be examined. This stated that higher levels of parental neighbourhood attachment should be related to higher levels of youth neighbourhood attachment. Other covariates will also be included in this model. Given the relatively small sample sizes a binary version of participation in local groups is used. This is due to the heavily skewed nature of this variable. It is coded so that people 'who never / almost never' or only attend local groups 'once a year or less' make up the lower category and anybody that attends more than 'several times a year' form the higher category. The first group comprises 168 people and the second 52. Trust is obviously a binary variable: there are 192 people who say they do not trust others, and 131 people who say they do. There are 194 males and 168 females in the sample. The mean of youth neighbourhood attachment when individuals are trusting is -.01 and .04 when they are not. For non-participators it is .01 and -.17 for those who do. It is worth noting that other variables, such as parental education were tested in this model but no results were found when including these other covariates. The model is shown in table 7.4.1.

Table 7.4.1: Linear regression of parental neighbourhood attachment on youthneighbourhood attachment

	Mod		Мо			
	Coef.	Std. Err.		Coef.	Std. Err.	
Father neighbourhood attachment	0.249	(0.058)	***	0.273	(0.068)	***
Mother neighbourhood attachment	0.219	(0.057)	***	0.270	(0.067)	***
Youth trust (Ref = No)				-0.083	(0.150)	
Youth participate in local groups (Ref = No)				-0.255	(0.163)	
Youth Sex (Ref = Male)				-0.134	(0.138)	
R ²	0.188			0.273		
Ν	362			196		

* = p<.1, **=p<.05, *** = p<.001

The model is effectively a linear regression, albeit one in which the simultaneous estimation of three latent variables is included. Also not shown here is the covariance between mothers and fathers neighbourhood attachment which was estimated. Model 1 shows the impact the key variables and model 2 shows the impact of including further controls. The results suggest that the impact of both fathers and mothers is significant and large and imply that hypothesis 2.iii is correct. Both models are consistent in terms these relationships between the key variables and youth attachment. An interaction effect was tested in order to examine whether or not living in households with two parents with higher or lower levels of neighbourhood attachment had an impact but was unrelated. Neither trust nor participation is significantly related to the neighbourhood attachment of youths suggesting that hypotheses 1.i and 1.ii are incorrect in terms of predicting a relationship to neighbourhood attachment among this group of young people. These results are consistent with a socialisation perspective of neighbourhood attachment. However, it cannot demonstrate that this is true because the fact that all members of the household live in the same environment. If, as has been argued throughout, neighbourhood attachment is directly related to the level weak situational networks that exist in the neighbourhood then all members of the household may display similar levels of attachment for this reason. The fact that neither trust nor participation in local groups is related to attachment implies that young people are unlikely to engage for the same reasons as adults. It is worth noting that even if parental neighbourhood attachment is excluded from the model there is no relationship from youth participation or trust on neighbourhood attachment.

This examination of youth neighbourhood attachment has allowed a number of important points to be addressed. In the first instance it seems clear that neighbourhood attachment for youths is different in character to that of their parents. In a sense this is reasonable: there should be some developmental relationship between how young people perceive their neighbourhood in terms of the networks of relationships that exist within them because the household represents a strong network within which situational neighbourhood networks may be mediated to members. It is noteworthy that the 16 to 18 year individuals in this sample do not appear to have matured with regard
to this variable as they do not display the same kind of attachment as their parents. This conclusion is further supported by the fact that there is no relationship between trust and participation on attachment. There is a strong relationship between parental neighbourhood attachment and that of their offspring and this supports the socialisation hypothesis. However, and as has been emphasised it is not possible to state this must be the cause and it is equally plausible that living in a common environment would explain this relationship. This question will be examined further both when contextual effects are assessed, and in chapter 8 when the stability of these relationships are examined between youth and adulthood.

7.5: The impact of parental interpersonal trust on the interpersonal trust of young people

Young people who live in households which are characterised as being highly trusting should also be highly trusting themselves. It has been argued that this is likely to be evidence of either a socialised effect, or of some genetically heritable propensity to trust. However, the same caveats as those outlined in section 7.4 apply here. By viewing all members of the household at the same occasion it is plausible that some external factor, such as the neighbourhood environment, will affect trust and may explain the similarities between household members. Once again this possibility cannot be fully addressed. However, chapter 8 will more fully explore the stability of trust from youth into adulthood. It is argued that if trust is shown to be similar between parents and their offspring, and remains stable into adulthood, then this will provide greater evidence of a socialised relationship. The impact of the social environment on both parental and youth trust will also be explored in this chapter. It is argued that if a strong impact of this is found then this should, other things being equal, provide evidence for the notion that interpersonal trust has some root in familial influence. Table 7.5.1 shows a cross-tabulation of household trust with youth trust.

This suggests that there does seem to be a strong impact of growing up in a household in which neither parents trusts. Of the 214 young people who live in non-trusting households, only 19% stated that 'most people can be trusted'. The impact of living in a household in which both parents trust does not appear to be related to displaying trust in youth, with approximately 50% of respondents stating that 'most people can be trusted' and 50% stating that they 'can't be too careful'. The impact of living in a

		Trustworthiness of others				
		Can't be too careful	Most people can be	Total		
q	None	80.84	19.16	100		
ehol ust	Father only	61.95	38.05	100		
lous tri	Mother only	56.04	43.96	100		
T	Both	50.36	49.64	100		
	N			555		

	Table 7.5.1: Cross-tabulation showing	g row percentages of household and y	outh trust
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household in in which only one person is trusting is slightly higher: 62% of those people with trusting fathers and 56% with trusting mothers state that 'most people can be trusted'. This suggests that living in a household in which at least one parent is trusting will be related to trust in youth. Indeed, of those people that do state that 'most people can be trusted', only 21% come from households in which neither parent trusts, whereas 35% come from households in which do. The relationship between trust and attachment remains the same as in section 5: the trusting have a slightly higher average level of attachment at .026 and non-trusters at -.035. The relationship between participating in local groups and trust is shown in table 7.5.2. Of those people that do say that most people can be trusted, 38% also participate. By contrast 20% of non-trusters participate. This suggests there may be a relationship between interpersonal trust and participation in youth.

Table 7.5.2: Cross-tabulation showing row percentages of participation and trust inyouth

	Participates in local groups				
		Once a year or less	Several times year or more	Total	
Trustworthiness of others	Can't be too careful	80.84	19.16	100	
	Most people can be trusted	61.95	38.05	100	
	Ν			421	

Table 7.5.3 shows the results of the analysis of parental trust predicting youth trust. This is a probit model in which household trust is treated as a set of dummy variables, with non-trusting households used as the reference category. Once again model 1 only includes the primary variables of interest (household trust) whereas model 2 accounts for further controls. Clearly the strongest predictor of youth interpersonal trust is living within a household in which both parents are also trusting. However, living within a household in which either parent trusts is also significantly related youth interpersonal trust relative to living in a household in which neither parent trusts. Females are also more likely than males to be trusting, which is surprising given the findings in chapter 6. However this relationship is only significant at p < .1; given the sample size it may be appropriate to consider p-values within this range to be significant. Neither attachment nor participation are significantly related to trust although it is worth noting that in a model which excluded parental interpersonal trust there was a positive relationship, with a parameter estimate of .245 (standard error = .125) and a p-value of .051, between participation and trust. This relationship obviously disappears when parental trust variables are included in the model. This table addresses hypotheses 1.ii and 1.iii insofar as it suggests that neither participation nor attachment are related to youth trust when parental trust is accounted for. The table also provides strong evidence for hypothesis 2.i in that it implies that parental trust predicts youth trust.

Table	7.5.3:	Probit	regression	of parenta	l interpersonal	trust on	youth	interperso	nal
trust									

	М	Model 1		Model 2		
	Coef.	Std. Err.		Coef.	Std. Err.	
Household Trust (Ref = No household trust)						
Father on	ly 0.568	(0.155)	***	0.421	(0.207)	**
Mother on	ly 0.719	(0.165)	***	0.726	(0.207)	***
Bot	h 0.863	(0.146)	***	0.851	(0.196)	***
Youth neighbourhood attachment				-0.047	(0.118)	
Youth participate in local groups				0.249	(0.186)	
Youth Sex (Ref = Male)				-0.271	(0.149)	*
R ²	0 119			0 136		
N	555			377		

* = p<.1, **=p<.05, *** = p<.001

Notes: Link function = probit. Estimator = WLSMV. Coefficients are unstandardised.

7.6: Parental participation in local groups and young people

It is also necessary to examine the relationship between parental and youth participation. Here it was suggested that there should be no relationship between parental participation and youth participation in local groups because young people should participate due to school and peer effects. The cross-tabulation shown in table 7.6.1 shows the relationship between parental and youth participation. Clearly by far the largest group for both are non-participants. There also appears to be a strong relationship between young people and their parents. In households in which neither parent participates 87% of young people do not participate. By contrast in households in which both parents do participate 34% of youths also participate.

Total
100
100
100
100
421

 Table 7.6.1: Cross-tabulation showing row percentages of household and youth

 participation

The results from table 7.5.2, above also apply here. They imply that there may be some reason to expect that trust would be related to participation. The mean neighbourhood attachment for participants is -.08 and for non-participants it is .04. This implies that higher attachment should be related to lower participation which is counterintuitive. It is worth noting that an analysis which excludes the household variables finds significant results for both trust and participation: the former with a coefficient of .223 (standard error = .116) and the latter with a coefficient of -.158 (standard error = .091). However, as can be seen in table 7.6.2 these relationships disappear when parental relationships are included. This model is also a probit regression in which the key independent variable is a dummy variable with a reference category in which non-participatory households

are used as the reference category. The dependant variable, participation in local groups has been recoded into a binary variable with non-participants set as 0 and people who participate several times a year or more set as one.

 Table 7.6.2: Probit regression of parental participation in local groups on youth

 participation in local groups

	Мос	del 1		Model 2		
	Coef.	Std. Err.		Coef.	Std. Err.	
Household participation						
Mothers only	0.527	(0.193)	**	0.523	(0.201)	**
Fathers only	0.222	(0.221)		0.163	(0.250)	
Both	0.241	(0.073)	**	0.271	(0.077)	***
Youth neighbourhood attachment				-0.183	(0.115)	
Youth interpersonal trust				0.254	(0.167)	
Youth Sex (Reference = Male)				0.170	(0.156)	
R ²	0.065			0.113		
Ν	421			395		

* = p <.1, ** = p <.05, *** = p <.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

The relationship between parental participation and youth participation appears strong for both households in which both parents, and only mothers, participate, relative to households in which neither parent participates. This is counter to hypothesis 2.ii and suggests that parents may influence their offspring to participate. However, as with the previous two analyses this apparent relationship may be due to the omission of some external variable which might explain both parental and youth participation. For example, the community within which a household is situated may be highly participatory. The fact that no school or friendship network related variables are included in this analysis also means that other important explanations for youth participation are not accounted for.

If the relationship between parents and their offspring in relation to participation is correct it is worth considering what the mechanism might be. It is plausible to argue that when both parents participate the young person would have a much more consistent example of participation in the household. In other words they may grow to view participation as something positive due to a consistent example from both parents. It is also plausible that in this kind of household parents discuss the positive aspects of participation in the community with their children and this has a positive impact on promoting participation. Finally it is plausible that children are directly mobilised into participation by their parents. That is parents actively recruit their offspring into participation. The first two are consistent with the social learning model (Bandura, 1977; Hess and Torney, 1967) and the latter is consistent with a mobilisation model (Rosenstone and Hansen, 1993).

7.7: The impact of environmental context on the neighbourhood attachment, interpersonal trust, and participation in local groups, of young people

The evidence in sections 7.3 to 7.6 implies that there is strong evidence for a parental influence across all three dimensions of social capital. From a theoretical perspective this section proposes that socialisation within the household follows a social learning model (Bandura, 1977). The different mechanisms cannot be tested here but it is worth reconsidering precisely how this kind of socialisation might occur. Parents may influence their children directly or indirectly: the former may encompass teaching and emphasising certain behaviours and attitudes, and the latter is likely to be the result of social modelling of behaviours (Hess and Torney, 1967). In terms of participation this process is easy to imagine. Participatory parents may actively discuss and encourage their children to participate in similar organisations. However, children will also observe their parents engaging in participatory activities and thereby come to have a more positive view of participation. Living in an area characterised by high levels of deprivation may lead parents to exert greater social control over their children (Furstenburg 1993; Jarrett, 1997). While the logic for participation to be socialised in this way is reasonable most of the evidence suggests that it is not (Beck and Jennings, 1982; Kirlin, 2003). Stolle and Hooghe (2004) assessed both simultaneously and found that while youth participatory activities where the strongest predictor, parental participation did appear to have some effect. However, they did not also assess the extent to which parents influence youth participation which is potentially an important route into participation. Youth trust should be strongly related to parental trust following the logic of Uslaner (2002) and Renshon (1975). It should also be borne in mind that trust may have some genetic aspect (Sonderskov, 2011; Sturgis et al, 2012). In either case trust should behave in largely the same way if it is conceived as a fundamental moral characteristic or as a genetically heritable trait. The logic for neighbourhood attachment is more complicated. While it is predicted that no socialised effect should exist over the long term it is plausible that some evidence for parental influence should exist in youth. It is argued that attachment is a reflection of the kinds of weak situational networks that exist within the neighbourhood as they have access to other important networks and communities such as educational settings. The family is another, strong, network that young people have access to. It is argued that an important source of information about the neighbourhood, and the kinds of ties that exist therein, will be these familial relationships. In other words young people may take cues about the neighbourhood from their parents.

The cross-sectional analyses in chapter 6 demonstrated that both neighbourhood deprivation and the population density of a neighbourhood are differentially related to the three dimensions of social capital. Neighbourhood attachment in particular was found to be negatively impacted by deprivation and positively affected by areas with a lower population density. This section of the thesis will assess how these are related to neighbourhood attachment, interpersonal trust, and participation in local groups for young people. Importantly it will assess the way in which these might have an impact via the household. In other words, the neighbourhood environment might influence young people indirectly via their parents. It can be argued that this can be taken as evidence of social influence within the household insofar as an indirect relationship of deprivation, for example, would suggest parental influence over and above the fact that individuals reside within the same social context. To be clear this cannot establish a causal relationship *per se*. However, the presence of an effect of neighbourhood context which is mediated via the household should demonstrate that parents do have some influence over their offspring and that this *might* influence how individuals relate to their neighbourhoods and communities in terms of attachment, interpersonal trust, and propensity to participate in local groups. Socialisation as such cannot be assessed here although it is argued that evidence of stability between youth and adulthood will. In other words, socialisation is long term effect that is not subject to a great deal of

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environmental change. This will be examined further in chapter 8 when stability between youth and adulthood across the three dimensions will be assessed.

In this section a series of mediation models will be examined in which the relationship between the neighbourhood environment and the three dimensions of social capital will be examined. The basic model is shown in figure 7.7.1. Here the term social capital is used to refer to any of the three dimensions under investigation. It is argued that neighbourhood environment may have an influence both directly and via an effect on the household, or parents, which then has an effect on the child. Independent variables found to have been important previously are also included as controls where appropriate. The approach outlined in section 5.8 is used and all mediation models are estimated with bootstrapped standard errors following MacKinnon et al (2002). When trust and participation are estimated a probit model is used, and when neighbourhood



Figure 7.7.1: The impact of social context on young people and their parents

attachment is estimated the latent variable is estimated using a probit linking function and the regression parameters are linear. For each model 2 sets of results are presented. The first are the regression results and the second are estimates of the direct and indirect effects.

Returning to hypotheses 2.i to 2.iii outlined in section 7.2, it is possible to interpret the relationship that should exist between environmental effects and the child-parent correspondence in the three dimensions of social capital. Hypothesis 2.i suggested that

there should be a strong relationship between parental and youth trust. If this is the case then there should be a mediated relationship between environmental context and parental trust on youth trust. However, there are conditions under which strongly socialised, or genetically heritable, trust may have no relationship with deprivation and for there to be no evidence of a mediated effect. If trust is a deep moral value developed early in childhood there may be no effect of environmental context and therefore no way to establish whether trust is affected by the household context because it may be very stable from early childhood. Parents would also be unaffected, although the crosssectional models in chapter 6 suggests that they are influenced by deprivation in particular. If this is the case then it will not be possible to detect any evidence of parental influence and to therefore distinguish between the confounding effects of a common omitted variable which might explain interpersonal trust in parents and children and a causal relationship. It is also worth noting that evidence of parental influence in this way should also lend support to the suggestion that trust is strategic and related to contemporary networks and conditions and thereby lend support to Putnam's argument (2000).

Participation in local groups was argued to be unlikely to be related to parental participation in hypothesis 2.ii. The results in section 7.6 suggested that this may not be the case although an argument was again made that this may be due to omitted variable bias. If an indirect relationship is found here this will provide further evidence that parental influence does occur in terms of participation. If there is none then this should imply an omitted variable may be accounting for the relationship. In other words, if deprivation affects parental participation but this does not in influence youth participation then parental participation may not be directly influencing young people. Finally, hypothesis 2.iii suggested that the neighbourhood attachment of young people will be influenced by their parents because this relationship represents a direct and important *strong* network which may be permeated by the weak situational ties which exist within the neighbourhood.

It is important to note that the existence of parental influence in youth will not necessarily imply a long term socialised effect. For instance the context specific nature of neighbourhood attachment inherent in the way it has been defined here suggests it should be subject to parental influence. By contrast trust may appear to be unrelated to the influence of parents via the mechanism of an indirect neighbourhood effect. This may be the result of a strongly socialised effect earlier in life or an omitted variable. These questions will be examined further in chapter 8.

7.8: The impact of social context on neighbourhood attachment of young people

Prior to assessing the model shown in table 7.8 it is important to examine the bivariate relationship between neighbourhood attachment for young people and their parents and the neighbourhood level effects. Mothers have the highest correlation with deprivation at -.155 while the correlation between deprivation and the attachment of young people is only -.012. Fathers are in between at -.093. That all correlations are negative is intuitive and conforms to expectations that higher levels of deprivation should be related to lower levels of attachment. It has also been argued that females should rely on neighbourhood attachment more than males and it is therefore reasonable that anything which depresses weak situational neighbourhood ties, such as deprivation, should also have a stronger impact. The fact that young people have a relatively low correlation implies that they are less affected by the neighbourhood environment and that this is likely to be as a result of the availability of networks outside of the neighbourhood. Young people who live in larger urban areas have a mean neighbourhood attachment of .029, while for fathers and mothers it is 1.23 and 1.35 respectively. By contrast young people living in towns or villages have a mean neighbourhood attachment of .07 and fathers and mothers 1.31 and 1.63. In other words, living in a town or village is related to higher neighbourhood attachment for all groups although both parents are affected by more than their children. Mothers in particular have higher attachment when they live in a town or village.

Table 7.8.1 shows a structural model of the effects of various covariates that have been found to be important predictors of neighbourhood attachment and includes contextual effects of neighbourhood type and deprivation. It also shows the results of the mediation modelling. The model uses a probit linking function to estimate the latent variables and the regression parameters are all linear. Bootstrapped standard errors are estimated following the advice of MacKinnon et al (2002). Variables which have not been found to be strong predictors of neighbourhood attachment have not been included here due to the relatively low sample size available in these models. Living in a town or village has been recoded into one group as in the earlier empirical section of this chapter due to the small sample size for those who live in villages.

Table 7.8.1: Structural linear model on youth neighbourhood attachment via an indirect effect of neighbourhood environment on parental neighbourhood attachment

	Coef.	Std. Err.			
Youth neighbourhood attachment					
Father neighbourhood attachment	0.252	(0.058)	***		
Mother neighbourhood attachment	0.222	(0.056)	***		
Neighbourhood type: Reference = City	0.048	(0.113)			
Deprivation	0.020	(0.015)			
Mother neighbourhood attachment					
Neighbourhood type: Reference = City	0.232	(0.122)	*		
Deprivation	-0.036	(0.016)	**		
Father neighbourhood attachment					
Neighbourhood type: Reference = City	0.002	(0.131)			
Deprivation	-0.025	(0.017)	*		
P ²	0 104				
к- N	0.194				
Direct and Indirect effects	Denri	vation		Town	vr Village
	Coef	Std Frr		Coef	Std Frr
Total	0.006	(0.014)		0 100	(0 116)
Total indirect	-0.014	(0.014)	**	0.100	(0.110)
	0.014	(0.007)		0.052	(0.052)
Specific indirect					
Mother neighbourhood attachment	-0.008	(0.004)	*	0.052	(0.033)
Father neighbourhood attachment	-0.006	(0.005)		0.000	(0.031)
Direct	0.020	(0.014)		0.048	(0.108)

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

As has been seen previously parental neighbourhood attachment is strongly positively related to youth neighbourhood attachment. Neither deprivation nor neighbourhood type has any impact on young people which is unsurprising given the bivariate analyses reported above. Living in a town or village relative to a larger urban area is not strongly predictive of higher attachment for either mothers or fathers at p<.05 although there is an effect at p<.1 for mothers. It is plausible that combining these two categories has reduced the effect of living in village which was seen to be stronger in the cross-sectional models. Deprivation has a negative impact on mothers at p<.05 and the result for fathers

is significant at p < .1 level. This suggests that, for mothers in particular the impact of living in a more deprived area is related to having lower levels of neighbourhood attachment. The second section of the results shows the direct and indirect effects of both deprivation and neighbourhood density on children. There is no impact of living in a less dense area. However, there is an impact of deprivation via mothers, with a negative total (i.e. composed of mediated pathways from both parents) indirect effect which is significant at p < .05. The non-significant total effect is due to the opposite sign of living in a deprived area for seen for young people. Given the fact that this was not seen in either the bivariate analysis or the structural model this effect is likely to be close to 0.

Taken as a whole there is a small negative indirect effect of deprivation which is largely mediated by mothers. Following the logic outlined above this implies that there is an extent to which the relationship between parent-child is determined within the household rather than via some unobserved variable because they share the same context. Of course this is not to say that the effect is wholly located within the household. Rather it provides some evidence that household influence occurs.

7.9: The impact of social context on the interpersonal trust of young people

This section follows the same approach to assess the impact of deprivation and living in a less urban area on the interpersonal trust of young people. The mean level of deprivation for young people who do not trust is .376 and is -.105 for those who do. It is worth reiterating that the scale of deprivation used in this sample ranges from -4.41 for the least deprived and 17.1 for the most deprived. The results for the different household types are shown in figure 7.9.1.Here it is clear that households in which both parents are trusting tend to be located in much less deprived areas than households in which neither parent trusts. There is very little difference between households within which only 1 parent trusts and these tend to be in less deprived areas relative to households in which neither parent does, and more deprived neighbourhoods than fully trusting households. Table 7.9.1 shows a cross-tabulation of youth and household interpersonal trust with population density. This shows that, in terms of young people, there is no difference in whether or not they trust according to the population density of the area that they live 192 in. Of those who live in larger urban areas 66% are non-trusting compared to 34% who are. These figures are effectively the same for those who live in towns or villages.



Figure 7.9.1: Boxplot: Level of deprivation by household trust (*N* = 599)

Table 7.9.1: Cross-tabulation	showing	column	percentages	of	trust	and	population
density for youth and parents	;						

Youth trust	City	Town or village
Can't be too careful	65.83	64.33
Most people can be		
trusted	34.17	35.67
Ν	100	100
Household trust		
None	38.79	37.43
Father only	20.33	22.81
Mother only	17.06	12.87
Both	23.83	26.90
Ν	100	100

For household trust, 38% of those in cities come from a household in which neither parent is trusting. This figure is approximately the same for those who live in towns and villages. The figures do not differ in a large way for households in which both parents trust: 27% live in towns and villages, and 24% live in cities. Clearly there do not appear to be strong differences in terms of trust and the social environment which is consistent with a moral view of trust.

Table 7.9.2 shows the structural model for youth interpersonal trust. This follows the same logic as the previous model for youth neighbourhood attachment. It is a probit model and the key independent variable, household trust, is a dummy with non-trusting households as the reference category. A number of observations can be made about the structural model. Household interpersonal trust is strongly related to youth interpersonal trust, as is being male. Unsurprisingly given the bivariate analysis neither deprivation nor living in a town or village are directly related to youth interpersonal trust. They are also unrelated to households within which only one parent trusts. However, deprivation is strongly negatively related to households within which both parents trust, relative to households in which neither parent trusts. This implies that living in a deprived area should make it much less likely that both parents will trust. This supports the bivariate analysis in figure 7.9.1. The lower section of table 7.9.2 also shows the results of the mediation model. Given that there was no relationship between neighbourhood density and household or youth trust, this was not estimated here. However, there is a negative indirect effect of deprivation on youth trust via households in which both parents trust.

This result is not necessarily intuitive: it implies that households in less deprived areas are less likely to have two parents who trust. However, when a household exists in which both parents trust in a deprived area there is still likely to be a positive effect of this. This implies that while households in which both parents trust are less likely in areas of higher deprivation there should still be a strong socialised effect when they do exist. In other words, this effect implies some social influence from parents because there is an extent to which they should be robust to social influences.
 Table 7.9.2: Structural probit model on youth neighbourhood attachment via an

 indirect of neighbourhood environment on parental interpersonal trust

	Coef.	Std. Err.	
Youth Trust			
Household Trust: Ref = No household trust			
Father only	0.070	(0.078)	
Mother only	0.167	(0.077)	**
Both	0.293	(0.071)	***
Sex: Ref = Male	-0.252	(0.110)	**
Neighbourhood type: Reference = City			
Town or village	0.028	(0.125)	
Deprivation	-0.003	(0.020)	
Household Trust: Ref = Father only vs None			
Neighbourhood type: Reference = City			
Town or village	0.032	(0.136)	
Deprivation	-0.022	(0.023)	
Household Trust: Ref = Mother only vs None			
Neighbourhood type: Reference = City			
	-0 167	(0 1/18)	
Deprivation	0.005	(0.019)	
Household Trust: Ref = Both vs None			
Neighbourhood type: Reference = City			
Town or village	-0.094	(0.132)	
Deprivation	-0.093	(0.022)	***
R ²	0.140		
Ν	599		
Direct and Indirect Effects	Depriv	ation	
Total	-0.031	(0.018)	*
Total indirect	-0.028	(0.010)	**
Specific indirect			
Household Trust: Ref = Father only vs None	-0.002	(0.003)	
Household Trust: Ref = Mother only vs None	0.001	(0.004)	
Household Trust: Ref = Both vs None	-0.027	(0.010)	**
Direct	-0.003	(0.020)	

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

7.10: The impact of social context on participation in local groups of young people

Finally it is possible to examine the mediated relationship of the social environment on the participation in local groups of young people. It was suggested that there should not be a relationship between parent-child participation in hypothesis 2.ii. Clearly the analysis in section 7.6 suggests that this may not be the case with young people from highly participatory households being much more likely to participate. However, it was argued that this may be due to an omitted variable which explains both participation in young people and their parents. If there is no parental influence then there should be no indirect effect of neighbourhood contextual effects and an omitted variable would be a likely explanation for this relationship. Youth participation is once again coded as a binary variable here due to the fact that so few young people participate in local groups. The mean level of deprivation for non-participatory young people is .482 and is -.516 for those who do suggesting that those who participate are more to live in a less deprived area. Figure 7.10.1 shows a boxplot of the relationship between deprivation and the different household types. Here there is no clear pattern except for households in which mothers are the only groups to participate who tend to be located in less deprived places than any of the other groups.





Table 7.10.1 shows the results of the mediation modelling. Once again this follows the same basic approach as section 7.8 and 7.9. It is a probit model with a binary dependent variable. The first part of the table suggests that, as in section 7.6 household participation

is strongly related to youth participation, with the exception of households where fathers are the only group to participate. Neither deprivation nor population density are strongly associated with the participation of young people. However, households in which

 Table 7.10.1: Structural probit model on youth participation in local groups via an

 indirect effect of neighbourhood environment on parental participation

	Coef.	Std. Err.	
Youth participation			
Household participation			
Mothers only	0.206	(0.099)	**
Fathers only	0.002	(0.110)	
Both	0.283	(0.105)	**
Sex: Male = lowest	0.237	(0.146)	
Neighbourhood type: Reference = City			
Town or village	-0.123	(0.173)	
Deprivation	-0.017	(0.021)	
Household participation: mothers only			
Neighbourhood type: Reference = City			
Town or village	-0.125	(0.164)	
Deprivation	-0.051	(0.018)	**
Household participation: Fathers only			
Neighbourhood type: Reference = City			
Town or village	-0.193	(0.184)	
Deprivation	0.002	(0.018)	
Household participation: Both only			
Neighbourhood type: Reference = City			
Town or village	-0.040	(0.196)	
Deprivation	-0.015	(0.029)	
R ²	0.146		
Ν	434		
Direct and Indirect Effects	Depriv	ation	
Total	-0.031	(0.021)	
Total indirect	-0.015	(0.010)	
Specific indirect			
Household Participation: Ref = Father only vs			
None	0.000	(0.000)	
Household Participation: Ref = Mother only vs		10	
None	-0.010	(0.006)	*
Household Participation: Ref = Both vs None	-0.004	(0.008)	
Direct	-0.017	(0.021)	

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

mothers are the only participant are negatively affected by deprivation. None of the other neighbourhood level effects have an impact on the other household types. The second part of the table shows the direct and indirect effects of deprivation across all household types. Here there is little evidence of a mediated relationships. Mothers have a low co-efficient at the p<.1 level, however the total indirect effect is non-significant.

Conclusions about this are more difficult to make in terms of hypothesis 2.ii. It has been argued that the lack of an effect should suggest that the variables are independent and likely to be explained by some omitted variable which explains participation across both groups. However, the fact that neither of the neighbourhood variables predicted household participation makes this argument more difficult to justify. For example if household participation was strongly predicted by deprivation then the lack of indirect effect, in the presence of a direct effect, would have suggested that neighbourhood context would be the likely explanatory variable for both. If, as was found for both trust and attachment, a consistent indirect effect was present this would suggest the existence of household influence on the participation of young people. Here neither conclusion can made, and both a family influence and omitted variable argument are plausible explanations for this relationship.

7.11: Discussion and conclusions

This chapter has addressed a number of important questions in terms of the social influences that might occur between parents and children in terms of the three dimensions of social capital. A number of hypotheses were outlined in section 7.2. The first set, hypotheses 1.i to 1.iii outlined the relationships that should exist between neighbourhood attachment, participation in local groups, and interpersonal trust should have with another across the key stage of late adolescence. It was argued that while there may be reasons to think that in some instance these relationships may be mitigated by other factors, such as attendance of schools or colleges which may provide other routes into participation and access to social networks outside of the neighbourhood, that it was reasonable to expect the three dimensions of social capital to be related to one another in much the same way as for an adult population. These were examined in the presence of parental influence in section 7.4 through to 7.6. No effect was found 198

between the three dimensions of social capital in the presence of parental effects. When parental effects were excluded there was some evidence to suggest that participation was related to trust and *vice versa*. There was also a negative effect of neighbourhood attachment on participation in the absence of participation. There was no evidence of either trust or participation predicting attachment even in the absence of parental neighbourhood attachment.

Throughout there were strong effects of found of parental influence across all three dimensions of social capital. These effects were addressed in the second set of hypotheses, 2.i to 2.iii. It was argued that there should be a strong correspondence between parental interpersonal trust and the interpersonal trust of young people. This was found to be the case which supports an argument where trust is thought to be developed early in youth and is a deep moral value as argued by Uslaner (2002; see also Renshon, 1975). It is also consistent with the argument that trust is a genetically heritable trait (Sturgis et al, 2010; Oskarsson et al 2012). Similar evidence was found for the notion that neighbourhood attachment should be influenced by within household levels of attachment. This was outlined in hypotheses 2.iii and it was argued that because attachment is conceived of as being based on the kinds of weak situational ties that exist within a neighbourhood that one way in which young people might be able to access these is through the strong network represented by the household. In other words, because weak situational ties are conceived of as binding together the strong networks that might otherwise exist independently of one another in the neighbourhood (Granovetter, 1973), a place which is characterised by a rich network of these should permeate the family network via the interactions with the outside community of the parents. Hypotheses 2.ii argued that that there should be no relationship between parental and youth participation because young people should rely more on mobilisation within educational settings and friendship networks at this age (Galston, 2001; Jennings and Niemi, 1974; Jennings, et al, 2009). This was not found to be the case as there was a strong correspondence between parent-youth participation. It was argued that the inability to take into account the effect of school and friendship networks here, due to a lack of appropriate data, is likely to be an important omission.

However, more important is the confounding that might occur due to an omitted variable which accounts for both parental and youth participation. Indeed, this concern

is also a serious problem for both the interpersonal trust and neighbourhood attachment relationships. It is argued that some common variable, such as highly participatory neighbourhoods, may explain the commonality between parents and children across all three. Sections 7.7 through to sections 7.10 sought to address these issues to some extent by examining the impact of deprivation and population density parental effects and young people. Here an indirect effect of either deprivation or population density was argued to be evidence of within household influence. It was shown here that there is evidence that deprivation can have an indirect effect on all three dimensions of social capital. These effects suggest that there is an extent to which deprivation can influence both the trust and attachment of young people but that the route via which they work is through the family. In other words there is evidence to suggest that parental influence occurs via the mechanism of mediating neighbourhood environmental effects. It is worth reiterating that this kind of effect cannot demonstrate that omitted variable bias is not a causal influence and, indeed, this is likely to be the case particularly with respect to neighbourhood attachment. However, as well as helping to address the problem of omitted variable bias these findings also suggest that neighbourhood environment can have impact on the development of social capital when young people live with their parents. In other words young people will be less likely to be trusting and will have lower neighbourhood attachment when they, and their parents, live in more deprived neighbourhoods.

8: Socialisation: from youth to early adulthood

8.1: Introduction

This final chapter seeks to examine more thoroughly the notion that different contexts can have an influence on the development of social capital over the life-course. It will examine the interplay between those effects which have been found in chapter 7 and relate them to the development of the three dimensions of social capital in adulthood. It directly addresses questions of socialisation insofar as it is argued that correspondence between youth measures of interpersonal trust, participation in local groups, and neighbourhood attachment should suggest that these behaviours have been learned in childhood or adolescence. Moreover, it will address when this socialisation occurs by assessing the correspondence between parent, children, and adults simultaneously. Mediation models will be used to assess the direct and indirect effects between these relationships. It moves beyond chapter 7 because this did not assess socialisation per se. Rather it argued that the correspondence between parents and adolescents was indicative of interpersonal influence within the household. Secondly it argued that the household might mediate certain neighbourhood level effects and showed that the impact of living in more deprived areas in particular was likely to lead to lower levels of trust and neighbourhood attachment via a reduction in parental propensity to trust and participate.

Returning to the discussions at the outset of the thesis it can be argued that little research has been conducted into the development of the different dimensions of social capital over the life course. It has been argued throughout that the different theoretical expectations that exist regarding the three dimensions of social capital under consideration implies that different expectations should also be made in terms of where and when they develop. Much was also made of the different expectations in the social capital literature and the socialisation literature in terms of how these dimensions should relate to one another. A distinction was drawn between Putnam's (2000) conception of the relationship between trust and participation, and the arguments of Uslaner (2002). In particular and it was suggested that Putnam (2000) argues that trust should be created by participation in networks, an in particular networks which involve working together in civic groups. By contrast Uslaner (2002), and others (Renshon, 1975; Stolle and

Hooghe, 2005) have argued that trust should be socialised within the household from a very early age. Differential expectations can also be made in terms of participation: here too a distinction can be made between the expectations in the more general political science literature and research into socialisation. For instance much of the research into participation is predicated on the mobilisation literature (see Rosenstone and Hansen, 1993) and suggests participation is stimulated by exposure to participation within social networks as well as by direct cues from organisations. It does not necessarily deny the importance of earlier acts of participation but it rarely addresses them directly. By contrast the socialisation literature emphasises that participation earlier in life is one of the key mechanisms by which individuals become participatory in adulthood (Beck and Jennings, 1982; Jennings et al 2009). However, it is not generally argued that participation is socialised in childhood, but later, in adolescence through exposure to, and engagement in, participation via schools and friendship networks (Galston, 2001; Jennings and Niemi, 1974; Jennings, et al, 2009). In contrast to both trust and participation it has been argued that neighbourhood attachment should be much more related to contemporary effects and conditions. Here there should be no relationship between attachment and socialisation in youth or childhood because attachment is conceived of as being determined by the nature of the situational weak ties that exist within the neighbourhood following the logic outlined by Granovetter (1973).

Consequently, the three dimensions of social capital may be determined at different stages of life. The key, and overriding, research question has been to examine whether or not this is case, or whether the effects of more contemporary effects might play a role in determining the extent to which people are trusting, participate in local groups, and are attached to their neighbourhoods. In other words, to what extent does Putnam's (2000) conception of the development of vibrant communities hold true in the presence of counter explanations derived from the socialisation literature. To this end the three dimensions of social capital have been assessed in terms of their relationship to one another throughout. Both the general social capital literature and the mobilisation literature make strong predictions about how they should be related. For instance, trust should both predict, and be predicted by, participation and attachment because more trusting people are more likely to engage in collective actions (Ostrom, 2000), and because trusting people should be more likely to be open to interactions with those outside of their specific strong networks, at least in Uslaner's (2002) conceptualisation

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of the phenomenon, because it necessarily conditions the way in which people view others.

Some evidence has been found to support each of these arguments. Chapter 6 set out to address how trust, participation, and attachment relate to one another in a population composed largely of an older group than were assessed in chapter 7, and who will be assessed in the present chapter. The aim of this was to gain a deeper understanding of the way in which the three dimensions relate to one another, particularly in the presence of lagged effects. It was found that by far the strongest predictor of any of the three was a lagged variable. This finding supports a view of each dimension as being socialised to some extent (it is worth noting that this data necessarily could not determine when this socialisation occurred). However, evidence was also found that trust in particular was related to both attachment and participation. This is in fact consistent with both a socialised and social capital view of the world insofar as both suggest that trusting people should more predisposed to participation, and social engagement more generally. However, it was also found that participation to some extent predicts trust which tends to support Putnam's (2000) contention that trust, at least to some extent, arises out of networks. Attachment was found to be much less consistent in terms of the extent to which it predicts either trust or participation. Participation was also found to not predict attachment and it was argued that this may due to omitted variable bias whereby both are predicted by some external variable. Indeed, the apparent socialised nature of attachment in this chapter was questioned in terms of a bias arising out of the fact that individuals are self-selected into neighbourhoods. Residential stability within the neighbourhood may then explain stability in neighbourhood attachment, and may also to some extent account for stability in both participation and trust. The cross-sectional models provided support for this suggestion when it was shown that living in the same address as last year was very strongly predictive of attachment.

Chapter 7 moved beyond an assessment of the kinds of relationships that exist between the three variables among this older group and asked to what extent young people and their parents correspond across the three dimensions of social capital. This data was effectively cross-sectional, being composed of a pooled sample of 16 to 18 year olds between 1998 and 2008, and therefore potentially biased by omitted variables. Another key problem was the lack of the ability to control for the effects of other key influences such as educational environment and friendship networks. Each of the three dimensions for young people was found to be very strongly associated with the same parental dimension. Evidence was also found that household context may mediate the effect of deprivation implying that at least some of the household and parental effects can be attributed to an influence from the parents. The relationship between trust, participation in local groups, and neighbourhood attachment was also examined here. No evidence was found that they are related to another at this stage of development at least in the presence of parental effects.

This final empirical chapter will extend the findings of a parental influence, and behaviours in youth, into adulthood and assess the extent to which these are stable. In other words it will determine the extent to which each are socialised and whether these effects are related to parental influences.

As in the previous chapter participation in local groups is reduced to a binary variable where 0 is equal to participating once a year or less and 1 represents participating several times a year or more. Trust is a binary variable where 0 represents 'can't be too careful' and 1 is equal to 'most people can be trusted'. Neighbourhood attachment is measured as a continuous latent variable. The key environment variables are used throughout. Once again, population density has been recoded into a binary variable where 0 represents large urban areas, or cities, and 1 represents towns and villages. There are 737 people living in large urban areas and 260 people living in towns or villages. Deprivation is continuous with higher deprivation equalling more deprived places: the range is between -4.5 and 20.67. The mean deprivation in youth is .514 and is 1.33 in adulthood. This is likely the result of many young people moving out of the family home during this period. Whether or not an individual lives in the same address as last year is also used throughout this chapter: 738 individuals live in the same address, and 254 have moved. Sex is included, with the reference category being males. There are slightly more women in the sample than men, with 505 of the former and 441 of the latter. The age range of the adults in the sample runs from 19 to 29 with a mean of 23. Finally, a reduced 3-point version of social class is used. Once again there is no need to include a separate category for those who have never had a job here as the category would be very low.

8.2: Hypotheses

Based on these discussions a final set of hypotheses can be specified which relate to the expectations outlined throughout. These each relate to the predictions of socialisation within households or youth more generally. In the first instance it is expected that interpersonal trust will be socialised within the household at an early age and should therefore be relatively stable across the life-course because it is a deep underlying moral value. Therefore, (1.i) trust in adulthood will be predicted by trust in youth. Because offspring trust is socialised within the household, and may have some genetic component, there should be a relationship between household trust and trust in adulthood, via trust in youth. Hence, (1.ii) there will be a positive mediated relationship on adult trust, of household trust, via youth trust. The first expectation for participation is the same as for trust because it should be socialised in youth: (2.i) participation in adulthood will be predicted by participation in adulthood. However, the second is different because participation in youth should be stimulated by factors external to the household such as education environments. It is argued that the effect found in chapter 7 is spurious and due to omitted variable bias. Therefore, (2.ii) there will be no mediated effect between participation in adulthood and household participation via participation in youth. There should be no socialised effect for neighbourhood attachment because it should be contingent on the contemporary nature of the social networks that exist within a neighbourhood at any given point in time: 3(i) there will be no effect from neighbourhood attachment in youth to neighbourhood attachment in adulthood. Because of this there will be no mediated relationship.

These expectations are reasonable given the theoretical frameworks adopted throughout. However, the problem of selection bias may confound these expectations if, for example, many people remain the in same neighbourhood over the period. If this is case then any associations between the three dimensions of social capital in adulthood and youth may be accounted by this rather than socialisation. Therefore a second set of models will be estimated whereby differences in the three dimensions will be estimated between youth and adulthood which can then be assessed against changes in the other key variables, and more importantly, against changes in the neighbourhood. This should have differential effects across the three dimensions of social capital. For instance trust, if it is moral in character, should be unaffected by changes in neighbourhood. Therefore,

(4.i) a change in neighbourhood variables will not predict changes in trust. Participation in local groups should also be associated with knowledge about these groups and it is reasonable to expect that: (4.ii) changes in neighbourhood will negatively affect participation in local groups. Finally, and as has been argued neighbourhood attachment should be highly contingent on the nature of the weak situational ties within the neighbourhood itself. Therefore, (4.iii) changes in neighbourhood will be associated with changes in neighbourhood attachment.

Finally a set of predictions can also be made regarding the relationships that should exist between the dimensions at different time points. They are important because they allow questions regarding the relationships that each of the key variables have with one another to be addressed once again. However, here they are addressed from the perspective of socialisation. For instance, because trust in adulthood is generally shown to be strongly related to participation in adulthood it is reasonable to argue that trust in youth may also predict participation because it is so strongly related to trust in adulthood. In other words growing up in a trusting environment will predispose a person to participation even in the absence of participation in youth: (5.i) participation in adulthood will be predicted by trust in youth via trust in adulthood. If this hypothesis is correct then it should lend support to the perspective that trust is a deeply held moral value. However, the converse may also be true and participation in youth may predict trust in adulthood via participation in adulthood. Therefore, (5.ii) participation in youth will predict trust adulthood via participation in adulthood. If this is found to be true then this should lend support to Putnam (2000) in his contention that trust is caused by participation. If either of these hypotheses is correct it will also help explain how participation and trust come to be related to each other in adulthood when this is not the case for younger people. Predictions are not made in terms of neighbourhood attachment because it is not thought to be socialised in this way.

8.3: Neighbourhood attachment: from youth to early adulthood

In the previous chapters the relationship between neighbourhood attachment across adults and between mothers, fathers and young people was assessed. Once again invariance testing is performed in order to establish whether or not the two measurement occasions between youth and adulthood are the same. In the last chapter young people were found to differ from their parents. In the first analysis measurement invariance over time was established. The fact that young people differ from their parents implies but that adults have been found to be invariant suggests that at some stage young people mature in terms of neighbourhood attachment and become similar to adults. It is therefore necessary to test whether or not the youths in this sample have measurement invariance between this sample in youth and adolescence. As well as being of substantive interest it would also be useful to make a mean comparison of the two measurement occasions. In the absence of invariance youth neighbourhood attachment will still be able to be included in a regression model, as a predictor of adult neighbourhood attachment for example, and will be used in much the same way as in chapter 7. That is, the measures may not be directly comparable although it may be reasonable to view the youth measure as capturing an aspect of pre-adult neighbourhood attachment and should therefore be related to adult neighbourhood attachment. Here the relationship between the youth-adult time points will be examined following a similar specification to that used in chapter 6. Parental measures will not be included as these have been examined in detail in chapter 7.

Table 8.3.1: shows a correlation matrix for the neighbourhood attachment indicator variables in youth and adulthood. This table shows that young people seem to have generally lower correlations between most variables than when they are older. It is difficult to compare directly although it appears that these correlation matrices are similar to the youth-parent correlations assessed in chapter 7. Appendix 4 presents the results from invariance testing and implies that this does appear to be the case insofar as only configural invariance was established (i.e. the same set of indicator variables are predicted by the latent variable). However, metric invariance was not found suggesting that youths and adults differ in terms of neighbourhood attachment even over a relatively short period of time. Non-invariance is important insofar as it suggests that the nature of the changes that an individual undergoes between the ages of 16 to

the mid-20s are such that neighbourhood attachment cannot be directly compared between the two time points. As has been seen in chapter 7 this variable is stable for adults over time. The fact that it is not, over this period, implies that a process of socialisation is ongoing and that the difference between parents and young people in the

Table 8.3.1: Correlation matrix of indicator variables of neighbourhood attachment,adult and youth

					Talk
	Local		Advice	Am similar to	regularly
	friends	Belong to	obtainable	others in	to
Adults	mean a lot	neighbourhood	locally	neighbourhood	neighbours
Local friends mean a lot	1				
Belong to neighbourhood	0.529	1			
Advice obtainable locally	0.682	0.405	1		
Am similar to others in neighbourhood	0.441	0.444	0.383	1	
Talk regularly to neighbours	0.570	0.500	0.546	0.458	1
Ν	912				
Youths					
Local friends mean a lot	1				
Belong to neighbourhood	0.464	1			
Advice obtainable locally	0.533	0.399	1		
Am similar to others in neighbourhood	0.409	0.504	0.369	1	
Talk regularly to neighbours	0.395	0.463	0.415	0.432	1
N	212				
	515				

previous chapter was not simply a function of looking at two different groups (i.e. parents and children).

Clearly it will not be possible to compare means between these two samples. However, it is still possible to assess the impact of youth neighbourhood attachment on young adult neighbourhood attachment and this should strongly predict the variable at the second measurement occasion. It is interesting to consider how a complex latent variable such as social capital develops at this crucial stage in an individuals' life, and when and how these changes might occur. For instance it is perfectly plausible to suggest that at an earlier stage of development individuals may not have the same configuration in terms of the variables of interest. Over time, and on average, this should converge so that individuals eventually become stable in terms of neighbourhood attachment. It is worth noting that just as the young appear to be different to older people there may be reasons to expect that the elderly should also differ. This is obviously outside the scope of the present study but the nature and development of complex factor variables should be considered more widely.

Table 8.3.2 shows the full measurement model. Once again standardised factor loadings are shown here as they are more intuitive to interpret. In the first instance this model has a CFI of .964 and a TLI of .951. The RMSEA is .080. These figures indicate adequate model fit in this freely loading model. All factor loadings and *R*²s are well above acceptable levels in both groups suggesting that all indicators are contributing strongly to the model. Notably for young adults, a sense of belonging stands out as being particularly important for neighbourhood attachment whereas feeling similar to others in the neighbourhood does not. It is also worth noting that the correlation between youth and adult attachment is lower than the correlation between parent-child attachment in section 7.3. This is further evidence that this relationship was caused by omitted variable bias which is jointly explaining the attachment of all individuals in the household, which is likely to be the actual weak situational networks within the neighbourhood.

Table 8.3.2	: Confirmatory	factor	analysis	of	neighbourhood	attachment:	adults	and
youths								

	Coef.	Std. Err.	R ²	
Adult: Neighbourhood attachment				
Belong to neighbourhood	0.846	(0.026)	0.716	***
Local friends mean a lot	0.691	(0.036)	0.478	***
Advice obtainable locally	0.772	(0.026)	0.597	***
Similar to others in neighbourhood	0.562	(0.044)	0.316	***
Talk regularly to neighbours	0.690	(0.033)	0.476	***
Youth: Neighbourhood attachment				
Belong to neighbourhood	0.739	(0.038)	0.546	***
Local friends mean a lot	0.751	(0.034)	0.565	***
Advice obtainable locally	0.690	(0.037)	0.477	***
Similar to others in neighbourhood	0.641	(0.039)	0.410	***
Talk regularly to neighbours	0.739	(0.034)	0.546	***
Correlations				
Youth with Young Adult	0.244	(0.061)	***	
Ν	319			

* = p<.1, **=p<.05, *** = p<.001

Notes: Link function = probit. Estimator = WLSMV. Coefficients are standardised.

8.4: The relationship between youth and adulthood

Hypotheses 1.i, 2.i, and 3.i made differential predictions regarding the relationships that youth measures of the three dimensions of social capital will have on the same measures in adulthood. These questions speak to the underlying question of this research which seeks to assess the extent to which social capital in adulthood is determined by context and behaviours in youth. The models in this section will establish the extent to which this occurs in the presence of contemporary effects. The models will also include the other dimensions of social capital as predictors of each from adulthood. The first analysis, shown in table 8.4.1 addresses the relationship between neighbourhood attachment in youth and adulthood. The correlation between these two measurement occasions is given in table 8.3.2, above, and is .244. It was noted that this is lower than the correlation between parent-youth attachment discussed in chapter 7. This is reasonable given the conceptualisation of neighbourhood attachment as being determined by the nature of the weak situational ties within the area (Granovetter, 1973). Hypothesis 3.i suggested that there should be no relationship between neighbourhood attachment in youth and in adulthood. Model 1 in table 8.4.1 shows the relationship between the controls as well as interpersonal trust and participation in local groups. This is a linear regression model in which a CFA of neighbourhood attachment is estimated simultaneously via probit

	Мо	del 1		Mo	del 2	
	Coef.	Std. Err.		Coef.	Std. Err.	
Trust: Ref = None	0.128	(0.170)		0.129	(0.169)	
Participate in local groups: Ref = No	0.349	(0.153)	**	0.346	(0.152)	**
Same address last year: Ref = Yes	-0.086	(0.156)		-0.084	(0.155)	
Education: 0 = none, 7 = higher degree	0.022	(0.049)		0.022	(0.049)	
Sex: 0 = Male	0.120	(0.137)		0.118	(0.136)	
Age in 2008	0.000	(0.023)		0.000	(0.023)	
Social Class: Ref = Service class						
Intermediate class	0.254	(0.159)		0.252	(0.158)	
Working class	0.586	(0.218)	**	0.584	(0.217)	**
Deprivation	-0.020	(0.019)		-0.020	(0.018)	
Neighbourhood type: ref = city	0.220	(0.161)		0.218	(0.161)	
Youth neighbourhood attachment				0.312	(0.075)	***
R ²	0.108			0.175		
Ν	212			212		

	Table 8.4.1: Linear	regression	models on	adult neigh	bourhood	attachment
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* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

regression. It shows that participation is strongly linked to neighbourhood attachment for this group of young adults but that trust is not. The finding for trust in particular is notable insofar as this was found to be a very strong predictor of attachment in the longitudinal model in chapter 6. This effect of participation remains when youth neighbourhood attachment is introduced in model 2. Here a strong positive relationship is seen suggesting that adult attachment is strongly predicted by youth attachment thus invalidating hypothesis 3.i. Indeed, inclusion of this variable results in a large increase in R^2 suggesting that this variable accounts for a high proportion of the variance in the outcome. However, it is not possible to be clear as to whether or not this is a real effect or an effect which is really due to the fact that many of the sample live in same neighbourhood as previously. This will be examined further in this chapter when the differences between the different measurement occasions are assessed more closely. It is also notable that the working class group is much more likely to have higher levels of attachment than the service class group. This is consistent with the models in chapter 6 and with the theoretical expectations that class should have with neighbourhood attachment. In other words because the lower class groups are likely to have recourse to fewer networks outside of the neighbourhood they are more likely to have higher levels of neighbourhood attachment.

Hypothesis 1.i stated that interpersonal trust in adulthood should be predicted by interpersonal trust in youth. This hypothesis is predicated on the notion that trust should be a deeply embedded moral characteristic that is subject to a low degree of change over the life-course (Uslaner, 2002). It may also be a genetically heritable trait (Sturgis et al, 2010; Oskarsson et al 2012). In either case it should be stable and enduring over time. Table 8.4.2 shows a cross-tabulation of trust in youth with trust in adulthood.

	Adult	trust	
		Most	
	Can't be too	people can	
Youth trust	careful	be trusted	Total
Can't be too careful	81.62	18.38	100
Most people can be trusted	56.25	43.75	100
Ν			362

Table office cross tabalation showing row percentages of youth tract with addit tras	Table 8.4.2: Cross-tabulation	showing row percentages	s of youth trust with adult true
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There is a particularly strong relationship between those who said that 'you can't be careful' between the two occasions. Indeed, of those who did not trust in youth 82% said the same in adulthood. By contrast, 56% of the people who said 'most people can be trusted in youth' were non-trusting in adulthood. Table 8.4.3 shows the result of using the same analysis as developed for neighbourhood attachment for trust in youth and adulthood. This model is estimated via the probit linking function. Here it can be seen that in model 1 participation predicts trust at the p<.1 level but is no longer significant in model 2. This is clearly consistent with the models developed in chapter 6 when the inclusion of any given lagged effect, and in particular trust, had the effect of reducing the size of all other parameters in the model. It is also worth noting that this is more consistent with Uslaner's (2002), or a genetic, conception of the relationship that trust

	Mod	el 1		Мос	lel 2	
	Coef.	Std. Err.		Coef.	Std. Err.	
Neighbourhood attachment	0.111	(0.093)		0.098	(0.094)	
Participate in local groups: Ref=No	0.286	(0.164)	*	0.226	(0.166)	
Same address last year: 0 = Yes; 1 = No	0.111	(0.210)		0.120	(0.209)	
Education: 0 = none, 7 = higher degree	0.231	(0.058)	***	0.193	(0.061)	**
Sex: 0 = Male	-0.438	(0.164)	**	-0.419	(0.166)	**
Age in 2008	-0.059	(0.029)	**	-0.055	(0.030)	*
Social Class: Reference = Service class						
Intermediate class	-0.509	(0.205)	**	-0.573	(0.203)	**
Working class	-0.517	(0.254)	**	-0.578	(0.263)	**
Deprivation	0.013	(0.023)		0.011	(0.024)	
Neighbourhood type: ref = city	0.271	(0.181)		0.248	(0.186)	
Trust in youth				0.503	(0.169)	**
R ²	0.242			0.278		
Ν	441			441		

Table 8.4.3: Probit regression model on in	iterpersonal trust adulthood
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* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

has with participation, than it is with Putnam's (2000). Hypothesis 1.i is clearly confirmed insofar as trust in youth strongly predicts trust in adulthood. Once again, it might be objected that that this relationship is the result of remaining in the same neighbourhood. Indeed, from Putnam's (2000) perspective of trust arising out of social networks this would be reasonable because stability within the same neighbourhood should predict the same level of trust across individuals. In other words, a non-participatory neighbourhood characterised by few weak ties would be likely to lead individuals to be non-trusting and to remain non-trusting. The converse would also be true. Once again this will be explored in more detail below. It is worth noting that the addition of trust to the model leads to an increase in the R^2 however the model was reasonably well predicted prior to doing so. The other variables the model all work according to expectations, with the exception of sex which strongly suggests males are more likely to be trusting than females. The more highly educated and the higher social classes are much more likely to be trusting which is consistent with the literature.

Table 8.4.4 shows the relationship between participation in youth and participation in adulthood via a cross-tabulation. Here there is a great deal of stability in those who only participated once a year or less. Of those who did not participate in youth 71% remained

Table 8.4.4: Cross-tabulation showing row percentages of youth participation in localgroups with adult participation in local groups

	Adult par	ticipation	
	Once a	Several	
	year or	times year	
Youth participation	less	or more	Total
Once a year or less	86.84	13.16	100
Several times year or more	77.07	22.93	100
Ν			499

non-participants in adulthood. By contrast of those who did participate in youth only 44% still participated in adulthood. This implies that the relationship between participation in adulthood and in youth may not be as strong as has been suggested. Table 8.4.5 examines this and tests hypothesis 2.i which stated that participation in youth should predict participation in adulthood. This relationship is confirmed if a p-value of <.1 can be taken as evidence of this. R^2 indicates that the amount of extra variance explained by the addition of a lagged participation variable is very low. Given the low N it may be reasonable to accept this as evidence of an effect although it will be important to examine this in more detail below.

	Model 1			Model 2		
	Coef.	Std. Err.		Coef.	Std. Err.	
Neighbourhood attachment	0.103	(0.084)		0.099	(0.085)	
Trust: Ref=None	0.075	(0.163)		0.052	(0.164)	
Same address last year: 0 = Yes; 1 = No	0.161	(0.168)		0.140	(0.167)	
Education: 0 = none, 7 = higher degree	0.092	(0.053)	*	0.078	(0.054)	
Sex: 0 = Male	0.132	(0.149)		0.104	(0.150)	
Age in 2008	-0.026	(0.028)		-0.028	(0.028)	
Social Class: Reference = Service class						
Intermediate class	-0.336	(0.175)	*	-0.354	(0.176)	**
Working class	-0.599	(0.221)	**	-0.622	(0.222)	**
Deprivation	-0.050	(0.021)	**	-0.052	(0.020)	**
Neighbourhood type: ref = city	-0.064	(0.172)		-0.084	(0.174)	
Participation in youth				0.373	(0.192)	*
R ²	0.131			0.146		
Ν	361			361		

8.4.5: Probit regression model on participation in local groups in adulthood

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.

This set of models has allowed hypotheses 1.i through 1.iii to be examined. Differential expectations were outlined in terms of whether or not the three dimensions of social capital should be predicted by youth. It was argued that both trust and participation in adulthood should be predicted by trust and participation in youth. This was found very clearly to be the case for trust which appears to be stable over this formative period. Obviously this is consistent with the results from chapter 6 which suggested that the strongest predictor of trust was a lagged effect of trust. It is also consistent with the expectations outlined in terms of trust as a deep moral characteristic. The findings for participation are more mixed. However, it was argued that in a comparatively small sample a p-value of <.1 may be sufficient evidence for an effect. This relationship will be examined in more detail below. Finally, it was predicted that there should be no relationship between neighbourhood attachment in youth and adulthood. This was rejected due to a strong and significant effect. However, it was argued that this relationship may be the result of omitted variable bias such that some neighbourhood level variable predicts both neighbourhood stability and neighbourhood attachment.

It is worth noting that the relationships between the three variables of interest should be understood in terms of the findings in chapter 6. For example trust consistently predicted both neighbourhood attachment and participation. There are two plausible explanations for the lack of these contemporary effects. The first is that the effects were not large and the low sample means that this is not detected. The second suggests that these relationships exist among a group of older people but that they have not yet developed in the same way across younger people. This is supported by the lack of any such relationships in chapter 7 when a sample aged between 16 and 18 was examined. If this is the case then an important direction for future research will be to assess this relationship.

8.5: The impact of the household in youth on social capital in adulthood

Given the effects found in tables in section 8.5, and assuming they are real (i.e. not the spurious consequence of an omitted variable) it is necessary to address the second set of hypotheses outlined above. These hypotheses addressed whether or not household context in youth plays a role in determining the three dimensions of social capital in adulthood. Once again differential predictions were made regarding this: 1.ii stated that there should be a positive and strong relationship between household trust and adult trust and that this should be mediated by the relationship of household trust on youth trust. In other words household trust causes trust in youth which causes trust in adulthood. This hypothesis addresses one of the core questions of the thesis insofar as it aims to assess whether or not the correspondence between youth and adulthood can be related back to parental effects following Uslaner's (2002) reasoning. Hypothesis 2.ii suggested that there should not be such a mediated effect for participation because the correspondence between youth participation and adult participation should not be due to parental participation. Instead, it should be related to the effects of external influences, such as educational establishments and friendship networks, which have been shown to stimulate participatory behaviours over throughout adulthood (Beck and Jennings, 1982; Jennings et al 2009). No hypothesis was made about a mediated relationship for neighbourhood attachment. However, given the findings in table 8.5.1, which contradicted the hypothesis that no relationship should exist between attachment in youth and adulthood, it is worth testing for a mediated relationship. This will place the

failed hypotheses, 3.i, under further scrutiny. If parental influence is found this will provide further evidence that the relationship is indeed socialised and stable whereas a lack of an indirect will relationship will suggest the relationship may be spurious and due to stability within the neighbourhood or due to the formation of these attitudes and behaviours in youth in the same manner as participation.

Figure 8.5.1 shows the overall modelling strategy to be adopted here. It follows the same basic strategy as outlined in section 5.8 and the mediation modelling used chapter 7. Once again the generic term social capital is used to describe any of the three specific dimensions of social capital in question. The youth and participation models will be estimated using the probit linking function and the indirect effects are estimated using bootstrapped standard errors following MacKinnon et al (2002). Neighbourhood attachment is a probit model for the measurement models (not shown here), and the regression parameters are estimated using a linear model. This figure implies that there are potentially two directions by which household context might influence any of the three dimensions in adulthood. The first is via a direct pathway between 'household social capital' and 'adult social capital'. The second route is the pathway via 'youth social capital' which estimates how much of the effect that youth has on adulthood is due to the prior influence of household on youth.





Table 8.5.1 shows a cross-tabulation of household trust in youth with adult trust. Here it can be seen that there is an apparently strong relationship between household context in terms of trust in youth and trust in adulthood. It can also be seen that just under half of the people who reported being trusting in adulthood come from households in which both parents were trusting. By contrast around three-quarters of those who lived in a
non-trusting household in youth were non-trusting in adulthood. This suggests that there should be evidence of a strong correspondence between household trust in youth and trust in adulthood. The evidence from section 8.5 has already demonstrated that there is a strong correspondence between trust in youth and trust in adulthood.

Table 8.5.1: Cross-tabulation showing row percentages of household trust in youth and trust in adulthood

	Adult trust									
		Most								
Parental trust in	Can't be too	people can								
youth	careful	be trusted	Total							
No HH trust	76.71	23.29	100							
Father only	83.72	16.28	100							
Mother only	71.79	28.21	100							
Both	53.97	46.03	100							
Ν			218							

Table 8.5.2 shows the standard regression model (model 1) and the mediation model (model 2). Note that the results in the bottom section refer to model 2 only and decompose the effect of growing in households with different configurations of trust relative to households which had no trust. It is worth noting that there is an apparent discrepancy in terms of N between the models. This is due to the WLSMV in MPlus omitting data based on observed covariates but not outcomes. For a discussion of these issues see section 5.10. Here it can be noted that there are no apparent discrepancies between the two models except that the size of the youth trust parameter on adult trust drops. This is not unreasonable given the amount of variance explained by regressing the household variables on youth trust. The addition of the parameters in model 2 increases the amount of variance explained in terms of trust in adulthood from .179 to .228. Consistent with the findings in section 8.5 trust in adulthood is strongly predicted by trust in youth. It is also consistent with the findings from the previous chapter where trust in youth was strongly predicted by household trust. Notably trust in adulthood is not predicted by household trust in youth in the presence of trust in youth. It should be pointed out that when youth trust is excluded living in a household in which both parents trust in youth is related to trust in adulthood. The mediation analysis section confirms

the expectation outlined in hypothesis 1.ii that that there would be an indirect effect between household trust in youth and trust in adulthood.

Table 8.5.2: Structural probit model predicting adult interpersonal trust via an indirecteffect of household interpersonal trust on youth interpersonal trust

	Мо	del 1		Mod	el 2				-
	Coef.	Std. Err.		Coef.	Std. Err.				_
Young adult trust									_
Youth trust	0.674	(0.210)	**	0.383	(0.107)	***			
Household Trust: Ref = No household trust									
Father only	-0.469	(0.291)		-0.304	(0.313)				
Mother only	-0.138	(0.308)		-0.109	(0.278)				
Both	0.325	(0.245)		0.280	(0.259)				
Vouth trust									
Youth trust									
Household Trust: Rel = No household trust				0.425	(0.225)				
Father only				0.135	(0.235)	* *			
Wother only				0.685	(0.221)	***			
Both				0.915	(0.203)	ጥ ጥ ጥ			
Adult R ²	0.179			0 220					
Vouth P ²	01270			0.220					
				0.136					
Ν	214			302					
	Effect	s from					Effec	ts from	
Direct and Indirect Effects: model 2	Mo	ther		Effects fro	m Father		E	Both	
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Total	0.153	(0.283)		-0.253	(0.308)		0.630	(0.235)	**
Specific indirect	0.262	(0.115)	**	0.052	(0.094)		0.350	(0.129)	**
Direct	-0.109	(0.278)		-0.304	(0.313)		0.280	(0.259)	

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

It suggests that in households in which mothers-only trust there is evidence of some socialised effect but that there is no evidence of this from households in which fathersonly trust. There is also evidence of a strong socialised effect from households in which both parents trust on trust in adulthood. In other words growing up in a high trusting household is a strong predictor of youth trust and this relationship carries through to adulthood. This suggests that a view of trust as being related to parental trust is reasonable and provides evidence that growing up in a high trusting household is related to trust later in life. Taken together with evidence from chapter 6 it implies that trust is highly likely to be a strong and stable characteristic and that one of the reasons that people trust in adulthood is because they grew up in a trusting household.

Following this the same set of analyses can be used to assess the relationships that exist between participation in local groups between the parents, youth, and adulthood. It is worth noting at the outset that the section 8.5 suggested that the relationship between participation in local groups in youth and adulthood may not be as strong as is often claimed. This may be because of the particular type of group that is being assessed rather than a more general phenomenon. In other words it is plausible that other forms of participation will have more stability between youth and adulthood. It is also plausible that the 'sleeper effect' suggested by Jennings and Stoker (2004) may increase this stability as individuals age. Hypothesis 2.ii suggested that there should be no mediated relationship between growing up in a participatory household and participation in adulthood because the effects of schools and friendship networks should have a much stronger mobilising effect here (Beck and Jennings, 1982; Jennings et al 2009).

Table 8.5.3 shows a cross-tabulation between household participation in youth and participation in adulthood. It shows that of the individuals who grew up in non-participatory households approximately 70% remain non-participatory in adulthood.

 Table 8.5.3: Cross-tabulation showing row percentages of household participation in

 local groups in youth and participation in local groups in adulthood

	Adult participation								
Parental participation in vouth	Once a year or less	Several times year or more	Total						
None	69.35	30.65	100						
Mother only	65.91	34.09	100						
Father only	66.67	33.33	100						
Both	60.61	39.39	100						
Ν			293						

Table 8.5.4 shows the same kind of model that was estimated in table 8.5.2. Once again the slightly different N between models can be accounted for by the way in which WLSMV estimation in MPlus treats missing data in relation to covariates and outcomes. Notably in both models 1 and 2 participation in youth predicts participation in adulthood relatively strongly. This differs slightly from table 8.5.5 in the previous section in terms of the level of significance although the magnitude of each of the different parameters are not unreasonable given the different models specified in each. That is, the largest effect is found in the most parsimonious model when only youth and household participation were included. This drops when other controls are included and when household participation is regressed on youth participation in model 2 of table 8.5.4. Consistent with the findings in chapter 7 household participation predicts youth participation. Notably in a model which excluded youth participation there was no direct effect of household participation in youth on participation in adulthood. Notably the inclusion of the mediated relationship increases the overall R^2 for participation in adulthood but it is worth noting that the youth variable is R^2 remains higher suggesting that the variance in participation in adulthood is not accounted for particularly well in this model.

The second section of table 8.5.4 shows the indirect effect of household participation in youth regressed on participation in adulthood mediated via participation in youth. This directly addresses hypothesis 2.ii. There is clearly no mediated effect from households in which only one parent participates. However, there is some evidence that households in which both parents participate does have an indirect effect on participation in local groups in adulthood via participation in youth. That is highly participatory households stimulate young people to participate which in turn leads to higher levels of participation in adulthood. This result is only significant at p<.1 which may be appropriate to take as evidence of an effect given the low sample size. However, when taken with the results from chapter 7, when a range of controls were also included in the model, this result should be treated cautiously. However it does warrant further research insofar as demonstrating an effect of parental participation on adult participation in this way would be counter too much of the socialisation literature (it should be noted that others have found evidence of parental influence. See for instance Stolle and Hooghe (2004)). However, demonstrating the path of this influence may flow through the stimulation of participation in youth is a notable finding.

Table 8.5.4: Structural probit model predicting adult participation in local groups via an indirect effect of household participation in local groups on youth participation in local groups

	Mod	el 1		Mod	el 2				
	Coef.	Std. Err.		Coef.	Std. Err.				
Young adult participation									
Youth participation	0.443	(0.196)	**	0.248	(0.111)	**			
Household participation: Ref = None									
Mother only	0.073	(0.219)		0.019	(0.236)				
Father only	-0.010	(0.265)		-0.091	(0.266)				
Both	0.053	(0.081)		0.019	(0.088)				
Youth participation									
Household participation: Ref = None									
Mother only				0.353	(0.243)				
Father only				0.719	(0.278)	**			
Both				0.256	(0.084)	**			
Adult R ²	0.034			0.068					
Youth R ²				0.086					
Ν		292		306					
	Effects fro	m mother		Effects fro	m father		Effec	ts from	
Direct and Indirect Effects: model 2	on	ly		on	ly		Ł	oth	
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Total	0.107	(0.228)		0.087	(0.264)		0.082	(0.084)	
Specific indirect	0.088	(0.076)		0.178	(0.112)		0.063	(0.036)	
Direct	0.019	(0.236)		-0.091	(0.266)		0.019	(0.088)	

* = p<.1, **=p<.05, *** = p<.001; Bootstrap = 2000

Notes: Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

Finally, this approach can be used to assess the impact that parental neighbourhood attachment in youth has on neighbourhood attachment in adulthood. Table 8.5.5 shows a correlation matrix for the adults, youths, and parents in terms of neighbourhood attachment. Clearly the strongest is that between fathers and mothers. By contrast there is only a relatively low correlation between both parents and their adult offspring. By contrast both parents are much more highly correlated with their adolescent offspring. It is notable, although not surprising given the results in section 8.5 that the correlation between the same individuals in youth and adulthood is also low. This table suggests that

the relationship between parents and their adult children is not strong. It also implies that the relationship between the same individuals over time is not strong which

Table8.5.5:Correlationmatrixofadult,youthandparentalneighbourhoodattachment

	Adult	Youth	Mother	Father
Adult	1			
Youth	0.302	1		
Mother	0.218	0.496	1	
Father	0.170	0.398	0.516	1
N	206			

suggests that the conceptualisation of neighbourhood attachment as being predicated on relatively contemporary relationships is correct.

Table 8.5.6 shows the results for this analysis which follows the same procedure outlined for the previous models in this section. It is worth noting that no specific hypothesis was outlined regarding neighbourhood attachment and whether or not it should be mediated, as hypothesis 3.i specified that there should be no relationship between youth and adult neighbourhood attachment. This analysis is therefore more exploratory and will be contrasted with the results from section 8.7 when difference models are estimated in order to assess the correlates of change between the three dimensions of social capital between youth and adulthood. Model 1 shows that parental attachment is

Structural model predicting adult participation in local groups via an indirect effect of trust in youth on trust in adulthood unrelated to adult neighbourhood attachment in the presence of neighbourhood attachment in youth. This drops in terms of significance in the second model although using the precedent established previously, when *N* is very low *p*<.1 may be taken as evidence of an effect. Notably R^2 remains unchanged for adult attachment between models and is relatively low, particularly when compared with the R^2 for younger people. The second part of the model addresses the presence of indirect effects. There is some evidence that there is an indirect effect from mothers to adults via young people at *p*<1. This suggests that to some extent household parental neighbourhood attachment may be related to neighbourhood attachment in adults.

There are two plausible explanations for this: the first is that the apparent relationship between neighbourhood attachment between parents and across time is spurious and due to the fact that individuals remain in the same neighbourhood and are therefore exposed to the same structure of weak situational networks. The second would suggest that neighbourhood attachment is less contingent on proximal effects than has been

Table 8.5.6: Structural linear model predicting adult neighbourhood attachment via an indirect effect of parental neighbourhood attachment on youth neighbourhood attachment

	Model 1			Мо	del 2	
	Coef.	Std. Err.		Coef.	Std. Err.	
Young adult neighbourhood attachment						
Youth neighbourhood attachment	0.212	(0.083)	**	0.220	(0.114)	*
Mother neighbourhood attachment	0.070	(0.089)		0.063	(0.087)	
Father neighbourhood attachment	0.049	(0.096)		0.047	(0.096)	
Youth neighbourhood attachment						
Mother neighbourhood attachment				0.317	(0.071)	***
Father neighbourhood attachment				0.160	(0.082)	*
Adult R ²	0.076			0.076		
Youth R ²				0.221		
Ν	206			206		
Direct and Indirect Effects: model 2	Effects fro	m Mother		Effects fr	om Father	
Total	0.133	(0.086)		0.082	(0.092)	
Total indirect	0.070	(0.039)	*	0.035	(0.026)	
Direct	0.063	(0.087)		0.047	(0.096)	

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

argued. In other words a tendency to view the neighbourhood, and the relationships that a person has within it are based to some extent on a socialised trait.

This section sought to address hypotheses 1.ii and 2.ii and the extent to which interpersonal trust and participation in local groups are socialised within the household. An exploratory analysis of neighbourhood attachment was also conducted after it was found that youth attachment predicted adult attachment in section 8.5. Strong evidence was found to support the hypothesis that trust is socialised within the household with

particularly large effects when a person lived in a household in which both parents were trusting. There was also some evidence to suggest that participation in local groups is socialised although a number of caveats were made regarding this effect and in particular how it should be viewed relative to the mixed findings from section 8.5 in terms of whether not participation in local groups in youth is actually predictive of the same in adulthood. Finally, an exploratory model of the indirect effect of parental neighbourhood attachment was estimated and a small indirect effect was found. Throughout it has been argued that many of the apparent effects which have been observed may be the result of bias due to the fact that many individuals remain in the same neighbourhood, or indeed, live in the same household. The following section will seek to assess the relationships that exist between the different time points and, importantly, will assess the impact that moving to a new neighbourhood may have on each of the three dimensions of social capital.

8.6: Differences between youth and young adulthood

Hypotheses 4.i to 4.iii made predictions about the way in which changes in the neighbourhood between youth and adulthood will be related to changes in the three dimensions of social capital. It was argued that if trust is a fundamental moral, or indeed genetic, characteristic then it should not be subject to change as other changes in the neighbourhood occur. By contrast it was argued that changes in the neighbourhood should negatively impact participation in local groups and neighbourhood attachment. This should particularly be the case for neighbourhood attachment because it is conceived of as being subject to the particular configuration of the weak situational ties that exist within a neighbourhood at any given point in time. It has been argued throughout that the apparent relationship that neighbourhood attachment has across different points in time, and within the household, may be due to an omitted variable which would account for these relationships because individuals inhabit the same social milieu. The same may of course be true for participation and it was argued that changes in neighbourhood should negatively affect this because participation should be contingent on knowledge about the groups that exist within the local community and the mobilising cues that might be related to this.

Here there are only two sample points which means that growth cannot be assessed as such. Rather models are estimated based on differences between the youth and adult samples using a latent difference model. This approach allows estimates to be generated based on the difference between the two time points in a structural model. It takes the form shown in figure 8.6.1.





Here Y represents any of the three dimensions of social capital at times 1 and 2. This variable may be observed or latent. *D* represents the difference score between the two time points and is a latent variable. In other words it is not directly observed. The arrows denoted 1 indicate that these are 'perfect' regressions, i.e. the amount of variation that is explained here is set to one. This framework, which has been somewhat simplified here, makes it possible to estimate the difference between the two models while simultaneously allowing more parameters to be included in the model. It should also be noted that this can be easily extended to include multiple latent difference estimates where the parameter of interest would be the correlation between the latent difference scores. For a detailed discussion of this approach to modelling see McArdle (2009).

Prior to estimating the full latent difference models in order to test hypotheses 4.i to 4.iii it is worth estimating simultaneous difference models across each of the three dimensions of social capital. These correlations are shown in table 8.6.1. It should be noted that only estimates of two sets of difference scores are conducted at once. The only significant result is between a change in participation in local groups and interpersonal trust which is relatively strong. It indicates that the greater the difference in terms of interpersonal trust. It should be noted that further models in which predictor 225

variables were included reduced the significance of the correlation between these two variables. This may be due to the relatively small *N* in this set of models and relatively large number of parameters including more covariates entails. In other words including one predictor in the model means estimating an extra two parameters as the covariate is regressed onto both difference scores. Of course this model cannot indicate directionality. Moreover, the fact that it modelled more thoroughly these relationships suggests that caution should be exercised in making any inferences. However, a relationship between trust and participation would be consistent with other results, and in particular chapter 6.

Table 8.6.1: Correlations between latent difference scores

	Coef.	Std. Err.		Ν
M1: Difference: participation and trust	0.376	(0.175)	**	496
M2: Difference: trust and neighbourhood attachment	0.144	(0.207)		496
M3: Difference: participation and neighbourhood attachment	1.020	(1.060)		507
* - n < 1 **-n < 05 *** - n < 001				

* = p<.1, **=p<.05, *** = p<.001

In order to test hypotheses 4.i to 4.iii the models are developed in three stages. In the first instance the two remaining (i.e. not the outcome) social capital variables are included as measured in 2008. A range of covariates such as age, sex, social class and education are then included. Some of these variables may have been subject to change over the period and other, such as sex will not have been. Education in particular may have been subject to a great deal of change over this period and in a sense may be thought of as a measure of change insofar as low levels of educational attainment should indicate greater similarity to the earlier time point. Finally, the key contextual measures are included which take into account changes in area of residence and deprivation. These are calculated simply by subtracting the measure in youth from 2008²⁷. It should be noted that changes in level of population density was tested but the vast majority of people remained in the same type of area and it was dropped from the analysis.

²⁷ It should be noted that a difference score was tested using deprivation and the estimates were very similar. Given the potential complexity of estimating multiple simultaneous difference models the simpler approach was taken for predictors.

Approximately 45% of people moved wards during the two periods. The majority of these moved to a more deprived neighbourhood: the mean deprivation score for the youth sample is .51, whereas it is 1.33 for the adult sample. All models were estimated using WLSMV estimation. As the difference score is a latent variable it has a linear interpretation²⁸. It should be noted here that the model for participation is not included here. No variables at any stage of analysis were related to changes in participation between youth and adulthood. This clearly suggests that hypothesis 4.ii is incorrect. It suggests that either participation is random and therefore unpredictable over time or, more likely, measures have not been included which might explain this change. As has been noted above an important potential predictor that is not included here is the *opportunity* to participate in local groups. For instance, it is not possible to include a measure of the number or nature of the groups which exist in any given community. These are likely to condition the probability that any individual will participate. As has also been noted even an individual who wishes to participate in their local community would be unlikely to be able to do so if no groups or opportunities exist.

Table 8.6.2 shows the results of the modelling for neighbourhood attachment. Model 1 shows the estimates for interpersonal trust and participation in local groups. Trust in 2008 is not predictive of changes in neighbourhood attachment across any of the models and it seems clear that it is unlikely to be related to changes in neighbourhood attachment. Participation in 2008 is strongly related to changes in attachment across all three models. However, the fact that this variable increases across all models as more covariates are added suggests that it should be interpreted cautiously. It is worth noting that including a model which excludes participation in local groups does not materially affect any of the other variables in the model in a meaningful way. All signs and magnitudes remain the same. There is clearly a suppression effect here. The exclusion of any single variable or set of variables from the model does not remove the problem. A

²⁸ It should be noted that the interpersonal trust model could not be estimated using the standard delta parameterization in MPlus and theta parameterization had to be used instead. This accounts for the apparent inflation in magnitude for some variables relative to other models. For more information see Muthen and Asparouhov (2002).

bivariate regression which includes participation only has a similar magnitude to model 1 and this is likely to be closest to the real effect.

Table 8.6.2: Latent difference model on change in youth and adult neighbourhood attachment

	Mode	el 1		Mod	el 2		Model 3		
	Coef.	Std. Eff.		Coef.	Std. Eff.		Coef.	Std. Eff.	
Young adult participate in local groups	0.262	(0.156)	*	0.392	(0.172)	**	0.438	(0.174)	**
Young adult trust		(0.167)		0.175	(0.188)		0.202	(0.193)	
Education: 0 = none, 7 = higher degree				0.028	(0.054)	*	0.080	(0.056)	
Sex: 0 = Male				-0.007	(0.025)		0.100	(0.157)	
Age in 2008				0.110	(0.155)		0.010	(0.026)	
Social Class: Reference = Service class									
Intermediate class				0.312	(0.178)	*	0.208	(0.186)	
Working class				0.720	(0.236)	**	0.580	(0.246)	**
Different ward							-0.411	(0.173)	**
Difference: deprivation							-0.047	(0.024)	*
R ²	0.028			0.107			0.178		
Ν	230			212			211		

* = p<.1, **=p<.05, *** = p<.001; Bootstrap = 2000 Notes: Linear model. Estimator = WLSMV. Coefficients are unstandardised.

Table 8.6.3: Latent difference model on change in youth and adult interpersonal trust

	Model 1			Model 2			Model 3		
	Coef.	Std. Eff.		Coef.	Std. Eff.		Coef.	Std. Eff.	
Young adult neighbourhood attachment	0.026	(0.062)		0.108	(0.099)		0.142	(0.107)	
Young adult participation in local groups	0.429	(0.238)	*	0.426	(0.370)		0.416	(0.369)	
Education: 0 = none, 7 = higher degree				0.395	(0.194)	**	0.359	(0.186)	*
Sex: 0 = Female				-0.887	(0.433)	**	-0.863	(0.426)	**
Age in 2008				-0.114	(0.075)		-0.129	(0.080)	
Social Class: Reference = Service class									
Intermediate class				-1.107	(0.538)	**	-1.063	(0.524)	**
Working class				-1.168	(0.619)	*	-1.096	(0.603)	*
Different ward							0.397	(0.373)	
Difference: deprivation							0.026	(0.052)	
R ²	0.021			0.213			0.222		
Ν	479			441			439		

* = p<.1, **=p<.05, *** = p<.001 Notes: Linear model. Estimator = WLSMV. Coefficients are unstandardised.

In model 2 the socio-demographic variables are added. As in previous models, and consistent with the theoretical expectations, being a member of the working class is a particularly strong predictor of changes in neighbourhood attachment. Finally, the changes in both ward and deprivation are added into the model. They suggest that, as predicted in hypothesis 4.iii, changes in neighbourhood should be related to changes in neighbourhood attachment. Moving to a different ward in particular has a strong negative effect at the p<.05 level. Deprivation also has an impact although the p-value was .051. Given the sample size it may be reasonable to treat this as an effect. It is also worth noting that R^2 suggest that the inclusion of these two variables explains a relatively large amount of variance in the outcome. This is an important finding as it suggests that the concerns that the relationships between neighbourhood attachment, both within households and across time, may be due to the fact that individuals remain within the same neighbourhood is warranted.

Table 8.6.3 repeats this analysis for interpersonal trust. Here it was predicted that changes in neighbourhood should be unrelated to changes in trust because trust should be a stable deep moral characteristic. In model 1 there is an impact of participation in local groups at the p < .1 level. However this disappears in models 2 and 3. There is no impact of neighbourhood attachment in any model. In model 2 there is an impact of sex, suggesting that women are more likely to be subject to change during this period. This is notable insofar as sex is not generally thought to have an impact on interpersonal trust. This effect remains in model 3. Education is strongly predictive of changes in interpersonal trust which is consistent with the general role that this is thought to play. However, this effect is reduced in model 3 and is only significant at the p<1 level. It should also be noted that being a member of the lower social classes relative to the service class is significantly negatively related to interpersonal trust in both models 2 and 3 although being a member of the working classes in only significant at p < 1. Finally, the change in neighbourhood variables are added in model 3. None are related to changes in interpersonal trust which is consistent with the hypothesis. This suggests that interpersonal is not subject to the same amount of bias as is likely for neighbourhood attachment in terms of living in the same neighbourhood across time and implies that trust is the deep underlying moral, or genetic, characteristic that has been suggested throughout.

This section has addressed hypotheses 4.i to 4.iii. Generally speaking these hypotheses address the role that neighbourhood context has on the three dimensions of social capital. No effect was found for participation in local groups and no covariate was found to be related to changes in participation. This implies that hypotheses 4.ii is incorrect which strengthens the socialised findings in relation to participation in local groups. It suggests that stability in participation over time is not negatively affected by moving to a new neighbourhood. In other words, if the hypothesised negative effect had been found this would have suggested that moving to a new neighbourhood would reduce participation relative to people who stay in the same neighbourhood. A similar argument can be made regarding interpersonal trust. This effect was expected and outlined in hypothesis 4.i, and once again it implies that the strength of socialised relationship in terms of interpersonal trust is not due to staying in the same neighbourhood over time. Finally, the converse is true of neighbourhood attachment. This confirmed hypothesis 4.iii which suggested that there should be a strong negative effect of moving to a new neighbourhood. This finding is intuitive given the conceptualisation of neighbourhood attachment as being based upon the nature of the weak situational ties that exist within neighbourhoods. In other words embeddedness within the neighbourhood develops over time. When a person moves to a new neighbourhood they should be less exposed to the weak situational networks within a community because they have fewer strong ties within the community. This should strengthen over time although the extent to which this is the case should be contingent on the particular ties within a given community.

8.7: Pathways into participation, neighbourhood attachment, and interpersonal trust

Finally, it is possible to address hypotheses 5.i to 5.iii. These suggested that participation in local groups, interpersonal trust, and higher levels of neighbourhood attachment, may be related to one another across time in more complicated ways. Chapter 6 demonstrated that these are related to one another in adulthood. This raises the possibility that there may be further pathways into neighbourhood engagement, participation, and trust. For example it was suggested that people may be participatory in adulthood not simply because they participated in youth, but because they also had higher levels of interpersonal trust or neighbourhood attachment in youth. Using a mediation approach this section will examine these questions. Hypotheses 5.i suggested that participation in adulthood should be predicted by trust in youth via trust in adulthood. In other words people will participate as adults because they grew up in high trusting environments as children. Hypothesis 5.ii suggested that participation in youth will predict trust adulthood via participation in adulthood. It is argued that such a finding would favour Putnam's (2000) argument that trust should be predicted by participation. Predictions were not made with regard to neighbourhood attachment because it is thought to be much more contingent on neighbourhood effects. Models were examined in which neighbourhood attachment was tested and this expectation was met insofar as it was unrelated to the other variables and no indirect effects were detected.

It has already been shown that both trust and participation appear to be socialised at least to some extent. Interpersonal trust in particular was found to be strongly linked between youth and adulthood. Table 8.7.1 shows the correspondence between youth trust and adult participation, adult trust and adult participation, and youth participation and adult trust. Approximately 70% of those who participated once a year or less in adulthood were non-trusting in youth. This figure rises slightly to 75% between participation and trust in adulthood. Non-participation in youth is strongly linked to non-trusting in adulthood with approximately 85% of non-participants being non-trusting.

Given these figures it is reasonable to suggest that each is related to the others to some extent. Tables 8.7.2 and 8.7.3 show the results for the mediation models. In order to test the relationship between trust in youth and participation in adulthood a number of models are specified. All variables in the model are binary and estimation is conducted via probit regression. The theta parameterization in MPlus is used in order to estimate these models. All models use bootstrapped standard errors to estimate the indirect effects. In model 1 of table 8.7.2 it is shown that adult trust has significant effect at p<1 on participation in adulthood. Youth trust here has no relationship with adult participation. Notably, there was a relationship in the absence of adult trust. There is clearly a strong relationship between trust in youth and trust in adulthood which is consistent with previous findings. There is a significant indirect effect in model 1 at the p<1 level and a significant total effect at p<.05. However there is no evidence of a direct

 Table 8.7.1: Cross-tabulation showing row percentages between youth and adult trust

 and participation

	Youth tr	ust		Adult tr	ust	
		Most			Most	
		people			people	
	Can't be too	can be		Can't be too	can be	
Adult participation	careful	trusted	Total	careful	trusted	Total
Once a year or less	70.28	29.72	100	74.74	25.26	100
Several times year						
or more	58.33	41.67	100	66.51	33.49	100
Ν			479			701
Youth participation	Adult tr	ust				
Once a year or less	75.47	24.53	100			
Several times year						
or more	64.18	35.82	100			
Ν			385			

effect which would be seen in the structural part of the model. Model 2 shows the impact of estimating a model in which the relationship between youth trust and adult participation is fully mediated by adult trust. Given the lack of a relationship between youth trust and adult participation when adult trust is present this is a reasonable model to specify. Moreover, it makes theoretical sense insofar as the mechanism by which trust in youth would have an impact on participation in adulthood is difficult to envisage. The only way in which this might work would be if trust in youth predicted some other variable, such as participation in youth, which then in turn predicted participation in adulthood. Such models were checked and no relationships were found. Model 2 therefore shows the impact of estimating a fully mediated relationship between trust in youth and adult participation. Here the estimate for adult trust on adult participation is slightly higher which is reasonable given that youth trust is no longer a direct covariate on adult participation. Here there is a stronger indirect effect as would be expected under this framework. Finally model 3 estimates the same model as in 2 (i.e. fully mediated) in the presence of youth participation. Here a correlation is also estimated between youth trust and youth participation which is not shown in the table. This model demonstrates that the relationship between trust in youth and participation in adulthood remains in the presence of the lagged effect. The indirect effect remains, albeit this has now dropped in significance, and the effect size remains a similar magnitude. This model implies that trust in youth does indeed predict participation in

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Table: 8.7.2: Structural probit model predicting adult participation in local groups via

	Мо	del 1	1		lel 2		Мо	del 3	
	Coef.	Std. Err.		Coef.	Std. Err.		Coef.	Std. Err.	
Adult participation									
Adult trust	0.188	(0.097)	*	0.246	(0.087)	**	0.275	(0.117)	**
Youth trust	0.187	(0.148)		NA			NA		
Youth participation	NA			NA			0.483	(0.222)	**
Adult trust									
Youth trust	0.743	(0.146)	***	0.788	(0.144)	***	0.668	(0.198)	**
Adult Participation R ²	0.056			0.064			0.094		
Youth Trust R ²	0.079			0.121			0.078		
Ν	479			496			294		
Direct and Indirect									
Effects									
Total	0.327	(0.127)	**	0.194	(0.080)	**	0.184	(0.096)	*
Specific indirect	0.139	(0.078)	*	0.194	(0.080)	**	0.184	(0.096)	*
Direct	0.187	(0.148)		NA			NA		

an indirect effect of trust in youth on trust in adulthood

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised.Parameterization = theta. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

adulthood via trust in adulthood. It confirms hypothesis 5.i and taken with the other results it suggests that growing up in a trusting household is likely to be related to participation in adulthood.

Table 8.7.3 shows a similar set of analyses in order to assess the relationship between participation in youth and trust in adulthood. It assesses hypotheses 5.ii and tests whether or not participation in youth predicts trust in adulthood. It is worth noting that the relationship between participation in youth and trust in adulthood is far more likely to have a direct effect. It might be suggested that participation in youth might lead to a more trusting attitude even if the participation itself does not carry on into adulthood. This should work in the way outlined by Putnam (2000) and which has been discussed extensively throughout. The models are estimated using a probit linking function and theta parameterization. The standard errors for the indirect effects are bootstrapped. Here two models are estimated. The first assesses direct and indirect effects for

Table: 8.7.3: Structural probit model predicting adult interpersonal trust via an indirect

	Мо	del 1		Мос	del 2	
	Coef.	Std. Err.		Coef.	Std. Err.	
Adult trust						
Adult participation	0.139	(0.093)		0.169	(0.094)	*
Youth participation	0.271	(0.179)		NA		
Youth trust	NA	NA		NA		
Adult participation						
Youth participation	0.415	(0.154)	**	0.448	(0.158)	**
Adult Trust R ²	0.033			0.028		
Adult Participation R ²	0.060			0.027		
Ν	499			294		
Direct and Indirect						
Effects						
Total	0.329	(0.179)	*	0.076	(0.057)	
Total indirect	0.058	(0.047)		0.076	(0.057)	
Specific indirect	0.058	(0.047)		0.076	(0.057)	
Direct	0.271	(0.179)		NA		

effect of participation in youth on participation in adulthood

* = p<.1, **=p<.05, *** = p<.001

Notes: Estimator = WLSMV. Coefficients are unstandardised. Paramterization = theta. Italicised variable names represent outcome variables in the structural model. Bootstrap = 2000

participation and finds that neither is related. The second tests whether a fully mediated indirect effect might account for this relationship and a positive effect from adult participation to trust is found at the p<1 level. No indirect effects are found, however, suggesting that participation in youth is not predictive of trust in adulthood.

8.8: Conclusions

In this final analytical chapter the relationships between youth and adulthood have been examined, as have the impact of household effects. Consideration was also given to differences between the two points of measurement might be explained. A number of hypotheses were outlined. The first set addressed the relationships that each dimension of social capital would have between the two measurement occasions. 1.i suggested that trust in adulthood would be strongly related to trust in youth and this was found to be the case. A similar argument and finding were made for hypothesis 2.i in terms of 236

participation. By contrast it was suggested that neighbourhood attachment in adulthood should not be related to youth neighbourhood attachment in hypothesis 3.i. This was not found not be the case although it was argued that this may be the result of an unobserved variable such as living in the same neighbourhood between the two time points. Hypotheses 1.ii and 2.ii addressed the role that the household might play in socialisation suggesting that trust should be socialised via the parents were as there should be no effect for participation because this is thought to be socialised outside of the household in adolescence. Trust was found, as expected, to be strongly related to parental and household trust in youth. There was also some evidence that participation of both parents. Some evidence was found that neighbourhood attachment was also socialised within the household although this did not address a specific hypothesis. It is worth reiterating that the indirect effect of parental trust was much stronger and more consistent than for any of the other dimensions of social capital.

The next set of models, section 8.5, addressed the problem of neighbourhood stability by assessing latent difference models and how changes in neighbourhood might have an impact on the key variables. It was argued that a strong relationship between moving into a new neighbourhood and any of the three dimensions of social capital would imply that this was unlikely to be a socialised phenomenon. Here it was hypothesised that changes in trust should be unrelated to changes in the neighbourhood in hypothesis 4.i because trust should be a much deeper moral characteristic, which conditions how an individual views the world around them. This was found to be the case and it was argued that this constitutes evidence that trust is a socialised phenomenon. It was suggested in 4.ii that participation should be subject to change as the neighbourhood changes because there is an extent to which the ability to participate in local groups may be contingent on knowing about the groups and having relationships with other people in the local community. This was not found, and indeed, no variable was related to changes in participation. Finally, it was suggested that neighbourhood attachment should be affected by changes in the neighbourhood because it is necessarily contingent on the kinds of networks that exist within the neighbourhood. This was found to be the case and it was argued that this suggests that the apparent socialised effects observed earlier in the chapter were likely due to the effect of many individuals being located in the same neighbourhood between the two time points.

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The final set of models addressed 5.i and 5.ii which suggested that participation and trust between youth and adulthood should be related to each other. It was suggested that individuals who were trusting in youth should be more likely to be participatory in adulthood and that evidence of this would suggest that a socialised, or indeed genetic, conception of trust would be more likely as it would be shown to have conditioned other behaviours in adulthood. This was shown to be the case for trust. A similar argument was made in terms of participation but no evidence of either or direct or indirect effect was found.

Taken together this chapter has presented strong evidence that trust and participation are socialised. There is strong evidence in particular that trust is generated within the household and that people who trust more in youth are likely to participate more as adults. By contrast neighbourhood attachment has been shown to be more contingent proximal effects such as moving to a new neighbourhood.

9: Conclusions

9.1: Introduction

The fundamental aim of this thesis has been to address the question of whether or not different contexts can have different impacts at different stages of life in the development of social capital. It has been argued that this is a much understudied area of research and one which warrants further study. Generally speaking the major social capital scholars have ignored what happens in childhood and youth even though there are compelling reasons to think that this is a time of great change in relation to the development of pro-social attitudes and behaviours (Niemi and Hepburn, 1995)²⁹. The socialisation literature includes many findings that contradict some of the most important assumptions underlying arguments about the benefits of social capital. Indeed, perhaps the core argument of Putnam (1995: 67) is that: 'life is easier in a community blessed with a substantial stock of social capital. In the first place, networks of civic engagement foster sturdy norms of generalized reciprocity and encourage the emergence of social trust.' In a sense this is undoubtedly true. Life is likely to be much easier in such places. However, the veracity of the statement that places characterised by networks imbued with norms of civic engagement should 'foster reciprocity' and encourage the 'emergence of social trust' is questionable. Some people may benefit from living in areas which are characterised by such norms but they may be precisely the kind of people that already possess them. In other words the externalities which have been at the heart of the proliferation in social capital research over the last 20 years may not be real.

This question has, of course, been raised and addressed before and authors have argued that the apparent association between trust and social engagement is really because the

²⁹ It should be noted that Bourdieu (1990) did consider these issues particularly in relation to his notion of *habitus*. In this he presents a powerful description of the ways in which different forms of capital are reproduced between generations. However, given that this thesis is primarily concerned with Putnam's (2000) conception of social capital and has emphasised the role that participation can have on the generation of interpersonal trust and neighbourliness it was felt that the more general socialisation literature was more relevant.

kind of people who trust are also the kind of people who participate (Sonderskov, 2011; Sturgis et al, 2012). In other words the line of causality is the wrong way around and it is trust which causes participation (it should be noted that *this* relationship has also been called into question (Claibourn and Martin, 2000)). However, even though these findings have questioned whether or not participatory and community minded social networks generate norms of reciprocity and interpersonal trust, and have therefore questioned the root causes of social capital, few researchers have sought to answer what, if any, the real causes are (a notable exception here are Stolle and Hooghe, 2004). It has been argued here that the socialisation literature presents compelling explanations for the development of many social norms and behaviours (see Sapiro, 2004 for a thorough review). Uslaner's (2002) work on trust, and how it can be conceived of as a moral value developed early in childhood (see also Renshon, 1975), has been highlighted as an important counter hypothesis regarding the way in which trust actually works. In terms of participation authors such as Jennings (see Jennings and Neimi (1981) for example) have argued that participation in youth is an important and powerful predictor of participation in later life. Each of these arguments contradicts to some extent the arguments of Putnam (2000) because they suggest that it may not be easy to generate trust and participatory behaviours.

Another key concept used throughout the thesis has been neighbourhood attachment. Following Granovetter (1973) this was argued to be conditioned by the particular social environment that individuals live within and to be a reflection of the nature of the weak ties that exist in the neighbourhood at any given point in time. It was argued that because of this neighbourhood attachment should be non-socialised in the sense used in the thesis. In other words neighbourhood attachment should not be developed in childhood and should instead be conditioned by the proximal characteristics of the neighbourhood. However, it was also suggested that neighbourhood attachment should be related to both interpersonal trust and participation in local groups. Once again two differential arguments were used here. The first suggested that attachment should affect trust because, following Putnam's (2000) logic, exposure to different groups through this kind of network should enhance the ability of communities to enforce norms of reciprocity. It should predict participation in much the same way, because communities with more weak social ties should make people feel more comfortable with individuals who they might otherwise have no social relationship with. That is, a person is more likely to get involved in a group with individuals if they have relationships with people who know others in the group. Secondly it should make mobilisation more effective by increasing the effectiveness of information diffusion within the neighbourhood (Granovetter, 1973), thereby increasing the overall level of knowledge about the participatory opportunities and mobilising cues within the local community (Rosenstone and Hansen, 1993).

However the converse may also be true if the socialisation perspective is correct. Once again, more trusting people may be more likely to be open to the effects of weak situational networks. That is, if, following Uslaner (2002), trust is a deep rooted moral characteristic which conditions the way in which people view the world it should make them more likely to engage in disparate and diffuse networks of people who they do not personally know. The less trusting, of course, should be more likely to remain within strong networks of friends and family, and to view outsiders with a greater degree of suspicion. The relationship that participation in local groups has with attachment may also work in the opposite direction as the act of engaging in groups outside of strong networks should provide people with a greater network of contacts within their neighbourhoods. This is one of the benefits of social capital suggested by Putnam (2000), but if participation is highly socialised the effect should be more likely to work in this direction.

Throughout the thesis strong distinctions have been made between the two approaches to the development of social capital. In relation to trust in particular these may be warranted. The implications of Putnam's (2000) and Uslaner's (2002) views about the way in which trust works are largely contradictory. While both may at times accept that other kinds of trust should exist it is appropriate to contrast and compare the differing expectations that can be found in each. The way in which participation works between Putnam's (2000) conception, which is in some respect similar to the mobilisation hypothesis of Rosenstone and Hansen (1993), and the alternative socialised view, is less stark. However, they do make different predictions: for example, if a highly participatory community exists, which is rich in cross-cutting weak situational networks and norms of reciprocity and trust, this should make the participation of newcomers more likely than in another, less socially cohesive community. A socialisation perspective allows predictions to be made about which newcomers would be more likely to participate

based on their history of participation and propensity to be trusting. Based on the literature at least some of this should be determined in adolescence (Jennings and Neimi, 1981; Galston, 2001; Kirlin, 2003). Putnam's (2000) social capital perspective makes these differences more difficult to explain because of its necessary focus on community level groups and characteristics. It can be argued that these differing propensities to get involved, and to trust, are a fundamental aspect of why some individuals are engaged and trusting members of their communities. Therefore it has been argued throughout that what a person has done, and where they come from, can have important consequences for what they will do.

This is not to argue that contemporary effects are unimportant. Indeed, it has been shown that at least for neighbourhood attachment strong situational effects should exist. The final conclusions of the thesis are somewhat complex and contradictory. There is strong and clear evidence that trust in particular has origins within the home. Whether or not these have a socialised or a genetic basis is open to debate and will be touched upon below. There is also evidence to suggest that participation in local groups is socialised within the household although this relationship was less strong than for trust. The behaviour of attachment over time is more complex. Both chapters 6 and 7 suggested that it may be socialised. However, when difference models were tested in chapter 8 there was strong evidence to suggest that moving to a new neighbourhood between youth and early adulthood has a powerful negative impact on neighbourhood attachment. In other words doubt was cast as to whether neighbourhood attachment is socialised over time. That is, the apparent stability of neighbourhood attachment, over time in chapter 6, and within the same household in chapter 7, might be accounted for by the fact that this all occurs within the same neighbourhood. This result was given further support by the fact that neither trust nor participation were affected by moving to a new area.

The findings here strongly support a socialised view of both trust and participation. This is consistent with the work of Uslaner (2002) in terms of trust and a number of socialisation scholars in terms of participation (see for instance Jennings and Neimi, 1981). Also consistent with Uslaner's (2002) perspective on trust was the finding in chapter 8 that trust in youth is related to participation in adulthood. When taken with the findings from chapter 7 that youth trust is strongly related to parental trust, it implies

that growing up in a highly trusting household is likely to be related to participation in the future. Once again this is an important finding and the fact that the converse was not true (i.e. participation in youth affecting participation in adulthood which in turn affects trust in adulthood) suggests that participation in youth is unlikely to generate interpersonal trust in adulthood.

The following section will outline the key findings from each chapter. This will be followed by a summary and a discussion of the limitations of the study and opportunities for future research. Finally, there will be some consideration of the policy recommendations that arise out of these findings. These will be made with specific reference to the UK governments focus on the *Big Society* agenda.

9.2: Key findings

Throughout each chapter a series of interrelated hypotheses have been formulated and tested. Each had the primary aim of examining the ways in which the three dimensions of social capital relate to themselves (for the longitudinal models) and one another at different stages of life. The following will summarise the findings from each in terms of the broader research questions.

In the opening analytical section, chapter 6, the relationship between participation in local groups, neighbourhood attachment, and interpersonal trust was considered in an adult population. The first section of this analysis assessed the relationships between the three dimensions of social capital in a series of cross-sectional models and it was found that each predicted the others. This was expected and was consistent with previous research and with Putnam's (2000) interpretation of how they should be related to one another. However, this modelling was effectively a baseline against which a rigorous longitudinal model could be assessed. Here strong lagged relationships of prior participation in local groups, neighbourhood attachment, and interpersonal trust were found. This was consistent with the expectations for both trust and participation, each of which were predicted to have socialised, or at least stable, aspects. The finding for trust was particularly strong which is consistent with a view of trust as deep rooted and moral (Uslaner, 2002).

Under this modelling approach it was also possible to test for the presence of effects of each of the variables, on each other, and over time. Much weaker effects from one to the other were found here which was expected and is consistent with other research (Claibourn and Martin, 2000; Sonderskov, 2011; Sturgis et al, 2012). The cross-lagged relationship of trust was a consistent predictor of both neighbourhood attachment and participation in local groups. Evidence was also found that participation, but not attachment, also predicted trust. This latter finding is notable because recent research has suggested that trust should not be predicted by participation (Sonderskov, 2011; Sturgis et al, 2012). It also suggests some inconsistency in the way in which trust is conceptualised by both Putnam (2000) and Uslaner (2002). If a strictly socialised view is taken of trust, that it is developed early in life and is deeply moral in character then it is difficult to envisage why there should be any effect from participation. In the same way following Putnam's (2000) view of trust it is very difficult to see why trust should be socialised. In reality this distinction should probably not be so stark. For example it has recently been argued that as well as generalised and particularised trust, it is important to consider community trust which falls somewhere between the two extremes (Wollbaek and Wallman Lundasen, 2012; Wallman Lundasen and Wollbaek, 2013). In other words people may not simply be trusting and non-trusting, but may approach different situations, communities and contexts, with a different outlook in terms of the way in which they will trust and engage with others.

In a sense this chapter was designed to frame the following chapters. Given that most studies which have assessed these kinds of relationship using longitudinal data have used different measures (Sturgis et al, 2012), as well as being situated in different countries (Claibourn and Martin, 2000; Sonderskov, 2011; Stolle and Hooghe, 2004), it was important to establish that the relationships worked as was expected in this adult sample. It is worth reiterating the key finding again that while participation and trust were found to be strongly predicted by lagged relationships they were also found to some extent to cause the other. In a sense this supports both Putnam (2000) and Uslaner (2002) and it has been argued that more nuanced approaches to interpersonal trust should be developed. These should provide a sound theoretical basis for findings of general stability that allow for change to occur amongst adults due to the impact of social relationships and events. This chapter also highlights the difficulty inherent in explaining contemporary behaviours and attitudes even when longitudinal data is available. It may

be possible to get a better picture of change across a period of time but it can still be difficult to establish *why* people participate in certain actions or hold specific attitudes. Chapter 7 therefore turned to explanations of the development of neighbourhood attachment, participation, and interpersonal trust, in younger people and how the parents might influence this.

The primary aim here was to establish the extent to which parents may influence their children in terms of the development of participation in local groups, neighbourhood attachment, and interpersonal trust. It was argued that the household may be a particularly important formative context in the development of interpersonal trust. This argument was largely based on the arguments of Uslaner (2002) and earlier scholars such as Renshon (1973). Both have suggested that trust should be formed early in life, in the household through experiences that very small children have with their parents. Once again it is worth noting that an important counter explanation is that trust has a genetic basis (Sturgis et al, 2010; Oskarsson et al 2012). It has been argued throughout that this should make little difference in terms of the way in which trust relates to the other variables or in terms of the way in which it develops over time. That is from the perspective of Uslaner (2002) trust should be a deep-seated and enduring moral attitude that conditions the way in which people view the world. Indeed, as Sturgis et al (2010: 224) point out: 'the evidence marshalled in support of the social-learning model is equally supportive of a biological transmission mechanism. If trust is 'sticky', why should we conclude — without evidence—that this property emanates from social and cultural processes alone?' However, a genetic interpretation of trust, like Uslaner's (2002) conception of trust as a moral value, would find it difficult to account for changes that occur over life course.

In this chapter a pooled sample of young people, aged between 16 and 18, was created using the BHPS between the years 1998 and 2008. The three dimensions of social capital were then compared against parental measures. Evidence of a strong correspondence between the two groups was found and it was argued that this may be due to within household influences. This was consistent with the hypotheses for both attachment and trust but not participation. It was argued that attachment should be socialised via the household through a mechanism by which the external influence of weak situational networks would be mediated via the parents. This could not be measured directly but a model by which neighbourhood environment, and in particular deprivation, was used as a proxy for this was assessed. It was argued that an effect here would be evidence of socialisation. This was found for both attachment and trust in terms of deprivation. The fact that participation in youth may, to some extent, be related to parental participation is notable because it contradicts many of the findings in the socialisation literature (Jennings and Neimi, 1981; Jennings et al, 2009; Sapiro, 2004). At least three explanations may account for this. The first would suggest that, in terms of participation in local groups, there really is a relationship because parents who participate in this way are likely to involve their offspring as well. The second would suggest that the omission of other variables which might explain this relationship accounts for it. For instance if school based mobilisation is taken into account this may explain youth participation. The third argument would suggest an omitted variable in terms of living in participatory communities. If the local community is highly participatory this may account for both parental and youth participation.

No evidence of relationships between neighbourhood attachment, participation, and interpersonal trust were found in this group. This is interesting as it implies that these relationships, which appear to be strong in cross-sectional models for adults, do not work in the same way for young people. There has been little research into this. It should be noted that the *N* of all models in this chapter was substantially lower than in the previous chapter which may lead to type 2 errors. However, a larger cause for concern is that the apparent relationships may be due to omitted variable bias of parents and children living in the same households which are necessarily located within the same neighbourhoods. This concern is addressed to some extent in chapter 8 when models are estimated which account for changes in neighbourhood and in each of the three dimensions of social capital.

Taken at face value the results provide support for the socialisation hypothesis. However they may equally support a view of social capital development which is contingent on proximate network effects as advocated by Putnam (2000). That is, one of the key networks that young people are likely to be embedded within is the family. From this perspective it is not surprising that parents and their children are similar because they live in the same household within the same communities. In other words the models in this chapter cannot distinguish between hypotheses built on a Putnamian view of social capital or socialisation effects. However, when viewed in the context of chapter 8 they can be used to measure the amount of correspondence there is between parent-child relationships in youth and the same child adult relationships.

In chapter 8 the same groups of young people from chapter 7 were assessed when they were aged 19 to 29. Here the association between parents and children were reexamined. This was based on the notion that a correspondence which appeared in youth should remain in adulthood if it is socialised. This directly tested the socialisation hypotheses. It was argued that a strong relationship should remain for trust following the logic of Uslaner (2002) and that this should be related to trust in the household when an adolescent. Participation by contrast should be predicted by youth participation but unrelated to household participation (Jennings and Neimi, 1981; Kirlin, 2003). Finally, it was argued that there should be no evidence of socialisation in terms of neighbourhood attachment at this stage because it is based on weak situational ties within the local community (Granovetter, 1973).

These relationships were tested in two ways: the first was by estimating mediation models in which the impact of parental participation, trust and attachment, was used to predict the same in adulthood via youth. The second approach estimated models which assessed the amount change between the two time points and included covariates of neighbourhood change. Taken together it was argued that these two approaches could assess the extent to which socialisation is likely to be taking place. The first set of models should assess the extent to which any relationship between parental and adult correlations might be accounted for by youth, and the latter should provide some information about the likelihood that these relationships are due to omitted variable bias of remaining in the same neighbourhood over the period. In terms of the difference models it was suggested that trust should have no relationship with neighbourhood change but that attachment should. Once again there should be differential predictions in terms of the way in which trust should work under Uslaner's (2002) conception of the concept and Putnam's (2000). If trust is a deep underlying moral characteristic it should remain stable throughout life and be unaffected by changes the neighbourhood. A Putnamian (2000) view by contrast would suggest that trust should be affected by moving to a new neighbourhood, at least in the short term through the impact of a diminished embeddedness in the community.

Here too Uslaner's (2002) conception of trust was largely validated. The mediation models implied that a great deal of trust, or non-trust, in adulthood is passed on via the parents through an effect in childhood or youth. Moreover, trust was stable to changes in the neighbourhood environment suggesting that this correspondence was not due to remaining in the same neighbourhood throughout the course of the study. By contrast, the difference models suggested that neighbourhood attachment was strongly affected by changes in the neighbourhood implying that much of the stability seen in chapter 6 and between youths and adults is due to this kind of omitted variable. Participation was also found to be socialised although there was less impact from the parents than for trust. There was no evidence that changes in trust are affected by changes in the neighbourhood suggesting that participation in adulthood is caused, at least partially, by socialisation in youth. Here the relationship between the three variables at the different time points was assessed and it was found that trust in youth predicts participation in adulthood. The converse was not found to be true. Once again, this strongly supports Uslaner's (2002) view of the way in which trust works and conditions how people decide to engage with others in their communities.

9.3: Implications

This research has a number of implications for social capital researchers in particular. It set out with the goal of understanding the way in which different contexts, be it the neighbourhood or the household, can have an effect on the development of different dimensions of social capital. It has shown this to be the case and in process suggested that Uslaner's (2002) perspective of the way that interpersonal trust works has much more validity than the more prevalent Putnamian view. It has also shown that there is an extent to which participation is socialised although there was only weak evidence to suggest that this was stimulated by the parents. This was consistent with much of the socialisation research that has examined the way in which people participate (Beck and Jennings, 1982; Jennings et al 2009; Kirlin, 2003). The inability to account for other important contexts, which are thought to stimulate participation in youth, such as schools and friendship networks more generally in a sense strengthen the suggestion that participation is not socialised within the household. It was suggested that

neighbourhood attachment should not be socialised within the household, or be stable overtime, and the findings in chapter 8 suggest that this is unlikely to be the case.

Overall the research presented here suggests that scholars of social capital should pay much greater attention to environments in childhood and youth. Moreover, it suggests that different dimensions of social capital should be understood to develop at different times and be influenced by different contexts and environments. To a very large extent, trust seems to be established in the household. Although the precise stage at which this occurs could not be established here, the very strong correspondence between parents and their adolescent children, taken together with the strong evidence of socialisation implies that it occurs relatively early. This is not to say that the notions of Putnam (2000) have been entirely refuted. The findings in chapter 6 suggest that there is an extent to which participation in particular might predict interpersonal trust. This was notable insofar as this relationship remained relatively robust even under a strict modelling framework.

This research, therefore, has shown that different dimensions of social capital develop differentially over time and in different contexts. It strongly implies that as well as recognising that social capital is not a uni-dimensional catch-all concept, it should also be understood from a temporal perspective. It has been argued that the socialisation literature can contribute to this understanding but it is also suggested that social capital researchers should develop theoretical frameworks to better understand the way in which these, often very different dimensions, relate to one another from one time to the next. For instance, although it has not been examined here it is reasonable to ask how and why different friendship networks might relate to participation in local groups and neighbourhood attachment. It may be plausible that early exposure to engaged and participatory networks might stimulate better network development in the future.

9.4: Limitations and future research

The limitations of this research and the opportunities for future research are necessarily linked. Most of the problems have stemmed from limitations in the data which is in part due to the particular design of this thesis. The number of variables of interest has meant that there have been limitations in the potential of longitudinal data. Future research 249

might focus on individual variables, such as trust or participation in local groups, in order to take advantage of more measurement occasions. This would allow specific trajectories of participation or trust to be estimated and related back to other key events. It is also limited by the length of time insofar as the sample of young people only allowed change to be assessed up to the age of 29.

It was also not possible to say whether or not the relationships that have been observed will remain for a longer period of time as people age. It is plausible that they will but future research should address these issues. The continued existence of the BHPS, as a sub-sample of the Understanding Society sample, should provide researchers with opportunity to address these issues over the coming years. Limitations also exist in the age of respondents in the youth sample. The survey does include a youth component, for young people aged 12 to 15, which was not used here because there was not a measurement for all of the key questions. Notably this included interpersonal trust. However, future research focusing on key issues surrounding the generation of social capital, interpersonal trust, attachment, and participation, at earlier ages would be beneficial in helping to explain some of relationships found here. Once again a focus on specific outcomes, such as participation, may be able to make use of this data.

One of the key findings of this thesis is that research should focus on the fact that behaviours and attitudes do not develop in isolation from one another. Nor are they distinct from particular environmental effects and all of these may come together and influence the development of social capital in dynamic and interacting ways over the life course. A young child who is highly trusting may develop the skills that determine the ability to form strong social bonds earlier than their non-contemporaries. It is plausible that the this positive interaction between trust and the ability to develop networks may then increase over the course of their life and explain what appear to be stark differences between individuals and groups in terms of social participation and engagement. It is also plausible that exposure to participatory environments at an early age may help develop trust outside of the household.

Another key point is that the interpersonal trust may not be socialised but may instead be genetically heritable (Sturgis et al, 2010; Oskarsson et al 2012). This implies that the key finding that trust seems to be socialised may be flawed in terms of the basic premise that environment can have some impact on the development of interpersonal trust. If trust is genetically heritable then the environment which individuals grow up in should have no relationship with how trusting they are. In a, sense and as was noted earlier in this chapter, this has no real bearing on the conclusions because genetically heritable trust and trust as a moral value should work in much the same way. Indeed, Uslaner's (2009) paper which assessed stability in trust over generations may also point to a genetic effect. However, genetic effects in terms of basic social and moral values imply a profound impact on the way in which social behaviours are understood.

9.5: Policy recommendations

It was noted in the opening sections of the thesis that in recent years there has been an increased academic and policy focus on the importance of public engagement in civil society organizations and local communities. The UK Coalition Government has emphasized a *Big Society* agenda and established the *Office for Civil Society* with a focus on making 'it easier to set up and run a charity, social enterprise or voluntary group; get more resources into the sector; and make it easier for the sector to work with the state' (Office for Civil Society, 2010b: 6). It is argued that local organisations are best placed to identify the needs of the community and should be involved in developing solutions to address these needs. A 'core component' of the agenda has been identified as: [p]romoting social action: encouraging and enabling people from all walks of life to play a more active part in society, and promoting more volunteering and philanthropy' (Office for Civil Society, 2010a: 3).

In order to stimulate citizen participation the Government proposed taking action in two key areas. In the first instance a programme of *National Citizen Service* (NCS) was introduced, aimed at bringing '16 year olds from different backgrounds together in a residential and home-based programme of activity' (Office for Civil Society, 2010a: 9). It was run as a pilot scheme involving 10,000 individuals in 2011 and 2012. NCS had a number of phases: the first aimed at promoting personal and social development, and involved mixing participants from different backgrounds in a residential setting away from the participant's home. Participants also undertook a series of tasks involving visiting and helping the local community. This stage was also based away from home.

community and engage in 30 hours of participation. They were also be encouraged to become involved in ongoing activities within their local area with a view to stimulating participation beyond the programme (Cabinet Office, 13/01/2011). The second key focus involved training 5,000 community organisers in order to help identify local needs and develop and mobilise social networks in order to implement these goals (Office for Civil Society, 2010a: 9).

Given the research undertaken here it is worth considering how likely it will be that these policies will be successful. Encouraging volunteerism and participation in youth should prove effective in stimulating future participation in local groups. The evidence in chapter 8 very clearly suggests this should be effective. Moreover, when taken together with findings in chapter 6 it is likely that once a person becomes participatory they will remain participatory. Will this promote a greater sense of community mindedness and spirit? There is some evidence to suggest that participation can to some extent engender interpersonal trust. However, the key finding is that it is interpersonal trust which is likely to condition other forms of participation. It is much less likely that policy makers would be able to influence this because all the evidence suggests that it is formed early and in the household. However, this is clearly not the only route into participation and policies which seek to stimulate participation in other ways should be effective.

The focus on less advantaged communities is also positive given that generally speaking the research here has indicated that such places tend to be far less participatory. Moreover, the finding that neighbourhood attachment is more likely amongst the less disadvantaged should be noted. The evidence presented here suggests that attachment is not necessarily strongly related to either trust or participation. In terms of the former this is not surprising but in terms of the latter it is. It might be argued that this contradiction can be explained by the fact that less people participate because there are fewer resources available within the community to form such groups. Taken with the fact that the less advantaged tend to lack many of the skills and sense of empowerment to become involved in their communities it suggests that policies which may ameliorate these effects may have some success in promoting more engagement and participation within them. If they are also able to make use of the latent feelings of attachment that many disadvantaged people have with their communities this may prove to be a fruitful way of engendering more participatory and empowered communities.
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Appendices

Appendix 1: Discussion of mediation analysis

It is worth noting that a number of approaches exist for testing mediating effects in a causal model. The most straightforward is the causal steps approach suggested by Baron and Kenny (1986) and Judd and Kenny (1981) in which they proposed 4-steps to establish mediation. In step 1 they suggest that there should be an effect of x on Y. If such an effect does not exist then x and Y are not correlated and there would be no reason to test for the mediating effect of m. However, if such an effect does exist, step 2 can be tested which will establish whether x predicts m. If this is the case it is necessary to move to step 3 which involves testing the regression of m on Y in the presence of x. In other words m will be correlated with Y due to the relationship with x. If this is the case then in step 4 we test whether the relationship between x and Y is fully or partially mediated by m. If the parameter between x on Y is zero then this indicates full mediation of x on Y via m.

While this approach is useful in terms of considering the specific relationships that exist between variables it is not sufficient to establish that such a relationship actually exists. It should also be noted that in the causal steps approach the aim is to examine parameter estimates rather than assess statistical significance. However a significant result may be associated with a trivial parameter estimate and a large parameter estimate may be associated with a non-significant result. In some instances a non-significant parameter estimate between x and Y may be due to a high correlation between x and m in step 3. MacKinnon et al (2002) note the low statistical power of the causal steps model when they assessed the statistical significance of mediator effects. It is therefore necessary to calculate the amount of mediation that actually occurs. This is known as an *indirect effect* as it is the effect of x on Y via m. For example imagine a model with 3 parameters β_1 , β_2 and β_3 and it is necessary to calculate the total effect. The following will give this,

Total effect = $\beta_1 + \beta_2 \beta_3$

where the total effect is equivalent to the direct effect β_1 when neither the β_2 or β_3 parameters are calculated.

However, while informative this statistic does not provide a test of the mediating effect as such. Rather it is better to establish the effect size of the product of β_2 and β_3 (i.e. $\beta_2\beta_3$). Two approaches have received much discussion in the literature. The Sobel test (Sobel, 1982) assesses the significance of a mediating variable by dividing the estimate of $\beta_2\beta_3$ by its standard error and comparing this against a normal distribution. This, or one of the variants which have been proposed subsequently, has been the statistic which has been most commonly utilized in most of the literature since its introduction (see MacKinnon et al, 2002, for a summary). However, the Sobel test is extremely sensitive to N due to the skewed nature of $\beta_2\beta_3$, and will often lead to a type 2 error (MacKinnon et al, 2002). Due to this, recent years have seen an upsurge in the use of bootstrapping methods which are non-parametric and less sensitive to N (see Shrout and Bolger, 2002; and Preacher and Hayes, 2008). Bootstrapping involves taking repeated k samples from a given data-set with N cases in which each case has an equal probability of being included in the re-sample. This generates a new sample in which all values of β_2 and β_3 are re-estimated k times. These estimates are then sorted from low to high. It is then possible to generate confidence intervals for the total indirect effect. Because of the problems associated with the Sobel test, bootstrapping is regarded as the optimal approach for determining the presence of an indirect effect (Shrout and Bolger, 2002; and Preacher and Hayes, 2008).

Appendix 2: Measurement invariance in the structural model in 1998, 2003, and 2008

The fit statistics for this modelling are reported in table A.2.1. Here the strength of the relationships between one variable at a later and an earlier time point is of interest. By examining regression rather than correlation parameters it is possible to examine the relationship between two different time points in a meaningful way and in particular with reference to direction and magnitude.

Effectively this means assessing whether these relationships differ between time points. Tests of MI are applied on the autoregressive and cross-lagged parameters in the same way as was done in the measurement models. The caveats regarding sample size apply for the tests of structural parameters in the same way. Here the Satorra-Bentler adjusted 274

Table Δ 2.1. Measurement invariance and model fit and measurement	for structura	narameters
Table A.2.1. Measurement invariance and model in and measurement	LIUI SLIUCLUIA	parameters

		χ²	$\Delta \chi^2$	Df	∆df	Р	CFI	ΔCFI	TLI	RMSEA	∆RMSEA	WRMR
1	Baseline	1490.671		198		0.000	0.985		0.984	0.035		1.992
2	Restricted autoregressive	2661.701	520.57	201	3	0.000	0.971	0.014	0.970	0.048	-0.013	2.742
3	2 + restricted cross-lagged attachment on trust	2647.046	535.54	202	4	0.000	0.972	-0.001	0.970	0.048	0.000	2.746
4	3 + restricted cross-lagged attachment on participation	2625.296	536.58	203	5	0.000	0.972	0.000	0.971	0.048	0.000	2.756
5	4 + restricted cross-lagged trust on attachment	2596.670	542.15	204	6	0.000	0.972	0.000	0.971	0.047	0.001	2.768
6	5 + restricted cross-lagged trust on participation	2821.825	660.27	205	7	0.000	0.970	0.002	0.969	0.049	-0.002	2.905
7	6 + restricted cross-lagged participation on attachment	2839.565	642.69	206	8	0.000	0.969	0.001	0.969	0.050	-0.001	2.957
8	7 + restricted cross-lagged participation on trust	2849.121	666.25	207	9	0.000	0.969	0.000	0.969	0.049	0.001	2.972
9	8 + restricted correlations	2855.189	701.77	213	15	0.000	0.969	0.000	0.970	0.049	0.000	3.147

 $\Delta \chi^2$ is non-significant in models 3 and 6 providing strong evidence that holding these parameters equal does not significantly change the model. However, using the less restrictive change in descriptive goodness of fit measures discussed above all equality constraints suggest these parameters are invariant over time.

Appendix 3: Multigroup CFA and measurement invariance in young people and their parents

This model takes the same form as in chapter 6. Table A.5.1 shows a set of statistics for different specifications of these models across the different groups. The first 3 show separate models for youths, mothers and fathers. Fathers have the best fit in terms of chi-square although it should be noted that, due to the sensitivity of chi-square to *N* these results are not be directly comparable. CFI and TLI for youths and fathers suggest these models have a good fit. However, the TLI for mothers suggests this model has a slightly worse fit.

This allows for configural invariance to be established which indicates that the groups have the same basic structure in terms of indicator and latent variables. That is, one group does not require more than one latent variable and all indicator variables fit reasonably well within the covariance structure. Models 4 and 5 show a simultaneous model for these groups: that is the models are estimated simultaneously with covariance between the three factors. Model 4 is a baseline model in which each parameter is allowed to freely load and model 5 is full constrained in terms of the λ and τ parameters. These show a significant χ^2 difference which suggests these models are significantly different. It is therefore necessary to determine where this difference lies. These tests are shown in models 6 to 25 and are investigated using multiple group analysis. Model 6 is a baseline model in which a multiple group analysis is undertaken over the three groups. This framework allows us to assess individual groups simultaneously. Once again mothers appear to have a worse fit than both youths and fathers.

The next step in the process is to specify a multiple-group CFA (MGCFA) in which neighbourhood social relationships are specified simultaneously for each group. This is necessary as it is necessary to apply hierarchical constraints to in order to establish

Table A.3.1: MGCFA measurement invariance statistics

		N	Free parameters x		$\chi^2 df$	χ ² P	Δχ²	$\Delta \chi^2 df$	Δ χ2 <i>p</i>	CFI	ти	RMSEA	WRMR
1	Youth only	746	25	92.725	5	0.000				0.971	0.941	0.153	1.172
2	Mother only	721	25	148.194	5	0.000				0.965	0.930	0.199	1.596
3	Father only Simultaneous nen MC model: baseline	414	25	19.143	125	0.002	267 925	40		0.993	0.987	0.083	0.523
4	Simultaneous non-MG model: baserine	,,,,	30	505.007	155	0.000	207.023	40		0.945	0.937	0.004	1.005
5	constrained	777	54	338.294	111	0.000	61.078	24	0.000	0.971	0.973	0.051	1.372
6	Multigroup model: baseline		75	270.383	15	0.000				0.972	0.945	0.165	2.048
	Youth	746		88.535									
	Father	414		17.632									
7	Multigroup model: fully constrained		27	363.668	63	0.000	236.527	48	0.000	0.967	0.985	0.087	3.897
	Youth	746		148.187									
	Mother	721		144.433									
	Multigroup model: mother + father	414		/1.048									
8	constrained		51	174.018	39	0.000	54.518	24	0.000	0.985	0.989	0.074	2.55
	Youth	746		36.737									
	Mother	721		90.607									
	Father MG: mother + father constrained; helong to	414		46.674									
9	neighbourhood free		56	181.649	34	0.000	51.384	19	0.000	0.984	0.986	0.083	2.524
	Youth	746		39.137									
	Mother	721		95.351									
	Father	414		47.161									
10	obtainable locally free		56	154,218	34	0.000	28,979	19	0.070	0.987	0.989	0.075	2,298
	Youth	746		40.082									
	Mother	721		86.240									
	Father	414		27.896									
11	MG: mother + father constrained: am similar to		EG	192 520	24	0.000	E2 E06	10	0.000	0.094	0.096	0.084	2.54
11	Youth	746	30	39.049	54	0.000	35.590	19	0.000	0.564	0.960	0.064	2.34
	Mother	721		95.748									
	Father	414		48.732									
4.2	MG: mother + father constrained: talk regularly			100 000			40.000		0.000	0.005	0.005	0.05	2.000
12	to neighbours free Youth	746	56	169.815	34	0.000	42.096	19	0.002	0.985	0.987	0.08	2.434
	Mother	721		90.774									
	Father	414		39.698									
	MG: mother + father constrained: advice												
	obtainable locally + talk regularly to						13.000						
13	Neighbours tree	746	61	152.874	29	0.000	17.203	14	0.246	0.987	0.986	0.083	2.186
	Mother	721		88.404									
	Father	414		20.544									
14	MG: youth + father constrained		51	256.072	39	0.000	120.539	24	0.000	0.977	0.982	0.094	3.127
	Youth	746		82.278									
	Mother Father	/21 414		66.672 107 123									
	MG: youth + father constrained: belong to	414		107.125									
15	neighbourhood free		56	246.879	34	0.000	102.040	19	0.000	0.977	0.980	0.1	2.964
	Youth	746		79.722									
	Mother	721		71.554									
	Father MG: youth + father constrained: advice	414		95.603									
16	obtainable locally free		56	263.465	34	0.000	114.026	19	0.000	0.975	0.978	0.104	3.045
	Youth	746		84.061									
	Mother	721		72.350									
	Father	414		107.054									
17	others in neighbourhood free		56	185.412	34	0.000	54.947	19	0.000	0.984	0.986	0.084	2,553
	Youth	746		60.320									
	Mother	721		72.461									
	Father	414		52.631									
18	to neighbours free		56	262.072	34	0.000	113,189	19	0.000	0.975	0.978	0.103	3.043
	Youth	746		84.324									
	Mother	721		72.048									
	Father	414		105.700									
10	MG: youth + father belong to neighbourhood +		61	171 727	20	0.000	33 050	14	0.002	0.085	0.084	0.090	2 252
13	Youth	746	10	56.491	29	0.000	22.229	14	0.002	0.303	0.304	0.069	2.333
	Mother	721		78.951									
	Father	414		36.295									
20	MG: youth + father: belong to neighbouhood +		~~	170 150		0.000	31.040	~	0.042	0.000	0.070	0.404	3 336
20	Youth	746	00	58.785	24	0.000	21.016	9	0.013	0.983	0.979	0.101	2.230
	Mother	721		90.769									
	Father	414		28.605									
21	MG: youth + mother		51	306.238	39	0.000	161.244	24	0.000	0.971	0.978	0.105	3.436
	YOUTN Mother	746		123.606									
	Father	414		7.091									
	MG: youth + mother: belong to neighbourhood	- /											
22	free		56	305.854	34	0.000	148.861	19	0.000	0.971	0.974	0.113	3.316
	Youth	746		122.369									
	Father	/21 41/		7 605									
	MG: youth + mother: advice obtainable locally	-14		,									
23	free		56	311.605	34	0.000	151.269	19	0.000	0.970	0.974	0.114	3.311
	Youth	746		124.322									
	Mother Fother	721		179.513									
	MG: youth + mother: am similar to others in	414		1.170									
24	neighbourhood free		56	226.372	34	0.000	86.731	19	0.000	0.979	0.982	0.095	2.833
	Youth	746		86.900									
	Mother Fother	721		131.758									
	MG: youth + mother: talk regularly to	414		1./13									
25	neighbours free		56	276.085	34	0.000	124.914	19	0.000	0.974	0.977	0.107	3.143
	Youth	746		110.027									
	Mother	721		158.418									
	rutter	414		7.641									

whether changes in the fit statistics suggest that parameter estimates are the same or different across groups. The first model will be unconstrained to the extent that factor loadings and thresholds are allowed to be free across each group. In order to identify this model scale factors across all groups are set to 1 and the latent factor mean is held to 0. The fit statistics estimated in this model will be used as a baseline against which nested models will be compared.

The results for this baseline model are shown in model 6. This model does not differ substantively from the separate models and slightly different fit statistics can be accounted for by the different model specification. Following this parameters are constrained to be equal across both the factor loadings and thresholds. It is worth noting that the procedure for invariance testing with ordinal data differs from continuous data when the factor loadings and means would be tested after one another in a set of nested models. When data is ordinal the most appropriate approach is to constrain both thresholds and loadings at the same time because the both parameters are essential to understand the response curve used in logit and probit models. By contrast in a linear model the intercepts and loadings can be interpreted separately. In the first instance a fully invariant model will be tested in which these parameters are constrained across all three groups.

The results shown in model 7, which is loading and threshold invariant, clearly indicate that it differs significantly from the baseline model. In order to identify the source of the invariance it would be possible to apply an exploratory or confirmatory approach. The latter should be predicated on substantive reasons. In other words, guided by what has been discussed above, why would the three groups be different to one another? The most obvious concern would be that one of the groups is different to the others in terms of the way in which neighbourhood attachment is understood by them. It has already been discussed that young people might be expected to have different perceptions of their neighbourhood and friendship relationships within it. Therefore freeing the young persons' group and performing the same MI tests on the mother and father groups is not unreasonable.

Models 8 to 14 show models constrained between fathers and mothers allowing the youth model to be freely estimated. Model 8 shows the fully constrained model for mothers and fathers and is highly significant. It can therefore be concluded that mothers

and fathers are different in terms of their combined thresholds and loadings. Here it should be noted that it has been argued that all indicator variables do not have to be constrained in order to allow some variables to be comparable. Byrne (2012) has argued that under certain conditions it is possible to establish partial MI, under which some parameters can be allowed to vary as long as some are constrained to equality across groups. Models 9 to 14 show this, with models 9 and 11 which free 'belong to the neighbourhood' and 'am similar to others in the neighbourhood' do not make a significant difference in reducing the variance. This suggests that mothers and fathers have similar perceptions about belonging to the neighbourhood. This is noteworthy insofar as it implies that the two groups may differ in terms of their perceptions of the nature of their friendships and acquaintances in the neighbourhood. This was discussed above as it is not unreasonable to suggest that this should have been the case. Model 13 shows the impact of freeing both and results in a relatively small reduction in chi-square. This indicates that model 13 which had a higher chi-square difference. However, one of the goals of this type of modelling is to establish the most parsimonious model and to hold as many parameters as possible to equality within the bounds of what is statistically justifiable. This will ensure that it is more likely the unobserved variables in the two groups are measuring the same thing. Therefore, model 10 is preferred to model 12 due to the lower level of significance and preferred to model 13 as it is more parsimonious while still being non-significant at the preferred .05 level.

Models 14 to 20 show the impact of constraints between youths and fathers while mothers are allowed to freely load. Once again the fully constrained model is significantly different to the freely loading model. Allowing more than 2 sets of parameters to load freely in a model with only five variables may not be sufficient to satisfy partial invariance. Model 20 allows two parameters to load freely and is the least different model in terms of chi-square at the p<.01 level. Models 21 to 25 show parameter constraints between mothers and youths. Here no constraints are sufficient to establish measurement invariance and given the magnitude of the chi-square difference tests no set of parameters are likely to be able to establish this. Given these issues it is implausible to suggest that youths have the same factorial make up of neighbourhood relationships as their parents. As was discussed above this is not entirely surprising. Therefore further models will be estimated which allow all parameters in the youth factor to load freely

while constraining mothers and fathers to be equal with the exception of the 'advice obtainable locally' parameter.

Appendix 4: Measurement invariance: between youth and adulthood

Figure A.6.1 shows the model used in this analysis of measurement invariance. This figure shows the parameters of interest in testing for the invariance modelling between young people and adults. This largely follows the approach outlined in the adult modelling chapter, but is also very similar to the modelling in the youth chapter. It is worth noting that these models are tested using formal χ^2 difference tests, which was problematic in the adult modelling chapter. Although there are no clear guidelines it seems reasonable to be more confident in the results presented here as *N* is much smaller.



Figure A.6.1: Structural model for testing measurement invariance

		Free parameters	χ²	χ^2df	χ ² ρ	$\Delta \chi^2$	$\Delta\chi^2df$	$\Delta \chi^2 p$	CFI	TLI	RMSEA	WRMR
1	Independent errors	51	102.84	34	0				0.96	0.95	0.08	0.977
2	Correlated errors	56	72.751	29	0				0.98	0.96	0.069	0.797
3	2 + Fully constrained	32	174.21	53	0	99.487	24	0.000	0.94	0.95	0.085	1.425
4	3 + Belong to neighbourhood free	37	168.84	48	0	91.927	19	0.000	0.94	0.94	0.089	1.375
5	3 + Advice obtainable locally free	37	165.61	48	0	90.248	19	0.000	0.94	0.94	0.088	1.356
6	3 + Similar to others free	37	174.33	48	0	96.783	19	0.000	0.93	0.94	0.091	1.398
7	3 + Talk regularly to neighbours free	37	144.81	48	0	71.952	19	0.000	0.95	0.95	0.08	1.277
8	3 + 5 & 7	42	135.41	43	0	61.59	14	0.000	0.95	0.95	0.082	1.204

Table A.4.1: Measurement invariance statistics for the simultaneous model at 2 measurement occasions (*N=319*)

Table A.4.1 shows the invariance statistics for the model. In the first instance the model with correlated errors appears to offer better model fit across all fit statistics. As this makes substantive sense this model is preferred and it is this which is used as the baseline in the subsequent models, 3-8. It should be noted that models 1 and 2 are both free with no constraints placed on parameters, with the exception of those required for achieving model identification. Model 3 is fully constrained and is therefore the strictest model tested. It clearly also has the highest χ^2 which would be expected. Models 4-3 free each of the parameters in the model in stepwise manner in order to establish whether the source of the invariance can be ascribed to any parameter. Clearly model 7 causes the smallest reduction in chi square. This makes some sense insofar as it can be inferred from this that indicator that has changed the most concerns stopping and talking with other people in the neighbourhood. It is not unreasonable to suppose that the as this is the least attitudinal of the variables, being predicated on actions, that this may have been affected more by any change in circumstances than attitudinal variables. However, freeing this variable alone does not reduce the invariance to such an extent that the two models are equivalent. Model 8 goes further by freeing the variable which contributes the second highest invariance. However, this model only reduced the chi square by a small amount relative to model 7. Therefore it can be concluded that neighbourhood attachment is not invariant within individuals between our two measurement occasions. As was noted above here χ^2 differences testing was used, however using the rules of thumb established in the adult chapter it none of the changes in the descriptive goodness-of-fit statistics would indicate a different interpretation.