Public Confidence in Policing: The Effects of Police Strategy, Organisation and Effectiveness

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Abstract

Public attitudes towards the police have received considerable attention over recent years as politicians and policy makers have emphasised the importance of public confidence in policing (Home Office 2009a; Home Office 2010c). Academic interest has also been strong; scholars have produced evidence identifying a wide range of correlates of confidence in policing and putative causal mechanisms underpinning it. However, what is missing from this evidence base is a consideration of the way in which confidence might be shaped by the strategies the police employ, the organisation of the police and their effectiveness at preventing and solving crime. Moreover, by focusing on the ways in which confidence differs between groups, academics have neglected to empirically consider the way in which confidence has changed over time and the factors that might account for such changes.

Using a variety of data sources and advanced quantitative methods to address these gaps in knowledge, the thesis finds that the public lose confidence in the police if the volume of crime and disorder is either high, or thought to be high. The degree to which the police are effective at solving crimes, the manner in which they are thought to behave during encounters with the public and the frequency with which they are perceived to patrol the streets were also found to be important factors in shaping confidence. It is notable, in light of recent police cuts, that the numbers of police officers employed were not associated with confidence in policing, although this is not to say that such cuts will not have indirect effects on confidence through their potential impacts on crime, crime detection, police visibility and so on. Finally, the thesis finds less clarity surrounding the role played by worry about crime, victimisation and perceptions of social cohesion and informal social control in shaping public confidence in policing, the use of different methods and data producing varied results.
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<th>Acronym</th>
<th>Description</th>
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<tr>
<td>ACORN</td>
<td>A Classification of Residential Neighbourhoods</td>
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<tr>
<td>AIC</td>
<td>Akaike Information Criteria</td>
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<tr>
<td>AR</td>
<td>Auto-regressive</td>
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<tr>
<td>ASBO</td>
<td>Anti-Social Behaviour Order</td>
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<td>BCS</td>
<td>British Crime Survey</td>
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<td>BCU</td>
<td>Basic Command Unit</td>
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<tr>
<td>CAPS</td>
<td>Chicago’s Alternative Policing Strategy</td>
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<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
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<tr>
<td>CFI</td>
<td>Comparative Fit Index</td>
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<tr>
<td>FIML</td>
<td>Full Information Maximum Likelihood</td>
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<tr>
<td>LSOA</td>
<td>Lower Layer Super Output Area</td>
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<tr>
<td>MPS</td>
<td>Metropolitan Police Service</td>
</tr>
<tr>
<td>MSOA</td>
<td>Middle Layer Super Output Area</td>
</tr>
<tr>
<td>NRPP</td>
<td>National Reassurance Policing Programme</td>
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<td>NPP</td>
<td>Neighbourhood Policing Programme</td>
</tr>
<tr>
<td>OA</td>
<td>Output Area</td>
</tr>
<tr>
<td>OLS</td>
<td>Ordinary Least Squares</td>
</tr>
<tr>
<td>PAF</td>
<td>Postcode Address File</td>
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<tr>
<td>PAS</td>
<td>Public Attitudes Survey</td>
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<td>PSA</td>
<td>Public Service Agreement</td>
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<tr>
<td>PSU</td>
<td>Primary Sampling Unit</td>
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<tr>
<td>RMSEA</td>
<td>Root Mean Squared Error of Approximation</td>
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<td>SEM</td>
<td>Structural Equation Modelling</td>
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<td>VPC</td>
<td>Variance Partition Coefficient</td>
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<td>WVS</td>
<td>World Values Survey</td>
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Chapter 1: Introduction

1.1 Introduction

Public confidence in policing has been given considerable attention by academics, policy makers and police administrators alike over recent years in the UK. For policy makers, this focus climaxed in 2009 when the then Labour government deemed that increasing public confidence in policing should be the sole target toward which police forces in England and Wales should be striving (Home Office 2009a). While the new coalition government has seen fit to return the primary target for policing to the reduction of crime and disorder, a concern about public opinion, confidence and trust still seems to permeate their police policies. This government continues to emphasise the need to increase ‘confidence’ in police effectiveness at fighting crime and anti-social behaviour and for the public to ‘trust’ that the police will respond to the public’s needs and act ethically and with integrity (Home Office 2010c).

Academic attention to public confidence in the police developed in the 1960s and 1970s in the US, a growth which has been attributed to the social unrest of the period and the resultant hostility between the police and ethnic minority communities (Sullivan et al. 1987; Webb and Marshall 1995). The Kerner Commission, conducted in 1968, is often cited as one of the earliest studies of public perceptions of the police. The report highlighted that African Americans were more likely to feel unfavourably about the police and to have had negative experiences with police officers (Sullivan et al. 1987; Schafer et al. 2003). This was followed by a large number of studies comparing attitudes towards the police across ethnic minority groups, but several studies also considered the effects of gender, education, income, age, occupation and the effects of contact with the police on attitudes towards the institution (Decker 1981). Interest in the subject died down in the 1980s (Sullivan et al. 1987), but, perhaps as a result of community policing and changes in policing philosophy and structure, since the 1990s there seems to have been a renewed interest in the study of citizen perceptions of the police and how they perform (Schafer et al. 2003). Consequently, the evidence base has rapidly expanded, as scholars from around the world have identified a wide range of correlates of confidence, from socio-
demographic characteristics, to concerns about crime and disorder, perceptions of neighbourhood conditions, the media and police officer conduct.

Interest in public confidence in policing in the UK can be traced back as far as 1929, when the then Home Secretary conceded that the public had lost trust in the police as a result of a variety of cases of police corruption. However, academic interest in public attitudes towards the police did not gain momentum until the 1980s, both with the first report of the British Crime Survey and as a response to the civil disturbances of the time (such as the Brixton and St Paul’s riots), which ignited interest in studying experiences of the police among Black Caribbean and other marginalised youth (Bradford et al. 2009b). Nevertheless, interest has only really deepened since the late 1990s with the emergence of the so called ‘reassurance gap’. To explain, in order to reduce rising crime rates, in the early 1990s the police were set targets to reduce the volume of crime. While crime rates did begin to fall, they were not accompanied by an increase in public confidence in policing, nor by a corresponding reduction in fear of crime and it was revealed that the public believed that crime was actually rising (Innes and Fielding 2002; Millie and Herrington 2005; Herrington and Millie 2006). This escalated interest in the study of confidence in policing, as the government, policy makers and the police increased their focus on improving public attitudes towards the police.

1.2 Confidence in Policing and Changing Police Agendas

In the late 1990s, the newly elected Labour government initiated a shift toward a more citizen-focused policing agenda. This placed the public at the centre of policing, and emphasised public reassurance, taking the concerns of the public seriously, and the reduction of anti-social behaviour and low-level disorder (Povey 2001). Increasing public reassurance was included as a primary objective for the police in numerous National Policing Plans and was measured in the Police Performance Assessment Framework (Dalgleish and Myhill 2004). This focus also resulted in the introduction of Police Community Support Officers, the 2003 Anti-Social Behaviour Act, including the now infamous ‘ASBO’ (Anti-Social Behaviour Order), and led to the National Reassurance Policing Programme (NRPP) (Herrington and Millie 2006).
The NRPP was a scheme trialled by eight police forces in England, born out of the recognition of the discrepancy between subjective perceptions and more ‘objective’ measures of crime (Tuffin et al. 2006). Reassurance policing was based on models of community policing, which themselves emphasise tackling social and physical disorder, increasing police foot patrols, holding beat meetings between the police and the public and focusing on local problem-solving (Skogan and Hartnett 1997; Herrington and Millie 2006). Specifically, reassurance policing promoted the use of visible, familiar and accessible policing and the tackling of ‘signal crimes’, which are low-level physical and social disorder issues that signal threat, danger and risk of crime. It also encourages community involvement, both in identifying problems that have a negative impact upon local residents’ quality of life and perception of risk, and in developing solutions to them. It was intended that the scheme would reduce fear of crime, reduce anti-social behaviour, increase social cohesion and increase confidence in the police (Tuffin et al. 2006).

Following the success of the NRPP (which is detailed in Chapter 5), ‘neighbourhood policing’ was introduced to every area of England and Wales between 2005 and 2008. The primary goal was to increase confidence in the police (Mason 2009). Neighbourhood policing rests on similar principles to reassurance policing, providing local communities with visible, accessible and familiar policing teams, but it also takes a problem-oriented approach to policing, trying to improve relations between the police and communities, liaising with local people to determine their priorities for the fight against crime and disorder in their area, and working with the local community to tackle those problems, keeping them informed about action that has been taken and how effective it has been (HMIC 2008; Bullock 2010). In addition to increasing confidence in the police, it was hoped that neighbourhood policing would decrease crime and anti-social behaviour, decrease fear of crime and perceptions of crime and disorder, increase collective efficacy and build relationships based on trust and co-operation between police and residents, enhancing police legitimacy (Home Office 2005; Home Office 2010b; Home Office 2010d).

In addition to reforming police strategies in order to increase public confidence in policing, over the course of Labour’s time in power, public confidence also become
central to the measurement of police performance. In 2000, improving public confidence in the criminal justice system became a key Public Service Agreement (PSA) target (Smith 2007), while confidence in policing also formed part of the Police Performance Assessment Framework (Shilston 2008). The Labour government’s emphasis on public confidence culminated in 2009, when they abolished all top-down targets for the police with the exception of one: to improve public confidence in the police (Home Office 2009a).

This police target was short lived, as the new coalition government has turned its focus away from the previous government’s goal of improving public confidence in the police and back towards crime and disorder prevention. However, despite such assertions, in their recent document detailing their plans for police reform, they continue to emphasise the need to reconnect the police and the public to ensure that the public have ‘confidence’ and ‘trust’ in the police and they also state their intention to remain committed to neighbourhood policing (Home Office 2010c). The police themselves also appear not to have turned their back on public opinion, the Metropolitan Police Service (MPS) affirming their commitment to enhancing public confidence in the police. Their business plan for 2011-14, which was published subsequent to the election of the coalition, stated that improving confidence remains in the Commissioner’s three key strategic themes, and will continue to be monitored with survey performance measures (MPA 2010).

1.3 The Consequences of Confidence in Policing

Far from being a mere political strategy to appease the public and win votes, it is argued that public confidence in policing has ramifications for the effective functioning of the police service. This was recognised at its conception in 1829, when Sir Robert Peel, founder of the modern police force, established nine basic principles around which the police should work, including:

“...to recognise always that the power of the police to fulfil their functions and duties is dependent on public approval of their existence, actions and behaviour, and their ability to secure and maintain public respect.” (Myhill 2006: 3)
“...to recognise always that to secure and maintain the respect and approval of the public means also the securing of willing co-operation of the public in the task of securing observance of laws.” (Myhill 2006: 3)

Locke (1690) (cited in Bowling and Foster 2002) explained that the public must give their consent to be policed for policing to succeed, because they have to exchange certain freedoms for protection from the state. However, it is argued that when the public lose trust in the police, the perceived legitimacy of police authority declines and public consent begins to be withdrawn (Hough and Roberts 2004). Without legitimacy, scholars contend that the public will not co-operate with the police, comply with the law, report crime, nor act as jurors and witnesses and so on (Hough and Roberts 2004; Tyler 2004; Hough et al. 2010a). Empirical evidence supports such claims. Using a recent survey conducted in England and Wales, Hough et al (2010a) showed that the extent to which people perceived there to be a risk of sanction if they broke the law had no statistically significant effects on their self-reported likelihood of complying with the law and co-operating with the police. In contrast, trust in the police led to stronger perceptions of police legitimacy, which, in turn, led respondents to give more positive responses to questions concerning whether they would comply with the law and co-operate with the police, while they were also less cynical about the legal system of justice. These findings corroborate those of Sunshine and Tyler (2003a; 2003b).

As Roberts (2004: 2) explains, “the justice system must inspire the confidence of the public in order to ensure its legitimacy. Power can be assigned, but legitimacy and authority have to be earned.” If the police’s power is perceived to be legitimate, which often centres around perceptions of police fairness and integrity, and it is felt that they have earned the right to command, then people will defer to their authority voluntarily, and will feel obliged to cooperate, obey social rules, comply with the law and respect their decisions. Without such legitimacy, the police have no other choice than to secure compliance through coercion and force, an exceedingly difficult task (Tyler 2001b; Roberts and Hough 2005). If these arguments and empirical evidence are valid, the importance of confidence in the police seems clear: confidence breeds
legitimacy, which itself induces cooperation with the police and compliance with the law, enabling this form of social control to continue to function effectively.

However, the effects of public confidence in the police may stretch further. Hahn (1971) argues that the police symbolically embody governmental authority and control. Consequently, if the public do not have confidence in the police, the institution that is the most visible and accessible representative of the state, Benson (1981) suggests that their confidence in government as a whole might also fall. Without such confidence in the police and ultimately the government and other social institutions, it has been asserted that democratic systems will struggle to cope in fiscal and social crises (Moy et al. 1999), in national emergencies (Inglehart 1997) and may even cease to exist at all (Inglehart 1997; Moy et al. 1999; Newton and Norris 1999).

A final argument recognises that the police are a publicly funded body; as such it is reasoned that the police are accountable to the tax payer and must ensure that the public have confidence in their abilities and deliver the kind of service the public expects (Roberts and Hough 2005; Hough and Roberts 2007). This is cited as the reason policy makers and police leaders have been keen to investigate public attitudes toward the police and people’s experiences of encounters with the police (Roberts and Hough 2005), to ensure that police policies and practices aid in increasing public support and that the service the police delivers does not fall short of the expectations of the public it serves (Frank et al. 2005; Roberts and Hough 2005).

1.4 The Gap in Existing Knowledge

Academic criminologists have produced much empirical evidence concerning the antecedents of confidence in the police. This can be crudely summarised into five different areas. The first concerns socio-demographic characteristics, individual differences in confidence in policing attributed to gender, age, socio-economic status, marital status and so on. Scholars have taken particular interest in studying the effects of ethnicity, arguing that ethnic minorities are less confident in the police and the most likely to experience harassment and mistreatment at the hands of police officers (see, for example, Weitzer and Tuch 2002; Weitzer et al. 2008).
Secondly, the effects of perceptions and concern about crime on confidence has been well researched, evidence often suggesting that if people are concerned about crime, they have less confidence in the police, the institution whose most primary function is the prevention of crime (see, for example, Reisig and Parks 2000; Sprott and Doob 2009).

Thirdly, interest has also focused on neighbourhood conditions, researchers’ findings implying that the police are held to account for more than just crime and perceptions of crime, but also signs of crime, in the form of perceptions of physical and social disorder, and signs of community breakdown and loss of order, in the form of perceptions of social cohesion and informal social control (see, for example, Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009).

Fourthly, as the majority of the public are unlikely to have had any contact with the police on which to base assessments of the institution, other studies have paid attention to the media and other sources of information about the police. However, this body of research has tended to suggest that media consumption does not influence perceptions of the police (see, for example, Moy et al. 1999; Chermak et al. 2006).

Finally, another body of existing research evidence has focused on both experience and perceptions of police conduct. This has implied that encounters with the police can do little to instil confidence and is actually likely to lessen confidence in policing (see, for example, Skogan 2006; Bradford et al. 2009a) and that confidence in policing emanates from perceptions that the police are acting with fairness and treating people with dignity and respect (see, for example, Tyler 2001a; Jackson and Sunshine 2007).

Despite the consideration of this broad spectrum of potential causes of confidence in policing, considerably less attention has been paid to how confidence is shaped by the strategies the police employ, the way in which they organise themselves and their effectiveness at preventing and solving crime. Without such an evidence base it is difficult for policy makers and police strategists to devise ways and means of policing that can most enhance public confidence in the police.
In addition to neglecting police roles and activities in the study of confidence in policing, by conducting analyses with predominantly cross-sectional survey data, researchers have also tended to neglect a proper consideration of the manner in which public confidence in policing might have changed over time. Whether it is rising or falling, if it is possible to identify why, then the police can either work on addressing the cause of decline, or continue to engage with strategies or sustain conditions that have been working to raise public approval. Moreover, any political or institutional assessment of public confidence in policing, such as the performance measures employed by the previous Labour government and those still used by the Metropolitan Police, will be made at the population level. It is well known that we should not expect causal mechanisms to work in the same way at the individual and aggregate level (Robinson 1950), so without identifying the potential causes of changes in confidence in policing at the population level, it may be more difficult for the police to improve public ratings of their performance.

1.5 The Thesis

This thesis aims to empirically address these gaps in existing knowledge in a methodologically robust manner. Firstly, it examines trends in confidence in policing over time to establish how confidence has developed over the last thirty years or so and whether peaks and troughs have been evident across all groups in the population, addressing arguments in the criminological literature that suggest confidence has been in decline. To aid in validating the conclusions drawn, data is taken from two sources, both the British Crime Survey (BCS) and the World Values Survey (WVS). Secondly, the thesis aims to account for these changes, exploring potential causes of rises and falls in confidence. In doing so, it examines not how levels of confidence differ between groups, as quantitative analyses of confidence in policing have typically focused, but instead it explores how changes in confidence at the population level are associated with changes in other aggregate level indicators, such as perceptions of disorder and worry about crime. This represents the first study to use time-series data and methods to further understand the mechanisms underpinning public evaluations of the police.
In addition to analysing changes over time, the thesis also examines the effects of police strategy, organisation and effectiveness. For example, in light of recently announced government cuts to police funding, the Association of Chief Police Officers (ACPO 2010) have declared that the number of police officers employed in England and Wales will have to be reduced. This thesis explores the potential repercussions of this for public confidence in policing, examining firstly, whether changes in police numbers can be associated with changes in confidence and secondly, whether confidence in policing varies across police jurisdictions according to the number of police officers employed in each area.

It also explicitly tests the assumptions behind neighbourhood policing, exploring whether the strategies employed by the police under the neighbourhood policing initiative might aid in increasing confidence as intended. Unlike previous studies of neighbourhood policing, it does so using representative cross-sectional survey data, while it also adds to the evidence provided by existing cross-sectional studies of confidence by incorporating these measures of police strategy. Moreover, it explores the way in which perceptions of police effectiveness at performing a variety of roles can influence public confidence in policing.

In addition to considering variations in police strength across police jurisdictions, the thesis also explores whether differences in confidence in policing across police jurisdictions are associated with differences in police effectiveness at solving and preventing crime and in perceptions of police visibility over these same areas of police control. To do so, a multilevel statistical framework is employed. This is the first time that police organisation and effectiveness has been considered in a multilevel study of confidence in policing and the first time a multilevel study of confidence has been applied to data collected in the UK.

To accomplish these goals and to consider confidence in policing from this range of perspectives, I use a variety of advanced quantitative methods. Without doing so these substantive areas of investigation could not be fully explored, nor could methodologically robust conclusions be drawn. The data used to conduct these analyses are restricted to the UK context, but as such the thesis adds to the limited,
although growing, volume of quantitative research that has been conducted in the UK to establish the putative causes of confidence in policing. It also more fully addresses the manner in which the work and behaviour of the police themselves might impact upon confidence in the police than research has considered before. It is the first study of its kind to consider changes in confidence over time and the factors that might account for such changes, and also to consider the context in which people live regarding the effectiveness and organisation of local police jurisdictions.

1.6 Outline of the Thesis

Chapter 2 begins by considering the meaning of 'confidence' and 'trust'. Sociological theory has produced a range of understandings of these concepts, some of which criminologists have applied to the study of confidence in policing. I outline some of these theories and discuss how they might be applied to better understand what is meant by 'confidence' in policing, before reviewing research that has empirically tested the principles behind these theoretical arguments.

Following this discussion, I detail the ways in which confidence in policing has been quantitatively measured and consider the criticisms that have been levied against these measures in terms of their adequacy at capturing attitudes towards the police, their usefulness as a measure of police performance and the extent to which their use can lead to meaningful interpretations.

The attention of the chapter is then turned to exploring the existing research that has tried to identify factors that are associated with confidence in the police, including the influence of neighbourhood conditions, concerns about crime and encounters with the police. Chapter 2 concludes by arguing that despite the range of factors that have been considered, insufficient empirical attention has been paid to the influence of police effectiveness, as well as police activity and organisation on public confidence. I also argue that with a focus on cross-sectional survey data, it has been difficult for scholars to draw robust conclusions concerning cause and effect and has meant that little research has explored the manner in which confidence in policing has changed over time, nor the factors that might account for such changes.
Chapter 3 begins by outlining theoretical arguments that have suggested public confidence in policing has been declining since the 1950s and the mixed, albeit limited evidence that is available to support such claims. Using data collected since 1981 by the BCS and the WVS, I employ descriptive methods to explore trends in confidence in policing, considering different measures of confidence, the extent to which trends differ across subgroups in the population and the degree to which the trend in confidence can be said to have followed trends in some of its key correlates, which are outlined in Chapter 2.

Chapter 4 extends this analysis by applying time series regression models to aggregated BCS data collected between 2001 and 2008, statistically testing whether monthly fluctuations in confidence can be attributed to movements in a range of indicators, encompassing police strength, worry about crime, perceptions of crime and disorder, perceptions of social cohesion and informal social control and a number of measures of the victimisation rate. This is the first study to take such an approach to the study of public attitudes towards the police, contributing to substantive understandings by considering how the causal mechanisms underpinning public confidence in policing might work at the population, rather than individual level.

Despite its novel approach, Chapter 4 is limited by the availability of time series data in the extent that it can explore the role of the police in the formation of citizens’ attitudes towards them. In comparison to this time series analysis and existing empirical studies, Chapter 5 represents a more comprehensive account of the manner in which police strategy and perceptions of their effectiveness can serve to stimulate confidence in policing, by testing some of the underlying assumptions of neighbourhood policing. The chapter begins by reviewing the evidence that can support a connection between such policing strategies and confidence, much of which comes from evaluative studies of police trials. Taking into consideration the assumptions of neighbourhood policing and the findings of existing research evidence concerning the drivers of confidence, I then outline a complex theoretical model concerning the direct and indirect effects of neighbourhood policing and perceptions of police effectiveness, conduct and community engagement on confidence in the police.
The chapter then describes the principles behind structural equation modelling, a statistical framework that can be used to estimate the complex system of hypothesised relationships, and the survey data collected by the Metropolitan Police in London that was employed to carry out the analysis. The results are then presented, revealing the ways in which neighbourhood policing might impact upon perceptions of the police in their various roles, as well as how both police strategies and police effectiveness and behaviour influence an overall measure of confidence in policing.

Chapter 6 investigates the idea that confidence might vary across police jurisdictions in line with the strategies they employ and their abilities to prevent and solve crime. In addition, given the volume of research that has highlighted the importance of neighbourhood conditions to attitudes towards the police, it also tests whether confidence varies across neighbourhoods according to their socio-economic and structural characteristics.

The chapter begins by outlining studies that have taken account of the structural characteristics of neighbourhoods, arguing that they are limited in the measures and methods they use and by failing to consider the ways in which policing strategies, successes and failures might vary over these geographical areas. Having outlined the multilevel model, a method of analysis that can account for the methodological limitations of some existing studies of neighbourhood effects, the BCS, census and policing data employed in the analysis is described. The chapter proceeds by presenting the analysis which explores the manner in which confidence varies across neighbourhoods and police jurisdictions and the extent to which police organisation and effectiveness and neighbourhood conditions can account for such variations.

This represents the first multilevel study of confidence in policing in the UK and is also the first to consider variations in confidence across police jurisdictions. Finally, by employing data about neighbourhood conditions and police effectiveness and organisation that is collected by official sources, and is thus independent of survey responses concerning confidence in policing, the analysis produces more robust evidence concerning cause and effect than previous studies that have relied upon survey respondents’ perceptions of such factors.
Finally, Chapter 7 pulls the findings of the thesis together. It begins by summarising the motivations for the analyses conducted in the thesis, as well as their results, implications and limitations, before drawing out the key findings of the thesis as a whole and considering how they resonate with the conclusions of existing criminological research.

Given the focus the police and government continue to have on public opinion of the police, the findings have some clear implications for policy and police practice. Consequently, the chapter proceeds by outlining these implications, considering how the findings sit with the coalition government’s vision of policing and identifying some key strategies and behaviours the police could engage in to encourage more positive attitudes towards the institution. I also discuss some implications for criminological research, in terms of the need to focus more heavily on the ways in which the police can influence confidence, the manner in which confidence in policing might be measured in analyses and the limitations researchers face by the availability of appropriate survey and administrative data.

The thesis concludes by considering some proposals for further research. This includes a discussion of the potential benefits of considering the effects of the media on confidence and of doing so over time, and a suggestion of using qualitative methods to explore the meaning of confidence and the underlying psychological processes that lead people to a final assessment of the degree to which they think the police are doing a ‘good job’.
Chapter 2: The Meaning, Measurement and Correlates of Confidence in Policing

In this chapter I begin by outlining some of the conceptual understandings of trust and confidence and describe how these have been applied to confidence in policing, before examining some of the ways in which confidence has been measured in surveys and quantitative studies, as well as debates concerning how it should be measured. I then outline some of the key findings of empirical studies that have tried to identify factors that can explain individual differences in confidence in policing and highlight some inconsistencies and inadequacies that I shall try to address in the analyses presented later in the thesis.

2.1 What is Confidence in the Police?

Numerous studies have examined and discussed public confidence in the police, but for the majority this seems to be without any consideration of what ‘confidence’ might mean and how it translates to confidence in the police. Scholars tend to use different terms in their discussions of public attitudes toward the police, including confidence, trust, support and satisfaction and tend to use these interchangeably, such that Hough and Roberts (2004: 6) argue that confidence is “often used as a shorthand term to refer to the – more complex – issues relating to trust, authority, institutional legitimacy and consent”. The theoretical literature surrounding the concept of ‘confidence’ is similarly nebulous, tending to refer to the term ‘trust’, but still using the terms ‘confidence’ and ‘trust’ interchangeably.

There is a vast literature concerning the meaning, mechanisms and functions of trust and a number of conceptions of trust have emerged, including evolutionary accounts, developmental accounts, discussions of trust as a commodity, of non-cognitive trust, of interpersonal and institutional trust, and of social or generalised trust (see Hardin 2001 for a summary of such accounts). The sociological literature has tended to emphasise the value of trust in reducing the complexity of our social worlds, enabling
societies and relationships to exist and thrive, for social order to reign and for individual actors to deal with the uncertainties and dangers that permeate everyday life. For example, Fukuyama (1995) argues that trust is born out of community consensus regarding a shared set of norms and moral values, which enables individual actors to have confidence that others will engage in expected, honest and co-operative behaviours. He maintains that when all, or at least most, members of a society subscribe to these moral codes, a sense of order pervades and the behaviour of others becomes predictable, creating conditions in which people and groups are able to form trusting relationships. Similarly, Giddens (1990) argues that trust is fundamental to ensuring the predictability and consistency of our social worlds and is central to our impressions of living in a reliable, stable and dependable society, a condition which allows us to live our lives without anxiety and fear of the unknown and without the constant threat of uncertainty and risk.

These discussions have tended not to distinguish between ‘trust’ and ‘confidence’ (Smith 2005). Among the few criminologists who have discussed the theoretical underpinnings of trust and confidence in the police (see, for example, Nelken 1994; Bradford et al. 2008; Van de Walle and Raine 2008; Brown and Evans 2009; Jackson and Bradford 2010), the work of Luhmann, Barber and Tyler is often cited and it is Luhmann (1988) who is one of the few authors that has made a distinction between trust and confidence (Smith 2005). Luhmann (1988) explains that trust is about making a risk judgement, choosing one course of action over another, or choosing to trust that the intentions of another are good and in your best interests, such as trusting politicians to act on their promises when you vote for them. In so doing, you face the possibility that you might be disappointed in your choice and that the repercussions of the disappointment might far outweigh the advantages of taking that action.

‘Confidence’, on the other hand, regards a state of mind in which you assume that the object of your confidence will meet your expectations and not let you down. He argues that confidence is not a rational choice judgment, but a necessary, essential attitude to ensure that you can live in a state of certainty and stability, rather than one of dissatisfaction, alienation, and even anomie. For example, one might have confidence that politicians will try to avoid war, or that an aeroplane will not crash. Gambetta (1988) explains that within this conception, confidence relies very little on cognitive processes and decision and is more akin to hope and ‘wishful thinking’.
Luhmann (1988) suggests that while trust and confidence are distinct, a situation can transform confidence into trust and vice versa. For instance, one might have confidence in the political system, but this confidence becomes trust if the political party you voted for wins the election. This distinction is also not to say that confidence and trust are not reliant upon one another. For example, he suggests that it may not be possible to hold confidence in a social institution, but have no trust in its agents and representatives. Therefore, we must have trust in police officers to have confidence that the institution of policing can protect us from danger, but also must have confidence in the institution of policing to have trust in its agents. Consequently, Luhmann (1988) suggests that gaining trust at the micro-level can build confidence at the macro-level. In the case of policing, this means that if individual police officers can gain our trust, confidence in the police as a whole will grow.

Applying Luhmann's (1988) conception of confidence and trust to public opinion of the police in a little more depth, we could argue that if individuals have confidence in the police, then they are assuming that the police, as an abstract system, are meeting their expectations in fighting crime and protecting them from harm. According to Luhmann, without such faith, people would live in a constant state of insecurity and concern that they were at risk of becoming victims of crime, lessening police legitimacy and public willingness to consent to submitting to police power. Following this understanding of confidence, it is likely that confidence in the police would remain relatively stable, and that any fluctuations after major events would return to equilibrium relatively quickly. But rather than confidence, what about trust in agents of the police, and in particular, trust in police officers? Employing the ideas of Luhmann (1988), putting trust in police officers requires us to take a risk and hope that deferring to their authority or seeking their assistance will be beneficial and that they will act in our best interests, placing our interests above their own.

Like Luhmann, Barber (1983) also understands trust as a means of reducing social complexity, but identifies three prerequisites for trust to thrive. Firstly, the actors or institutions involved in the trusting relationship must share the same values; secondly, the actors or institutions must fulfil their roles effectively, with 'technical
competence'; and finally, they must demonstrate 'fiduciary responsibility', putting the
concerns of others before their own. Applying Barber's (1983) model of trust to
public trust in policing, in order to gain trust the police would not only have to live up
to their fiduciary responsibility, acting with fairness and respect and putting the
interests of the public before themselves, but also to act with technical competence,
carrying out their responsibilities and duties effectively and efficiently to prevent
crime and protect the public. Finally, they would have to ensure that their work and
actions reflected the values and attitudes of their local communities. Given that trust
in police officers, in comparison to confidence in the police as a whole, might be
formed by Barber's more specific indicators, trust in the police is likely to fluctuate
more frequently and to a greater extent than confidence in the police, since just one
dissatisfactory contact with a police officer might severely weaken trust that future
contacts with the police would meet expectations. However, at the same time,
following Luhmann (1988), while our confidence in the police as a whole is
dependent upon us trusting police agents, just one dissatisfactory contact with one
representative is likely to do little to damage our overall confidence that the police as
an institution are working to prevent and fight crime and to protect the public from
danger.

Earle and Cvetkovich (1995) argue that rather than reducing cognitive complexity,
Barber's conception of trust requires actors to hold or seek out a great deal of
information in order to make trust judgements. As an alternative, they emphasise
Barber's idea of value compatibility, arguing that trust is bestowed on those with
similar values and that information about the values of others is gleaned from 'value-
bearing narratives', rather than from direct evidence. In the case of the police, this
might be from accounts of the morals and values of the police evident in images, the
media, hearsay and other representations of the police. Similarly, Tyler (2001b;
2002; 2005) also emphasises value compatibility, arguing that trust in the police is
dependent upon whether police work and behaviour are in accordance with the values
of citizens. He provides evidence to suggest that such 'motive-based trust' is
influenced by the degree to which the police are responsive to the requests and
worries of the public, are fair and respectful and the degree to which their actions and
intentions are seen as caring and benevolent, and in the best interests of the local
community.
These theoretical discussions of trust and confidence parallel Easton (1965) and Dennis' (1976) distinction between diffuse and specific support for social institutions. Diffuse support refers to that at a general level, regarding support orientated around the legitimacy and worth of the institution and/or authority. This may be what people are evaluating when thinking more generally about the police and the value of the institution of policing. Specific support, on the other hand, may be assessed when thinking more explicitly about the representatives of the institution, when recalling information from personal contacts with the police, from what has been seen in the media and on the streets, or from what others have said about the police.

Furthermore, Easton and Dennis argue that institutions have a 'reservoir of support', which is reflected in diffuse attitudes, a pool of goodwill directed at the institution that ensures its legitimacy even at times when aspects of specific support is low, such as dislike or distrust for specific policies or agents of the institution.

If Easton (1965), Dennis (1976) and Luhmann (1988) are correct and specific support (or trust in police officers) is distinct from diffuse support (or confidence in the institution of policing), we might expect responses to differ according to the survey questions asked and concepts used and whether the public are asked a general question about their overall feeling toward the police, or are asked to evaluate specific elements of police work. However, evidence of this is mixed. Brandi et al (1997) used survey data they had collected from 298 respondents in Cincinnati to compare responses to questions which ask how satisfied the respondents were with the job the police were doing to prevent the sale of drugs in their neighbourhood and to prevent crime in their neighbourhood (what Dennis would call specific support, or Luhmann would call trust in police agents), as well as general questions regarding satisfaction with the police, the police in their community and the police in their neighbourhood (diffuse support, or confidence in the police as an institution). Looking at aggregate percentages, they found similar proportions chose the same answer categories across all questions. Similarly, Brandi et al (1994) compared incident-specific evaluations of the police to more general evaluations, finding, again, that similar levels of support were expressed, regardless of the question asked. Therefore, they conclude that people will access a general, underlying attitude that they have toward the police when evaluating their performance, which will not be affected by the particular
question asked. Additionally, Moy et al (1999) used questions regarding how trustworthy, wise, favourable, valuable, pleasant, positive and good the police are, as well as asking how confident the respondent was in the police. They combined responses to all of these questions into one composite measure. This had a high reliability coefficient (α = .95), indicating that one underlying factor or latent construct may be influencing responses to all questions.

Nevertheless, evidence is also available to conclude that responses will vary according to the questions asked and concepts used. For example, Chermak et al (2006) used both a general and specific measure of confidence in policing in their study and found that the influence of the explanatory variables were not consistent across both measures of confidence. For example, age did not have an effect upon the general, only the specific measure. In addition, both Jackson et al (2009) and Bradford et al (2009a) used three different measures of trust in their studies, measuring police effectiveness, fairness and community engagement and both concluded that their respective independent variables had differing effects on the three measures of specific trust.

Without explicitly saying so, Jackson et al (2009) and Stanko and Bradford (2009) appear to take the ideas of Luhmann and Barber into consideration in developing a model of trust and confidence in policing. Using structural equation modelling, Jackson et al (2009) found that trust in police fairness, police community engagement and police effectiveness influenced, to varying degrees, an overall, general measure of confidence in local policing, their combined effects explaining 34% of the variance in this overall confidence. Similar results were reported by Stanko and Bradford (2009). These findings seem to corroborate the theoretical arguments of Luhmann (1988) that trust in the agents of the institution will lead to greater confidence in the institution as a whole, as well as those of Barber (1983), that trust is formed of three elements regarding technical competence (or police effectiveness), fiduciary responsibility (or police fairness and procedural justice) and the maintenance of the local social order and value consensus (or the ability of the police to engage with the community and work to meet their needs). However, in contradiction, Jackson et al (2009) found that while police fairness did work to influence overall assessments of the police, it did so by reducing confidence in the institution. More recently, Jackson and Bradford
(2010) have also incorporated Tyler's (2005) emphasis on motive-based trust into their model of trust and confidence in the police. They argue that their results are evidence that trust in police effectiveness and fairness predicts motive-based trust (measured by the extent to which the police were perceived to be working with local communities) and show that, in turn, all three of these trust measures have a positive effect upon overall confidence in the police.

2.2 How is Confidence in the Police Measured?

Aside from these few empirical studies that have explored the fine, conceptual differences between specific and general support, or between trust and confidence, others have more broadly addressed the measurement of confidence and the basis of people's attitudes towards the police, for researchers have differed in the methods and questions that they have used to measure public confidence in policing. For example, some research has focused upon confidence in the local police and some on the police as a whole. It is argued that answers to these questions will be informed by very different thought processes, with responses to questions regarding the police as a whole likely to be driven by the media and wider perceptions of the performance of government as a whole, while responses to questions concerning the local police are far more likely to be influenced by factors such as police visibility and personal police contact (Hough and Roberts 2004; Smith 2007).

Similarly, some research concerns specific aspects of police behaviour, some police-community engagement and some police contact; some survey questions use the term 'trust', some 'confidence', some 'support', while others use 'satisfaction' and researchers tend to use these terms interchangeably in their discussions of public attitudes toward the police (Schafer et al. 2003). Roberts (2004) points to the 2004 BCS, which revealed that 48% of respondents interviewed in England and Wales rated the police as doing "a good or excellent job", as opposed to a national MORI poll conducted just one year earlier, which reported that 73% of respondents were "very or fairly confident in the police". He also speculates that confidence may incline respondents to think about how they would expect the police to behave and respond, while satisfaction questions may result in a retrospective response, thinking
about information they have gleaned through contact with the police or through the media. Such differences suggest that it is worth exploring the ways in which confidence has been measured in surveys, as well as exploring arguments concerning the manner in which it should be measured and research that has explored the basis of citizens' attitudes towards the police.

Until very recently, police performance in the UK was measured using survey indicators regarding public attitudes towards the police. Between October 2007 and May 2010, data were taken from a single survey question in the BCS as the sole measure of police performance, which asked:

"It is the responsibility of the police and local council working in partnership to deal with anti-social behaviour and crime in your local area. How much would you agree or disagree that the police and local council are dealing with the anti-social behaviour and crimes issues that matter in this area?" (Rix et al. 2009: 3)

Prior to this, a number of measures of police performance were taken into account, but a single question in the BCS was used to measure public confidence in the police, which asks:

"Taking everything into account, how good a job do you think the police in this area are doing?" (Home Office 2007: 11)

This survey measure is the longest running measure of attitudes towards the police in the UK, first appearing in the BCS in 1982. As such, it is often used to measure changes in public opinion of the police over time (see, for example, Hough 2007; Jansson 2007; Jackson et al. 2009) and in studies that have analysed the antecedents of confidence (see, for example, Myhill and Beak 2008; Jackson and Bradford 2009; Jackson et al. 2009). The same question has appeared in other surveys, such as the Metropolitan Police Service Public Attitudes Survey and the Policing for London Survey.
Other measures have been added to the British Crime Survey over the years, including a question in 1996 about the police as a whole which asks "how good a job do you think the police are doing?". A series of questions were also added in 2004 to garner more specific attitudes toward the police, which ask:

"How much would you agree or disagree that the police in this area:

a. Can be relied on to be there when you need them?
b. Would treat you with respect if you had contact with them for any reason?
c. Treat everyone fairly regardless of who they are?
d. Can be relied on to deal with minor crimes?
e. Understand the issues that affect this community?
f. Are dealing with the things that matter to people in this community?
g. Taking everything into account, I have confidence in the police in this area?" (Grant et al. 2006: 108)

While the BCS is one of the largest surveys in the UK and has been used by the government and police to measure performance, other surveys have also asked questions concerning attitudes toward the police. For example, since 2002 the European Social Survey has been asking respondents across Europe "how much do you personally trust the police?" on a scale of 0 to 10 and a very similar question has appeared in a range of surveys including the General Household Survey in 2004, the Offending, Crime and Justice Survey in 2001, 2005 and 2007 and the Citizenship Survey in 2001, 2003, 2005 and 2007.

How confidence in the police should be measured has been a point of contention for many years. As early as 1969 Bayley and Mendelsohn (1969: 45) recognised that the role of the police is complex, the public expecting the police to be both 'servants and masters'. As such, they argued that it was unreasonable to expect the public to have a single attitude toward the police and inadequate to ask single survey questions to measure attitudes toward the police. Many others have argued that the police have a multiplicity of roles about which the public might think differently, so, for example, people may think favourably about the abilities of the police to enforce the law, prevent crime and protect the public, but might think less well about their success in acting with fairness and integrity (Worrall 1999; Fitzgerald et al. 2002; Bradford et al.
2009a; Stanko and Bradford 2009). Consequently, it is argued that using ‘global’ measures that ask questions similar to ‘how good a job do you think the police are doing’ cannot reveal what people mean by ‘good job’, whether interpretations of a good job differ for different groups, nor how the police should adjust their behaviour or strategies to improve assessments of their role (Jesilow et al. 1995; Frank et al. 2005).

I have already reviewed evidence in support of these arguments, evidence that suggests that people think differently about different elements of policing and that explanatory factors, such as age, have different effects on specific and general measures of confidence (Chermak et al. 2006; Bradford et al. 2009a; Jackson et al. 2009). Other studies that have explored the basis of citizens’ attitudes towards the police have also found that points of reference differ when answering general, ‘global’ questions. Frank et al (2005) asked respondents, “In general, how satisfied are you with the police” and then asked why they had given the response they had. 19% said that it was on the basis of police response time, 12% on the basis of police behaviour during encounters and 11% as a result of perceptions of police visibility. Other comments regarded outcomes of police encounters and officer attributes. Similarly, Jesilow et al (1995) asked respondents what they like best and worst about the police. The positive responses concerned reliability, response times, friendliness, visibility and helpfulness, while the negative responses concerned too few police officers, slow response times, unfavourable officer attributes and poor ethical conduct.

On the other hand, in the absence of a range of more specific measures, global questions have provided valuable time series data to track changes in confidence in the police and have provided much evidence about the antecedents of confidence and differences between groups in their evaluations of the police. Moreover, some evidence has found that responses to specific and general questions about the police are similar (Brandl et al. 1994; Brandl et al. 1997), while other evidence has shown that although responses to specific measures might differ, global measures are actually tapping into these more specific ideas about the police, and that a large proportion of the variance in the BCS global measure can be explained by
effectiveness, fairness and community engagement (Jackson et al. 2009; Stanko and Bradford 2009; Jackson and Bradford 2010).

Others have questioned the usefulness of survey measures of police performance, be they specific or global questions. Survey questions can provide general answers and can provide estimates of the feeling of the population under study and can do so consistently over time, but it is argued that they are less useful when trying to decipher causal explanations, gain in depth responses, or when trying to understand specialised problems (Allen 2007; Maxfield et al. 2007). However, it would seem that qualitative work does echo the basic findings of quantitative work. For example, Girling et al’s (2000) qualitative work concludes that people want a visible and familiar police force that protects the social order, reduces disorder and incivility and acts as a symbol of the community, creating a feeling of cohesion.

Regardless, Skogan (2007) questioned whether survey ratings of police performance reflect on the ground performance of the police. He pointed to his own research, which showed that those who were dissatisfied with an encounter they had had with the police were less confident in policing, while positively received contact had no effects (Skogan 2006). He also cited the evaluation of Chicago’s community oriented policing strategy, arguing that residents’ perceptions of police performance did not reflect the performance of the police that had been directly observed by himself and his colleagues (Skogan and Hartnett 1997). Conversely, in the same research, they also showed that confidence in the police appeared to have increased as a result of introducing the policing strategy, indicating that perceptions of the police might well be influenced by the actions of the police after all. Skogan (2007) concluded that while survey measures of confidence in the police might well be measures of perceptions rather than on the ground police performance, the consequences of perceptions may be no less than performance itself and so such measures should not be discounted.

Finally, Hough and Roberts (2004) also argued that analysing survey measures of attitudes towards the police is problematic, explaining that there is no way of deciphering how good a job ‘good’ is in comparison to ‘very good’ and whether this difference is the same for all survey respondents. Additionally, they pointed out that
if, for example, 75% of survey respondents think that the police are doing a ‘good job’, it is difficult to know whether this level of public confidence is high, mediocre, or low. Both Hough and Roberts (2004) and Skogan (2007) argued that the only real way of answering such questions, or avoiding such problems, is to compare levels of confidence, either between groups, across geographical areas, or across time. The analyses in this thesis account for some of these measurement arguments using multiple measures of attitudes towards the police where possible, and taking into account arguments that measures should be compared between groups and across space and time (this is more fully discussed in section 2.4).

2.3 The Correlates of Confidence in Policing

As noted, research exploring the basis of people’s attitudes towards the police began to emerge in the 1960s as a result of civil unrest in the US, such as the civil rights movement and anti-war protests (Webb and Marshall 1995; Schafer et al. 2003). Early studies tended to focus on associations between attitudes towards the police and gender, education, age, socio-economic status and ethnic origin, but the effects of victimisation, contact with the police and neighbourhood contexts also featured (Decker 1981). To some extent, the focus of research on confidence in policing has not changed over the last 50 years, and still centres around the effects of demographic characteristics, neighbourhood characteristics and experiences of the police, but it has also extended to consider crime and perceptions of crime and citizens’ knowledge of the police and police work. In this section I will review this work and argue that there has been comparatively less attention paid to the role that the police can play themselves in increasing public confidence, in their effectiveness, behaviour, strategy and organisation.

2.3.1 Demographic Influences

With the exception of ethnicity, demographic factors tend not to be the focus of empirical studies examining the antecedents of confidence in policing, but they often feature as control variables in quantitative analyses. In relation to gender, where a relationship has been found, the majority of studies conclude that women hold more confidence in the police than men (Brandl et al. 1994; Cao et al. 1996; Stack and Cao
1998; Reisig and Parks 2000; Weitzer and Tuch 2002; Hawdon and Ryan 2003; Myhill and Beak 2008; Sprott and Doob 2009). It has been suggested that this is a result of men’s tendency to commit more crimes and, as a result, to have more negative encounters with the police (Decker 1981; Schafer et al. 2003). However, a few studies have produced contrasting evidence, suggesting that males are more confident in the police than women (Sampson and Jeglum-Bartusch 1998; Hurst and Frank 2000; Bradford et al. 2009a) and many studies have found no relationship between gender and confidence at all (Schafer et al. 2003; Ho and McKean 2004; Ren et al. 2005; Weitzer and Tuch 2005b; Schuck et al. 2008; Dai and Johnson 2009).

Age has also been associated with confidence in policing, studies generally concluding that the young are less confident in the police than older people (Jesilow et al. 1995; Cao et al. 1996; Sampson and Jeglum-Bartusch 1998; Reisig and Parks 2000; Weitzer and Tuch 2002; Ho and McKean 2004; Ren et al. 2005; Weitzer and Tuch 2005b; Myhill and Beak 2008; Dai and Johnson 2009; Sprott and Doob 2009). Schafer et al (2003) described that this is often attributed to the increased likelihood that younger people will have negative contacts with the police and Brown and Benedict (2002) reviewed evidence to suggest that younger people are more likely to think that the police use too much force and to be dissatisfied with the manner in which the police treat them. On the other hand, some research has found no evidence of an association between age and confidence (Cao et al. 1996; Schafer et al. 2003; Schuck et al. 2008), while two recent studies in the UK have found that the young are actually more confident in the police than older people (Myhill and Beak 2008; Bradford et al. 2009a). However, a notable difference between studies is that those which find that the old are more confident that the young use continuous measures which have generated small effect sizes, while those that found that the young were more confident in the police than older people grouped age into dummy variables, which produced larger effect sizes. Moreover, Jackson et al (2009) used data collected in London to show that those aged 15-17 and 45-64 were less confident in the police than those aged 18-44 and 65 and over. This implies that the relationship between age and confidence may not be linear, accounting for the small effect sizes in those studies that treat the relationship as such.
Evidence has also emerged to suggest that those in lower socio-economic tiers are less confident in the police than the wealthy (Cao et al. 1996; Sampson and Jeglum-Bartusch 1998; Reisig and Parks 2000; Weitzer and Tuch 2002; Weitzer and Tuch 2005b), although others have found no evidence of an association between socio-economic status and confidence (Schafer et al. 2003; Ho and McKean 2004; Ren et al. 2005; Weitzer and Tuch 2005b; Dai and Johnson 2009). While the means of measuring socio-economic status vary from study to study, some using social class classifications, others using income, education, home ownership, or employment status, there is no consistent pattern to conclude that these diverse findings are a result of the use of different indicators.

A small number of studies have also examined the effects of marital status and the length of time people have been residing in their neighbourhoods, but findings have been mixed. Sampson and Jeglum-Bartusch (1998) found that those who were married had less confidence in the police than those who were not. However, Weitzer and Tuch (2002) showed that those who were married had more confidence in the police, while Schafer et al (2003) found no evidence of a relationship between the two factors. Sampson and Jeglum-Bartusch’s (1998) study also concluded that the longer people had lived in their neighbourhood, the lower their confidence in the police service, while Jesilow et al (1995) found no statistically significant relationships of this kind. Conversely, Reisig and Giacomazzi (1998) used neighbourhoods rather than individuals as their unit of analysis and found that confidence was highest in neighbourhoods where residents had been living in the area for a long period of time.

The effect of ethnicity upon confidence in policing has received much attention from scholars over the years. A number of authors have not found any evidence of an association between ethnicity and confidence (Jesilow et al. 1995; Cao et al. 1996; Sampson and Jeglum-Bartusch 1998; Ho and McKean 2004; Ren et al. 2005; Myhill and Beak 2008; Dai and Johnson 2009), but the general picture that has emerged from empirical research is that ethnic minorities have less favourable opinions of the police than white people (see, for example, Webb and Marshall 1995; Skogan and Hartnett 1997; Kaminski and Jefferis 1998; Worrall 1999; Reisig and Parks 2000; Weitzer and Tuch 2002; Weitzer and Tuch 2005b; Weitzer et al. 2008).
These negative evaluations have been attributed to findings which show that black people are more likely to feel they have been mistreated by the police (Weitzer and Tuch 1999; Weitzer et al. 2008), or would be treated unfairly by the police if they had contact with them (Weitzer and Tuch 2002). Similarly, Sharp and Atherton (2007) conducted interviews with black and ethnic minority young people in the West Midlands and concluded that confidence was lower among this sector of the population, as they felt that the police treated them with hostility and that they were victims of police misconduct. Theoretically, the negative relationship between ethnicity and confidence has also been associated with the 'group-position thesis', where the dominant racial group perceive the police as allies and overlook mistreatment of minority groups by the police, while minority groups themselves want and fight for better treatment by the police, reflected in their poor evaluations of policing (Weitzer and Tuch 2005a). Finally, some scholars have attributed evaluations of the police to the ethnicity of police officers. In Washington, where the majority of police officers were black, Weitzer et al (2008) showed that black residents held more positive views of the police than black residents of Chicago, which had a majority white police department. A similar finding was reported by Frank et al (2005) in Detroit.

The majority of studies, although certainly not all, have focused upon the differences between black and white groups (Brown and Benedict 2002). Some recent studies in the UK have incorporated more categories of race in their studies of public confidence in the police and have revealed a more complex picture. Jackson et al (2009) used nationwide data to show that black and Asian respondents were more confident in the police than white respondents and those who had refused to answer the survey question. Conversely, using data from a survey carried out in London, they show that Indians were more confident in the police than all other ethnic groups. Finally, Bradford et al (2009a) included ten different ethnic groups in their study to reveal a mix of significant and non-significant results, although, in general, white people tended to be more confident in the police than those from ethnic minorities.
Over the last ten years or so, interest has grown in the potential effects of neighbourhood conditions on residents' perceptions of the police (Reisig and Parks 2000). The focus has been on low-level neighbourhood disorder and the degree to which residents are integrated, cohesive and working together to maintain or improve quality of life. A few studies have also taken more structural characteristics of neighbourhoods into account, such as disadvantage and crime, which are briefly summarised in this section, but are more thoroughly explored in Chapter 6.

Physical and social disorder has been linked with a variety of outcomes, including crime, fear of crime and neighbourhood decline. Wilson and Kelling’s (1982) ‘Broken Windows’ thesis argued that if disorder, such as abandoned cars, broken windows and drinking on street corners, was not challenged, it could lead to more serious crimes. In turn, this might lead to higher levels of fear of crime and the migration of some groups out of the area, decreasing levels of informal social control leading to a further increase in crime as criminals are no longer informally policed. While evidence to support the Broken Windows hypothesis is mixed (see Skogan 1990; Taylor 2000), many studies have supported a link between neighbourhood disorder and fear of crime (see, for example, Rountree and Land 1996; Innes and Fielding 2002; Innes 2004b; Jackson 2004) and its importance has also been emphasised in the study of confidence in policing.

Cao, Frank and Cullen (1996) used survey data from over 500 respondents in Cincinnati to show that confidence in the police had a statistically significant association with perceptions of neighbourhood disorder, even when controlling for a variety of other factors including fear of crime and victimisation. The more perceived disorder in respondents' neighbourhoods, the less confident they were in the police. More recently, Sprott and Doob (2009) used data from a national Canadian survey to show that this finding persisted when controlling for socio-demographic characteristics, perceptions of crime, fear of crime, victimisation and whether or not respondents had been in contact with police officers. The link between neighbourhood disorder and confidence in policing has been supported by a number of other studies (including Jesilow et al. 1995; Reisig and Parks 2000; Ren et al. 2005;
Xu et al. 2005; Skogan 2006; Myhill and Beak 2008; Schuck et al. 2008; Bradford et al. 2009a; Dai and Johnson 2009; Jackson and Bradford 2009; Jackson et al. 2009), although there are cases that have not found significant relationships. These include Schafer et al (2003) who showed that the relationship disappeared once contact with the police had been accounted for and Reisig and Giacomazzi (1998), although their results were based upon data taken from just 365 respondents in one ‘small town’.

It has been argued that while many physical and social disorders are not in themselves criminal, they signal a lack of social order and indicate risk and a high likelihood of the occurrence of criminal behaviour (Innes 2004b; Innes 2004a). Since it is the responsibility of the police to reduce and control criminal behaviours, it is argued that the link that people appear to make between perceptions of disorder and perceptions of crime will have repercussions for the police; if neighbourhood disorder is rife and the police are not seen to be dealing with it, residents might start to question the ability of the police to perform their central role of crime prevention (Cao et al. 1996; Reisig and Parks 2000; Sprott and Doob 2009). Another explanation for the association between perceptions of neighbourhood disorder and confidence in policing comes from Weitzer and Tuch (2004), who argue that the police typically act with more aggression and suspicion in neighbourhoods suffering high crime and disorder, which may upset residents and leave them with a poor impression of the police.

The interest in perceptions of neighbourhood environments and their effects on crime, fear and confidence has also extended to discussions of the influence of neighbourhood social cohesion and informal social control. Sampson, Raudenbush and Earls (1997) associated social cohesion and informal social control with crime. In their quantitative study of neighbourhoods and violent crime in Chicago, they first coined the term ‘collective efficacy’ to describe a condition in which neighbourhoods were cohesive and neighbours were working together to solve local problems and to ensure the well being of their neighbourhood, such as intervening to inhibit public drinking and vandalism, or protesting against the closure of a local police station. They showed that collective efficacy predicted lower rates of violence to the extent that “in one example, a two-standard deviation elevation in collective efficacy was associated with a 40% reduction in the expected homicide rate in Chicago.
neighbourhoods” (Sampson et al. 1997: 108). In addition, using both survey and observation data from Chicago, Sampson and Raudenbush (1999) showed that crime seemed to be more a consequence of neighbourhood disadvantage and low levels of collective efficacy than of physical and social disorder.

Other studies have applied the concept of collective efficacy to the study of attitudes toward the police and have found that the stronger people’s perceptions of collective efficacy, the greater their confidence in the police (Schafer et al. 2003; Jackson and Sunshine 2007). Rather than combining the two concepts, others have analysed the effects of informal social control and social cohesion on confidence separately. In so doing, further positive associations have been found between perceptions of informal social control and confidence (Cao et al. 1996; Hawdon and Ryan 2003; Bradford et al. 2009a; Jackson and Bradford 2009; Jackson et al. 2009) and perceptions of social cohesion and confidence (Bradford et al. 2009a; Jackson et al. 2009). These relationships have held statistical significance even after having controlled for a variety of other factors, such as fear of crime, victimisation and perceptions of neighbourhood disorder.

In explaining the relationship they found between informal social control and confidence, Cao et al (1996) hypothesised that neighbourhood social integration helps people to feel integrated in wider society, encouraging identification with and positive attitudes towards social institutions, including the police. Jackson and colleagues borrowed from the ideas of Girling et al (2000) and Tyler et al (Tyler and Boeckmann 1997; Sunshine and Tyler 2003b) to construct what they called ‘an expressive model’ of confidence in policing, which they used to explain both the positive associations between confidence in policing and perceptions of social cohesion and informal social control, as well as the negative association between confidence in policing and perceptions of disorder. They argued that crime stands for more than just rule breaking, but also the deterioration of norms and social values that tie communities together, and that policing stands for more than just ‘crime fighting’, but also the protection of these norms and values. Consequently, they maintained that the public’s understanding of police work is not purely to prevent crime, but also to ensure that community values and local moral codes are upheld and protected. With feelings of community breakdown and fragmentation, which they argued emanate from concerns
about weakening social cohesion, loss of control over the area and the prevalence of in civility and disorder, comes dissatisfaction with the police who have failed to provide order and stability and to uphold the moral consensus (Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009).

The tendency of researchers to rely on survey respondents’ perceptions of their neighbourhood is potentially problematic if the police are to take this information and use it to try and improve neighbourhood conditions and increase public confidence, for research has shown that perceptions can vary widely from one resident to another living in the same neighbourhood, so can provide little information about actual neighbourhood conditions (Reisig and Parks 2000; Sampson and Raudenbush 2004; Sampson 2009). A few studies have incorporated more objective measures of the structural characteristics of neighbourhoods, showing that factors such as neighbourhood poverty and disadvantage and local crime rates might have negative effects upon residents’ confidence, over and above those of their individual characteristics (Jesilow et al. 1995; Reisig and Giacomazzi 1998; Sampson and Jeglum-Bartusch 1998; Reisig and Parks 2000; Schuck et al. 2008; Dai and Johnson 2009). Weitzer and Tuch (2002) and Jackson and Bradford (2009) included measures of urbanisation in their research and found that residents of urban areas were no more or less confident than rural residents, while Myhill and Beak (2008) found that urban residents had more confidence in the police than those living in rural areas. Similarly, Bradford et al (2009a) included a measure of deprivation taken from the Indices of Multiple Deprivation and showed that confidence in police effectiveness, fairness and community engagement was higher in more affluent areas. Conversely, Jackson and Bradford (2009) and Jackson et al (2009) found no such effects, although they did not control for the influence of respondents’ encounters with the police as Bradford et al had done. In Chapter 6 I expand on this discussion further and argue that, of the few studies that have employed more objective measures of neighbourhood conditions, most suffer from methodological limitations that leave the validity of their results in question and I embark upon my own, more methodologically robust analysis of spatial influences on confidence.
2.3.3 Crime and Perceptions of Crime

The core functions of policing are popularly understood to be the prevention and solving of crimes (Jones 2005; Newburn 2007), so it might be expected that confidence in the police is driven by their effectiveness at controlling crime. Much research has investigated this proposition, examining the effects of crime, perceptions of crime, victimisation and fear of crime on attitudes toward the police. It is argued that if crime is, or is felt to be, high, or if people are concerned about falling victim to crime, they will judge the police accordingly, for it is the most basic role of the police to prevent crime and provide safety (see Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009; Skogan 2009 for accounts of such arguments).

By far the most studied relationship is that between fear of crime and confidence. The majority of studies have concluded that those who are more concerned about the risk of victimisation are those who are less confident in the police (Thomas and Hyman 1977; Reisig and Parks 2000; Tyler 2001a; Weitzer and Tuch 2002; Hawdon and Ryan 2003; Ho and McKean 2004; Weitzer and Tuch 2005b; Xu et al. 2005; Skogan 2006; Jackson and Sunshine 2007; Dai and Johnson 2009; Jackson and Bradford 2009; Jackson et al. 2009; Sprott and Doob 2009). Bradford, Stanko and Jackson (2009a) considered the effects of this relationship on three elements of confidence in policing: confidence in police effectiveness, fairness and community engagement. Using survey data collected from residents in London, they showed that fear of crime predicted lower confidence in police effectiveness and police community engagement. However, being fearful of becoming a victim of crime had no statistically significant effects on whether or not respondents thought the police would act with fairness if they had contact with them for some reason.

Skogan (2009) observed that some studies have considered worry about crime to be the independent variable and confidence in policing the outcome variable, while others have reversed this relationship. Regardless of the hypothesised direction of causality, he noted that the majority have found a statistically significant correlation between the two concepts. The bulk of this research relies on cross-sectional survey data, which makes it very difficult to establish patterns of causal order, so Skogan tested which of the causal assertions is the most plausible using panel data and
structural equation modelling, a method which can simultaneously estimate both the
effect of worry about crime on confidence in policing, and confidence on worry.

Using data collected from 933 respondents in Chicago in 1983, he showed that having
controlled for contact with the police, perceptions of police visibility and
victimisation, confidence in policing worked to reduce worry about crime, but that
worry had no statistically significant effect upon confidence. Other evidence is also
available to suggest that worry about becoming victim to crime does not affect one’s
confidence in the police, although, unlike Skogan’s analysis, these studies rely on
cross-sectional survey data (Cao et al. 1996; Ren et al. 2005; Myhill and Beak 2008).

Much less research has examined the effects of crime on confidence. In general,
official crime statistics are rarely attached to survey datasets, so those researchers that
have examined crime have tended to rely on respondents’ perceptions of crime to
gauge how crime might affect their confidence in the police. Evidence has suggested
that the more crime residents think there is in their local area, the less confidence they
have in the police (Baker et al. 1983; Reisig and Parks 2000; Tyler 2001a; Schaefer et
al. 2003; Weitzer and Tuch 2005b; Chermak et al. 2006; Myhill and Beak 2008;
Sprott and Doob 2009). It is often asserted that there is a gap between the extent of
crime on the one hand and the public’s subjective perceptions of crime on the other,
the public perceiving that crime is rising, when actually crime has been falling (Moon
et al. 2009). Consequently, regardless of the actual crime rate and any improvements
in the rate of crime, the evidence suggests that if the public do not ‘feel’ that crime
has improved they will still judge the police as ineffective. However, Jackson,
Bradford and Hohl (2009) showed that once ‘expressive’ drivers of confidence had
been taken into account concerning perceptions of disorder, perceptions of social
cohesion and perceptions of informal social control (discussed in section 2.3.2), the
negative effects of perceptions of crime became non-significant. Similarly, Jackson
and colleagues have frequently reported that these expressive drivers of confidence
also reduce the importance of worry about crime in explaining confidence in policing
(Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009), a
finding echoed in the work of Cao, Frank and Cullen (1996).

The little research that has explored the effects of recorded crime rates, rather than
perceptions of crime, on the public’s attitude towards the police has produced mixed
results. Schafer, Huebner and Bynum (2003) used official crime statistics to rank
neighbourhoods within which respondents had been surveyed according to the rate of
crime. They then created a dummy variable, coding each respondent that lived in one
of the neighbourhoods in the top quartile (with the highest rates of crime) as 1. They
found that respondents living in the areas suffering the most crime were significantly
less confident in the police, even after having controlled for socio-demographic
characteristics, contact with the police and perceptions of crime and neighbourhood.
Similarly, using a more robust method (discussed in Chapter 6), Sampson and
Jeglum-Bartusch (1998) showed that the higher the rate of violent crime in a
neighbourhood, the less confidence in the police its residents held. However, in
contrast, two similar studies did not find support for this finding, neighbourhood
crime having no effect upon residents’ confidence (Reisig and Parks 2000; Dai and
Johnson 2009).

Some studies have also explored the effects of victimisation, scholars assuming that
having been a victim of crime will lessen confidence that the police are effective at
preventing crime. However, a number have found no statistically significant effects
of victimisation on confidence (Baker et al. 1983; Cao et al. 1996; Ho and McKean
two datasets in their study of confidence in the police, finding that victimisation had
no effect on confidence when using survey data collected in London, but with the use
of a UK nationwide survey, found that confidence in the police was lower among
those who had been a victim of crime over the previous 12 months. This negative
association was corroborated by Sprott and Doob (2009) and Ren et al (2005).
However, confusing these contrasting findings further, Bradford et al (2009a) showed
that victimisation had no effects upon confidence in police effectiveness, nor police-
community engagement, but that it actually had a positive effect on confidence in
police fairness, presumably as a result of the way in which the police handled the case
and dealt with the victim.

The majority of the studies that have concluded that crime and neighbourhood
conditions are important in shaping confidence in policing, have relied upon the
perceptions of survey respondents to draw their conclusions. While perceptions are
undoubtedly important and will have consequences of their own, when drawing
measures of independent and dependent variables from participants’ responses to a single survey, one cannot rule out endogeneity. As Skogan (2009) discussed, while a researcher might assume, for example, that worry about crime is driving confidence in policing, it might be the case that confidence is actually driving worry, or that their effects on one another are reciprocal. The use of cross-sectional survey data drawn at a single point in time can only reveal whether two variables covary and not which variable causes the other. Employing data that is independent of survey responses to questions regarding confidence in policing, such as recorded crime rates, overcomes these endogeneity problems, for it is more than unlikely, for example, that a survey respondent’s opinion as to how well they think the police are doing their job could cause the local crime rate to go up or down. Therefore, where possible, I will build independent measures of crime and neighbourhood into the analyses presented in this thesis and add to the evidence base produced by the limited research that has already done so.

2.3.4 Knowledge and Sources of Information about the Police

Moon et al (2009) showed that the crime rate has decreased over the last 15 years, but that over that time the public have consistently reported that they believe crime is rising. This might suggest that the public are misinformed about the level of crime in England and Wales, which has important implications for the police given that the evidence reviewed in section 2.3.3 seemed to indicate that perceptions of crime have negative effects upon confidence in policing. Since the majority of the public have very little experience of the police, it is worth exploring where the public get their information about crime and policing and how such information might affect public confidence in policing.

It is likely that much of the public’s knowledge regarding crime and policing comes from the media (Roberts and Hough 2005). Indeed, analysis of the BCS has shown that the majority of people get most of their information about the police from newspapers, television and radio (Allen et al. 2006). What is not clear, however, is how media communicated information impacts upon public confidence. It is argued that on the one hand, violent and serious crime is disproportionately represented in the mass media (news, literature, film and television) and that the police are often
portrayed as ineffective and incompetent, but on the other hand, crime fiction often portrays the police as honest, fair and trustworthy, and as heroes who always catch the bad guy and protect the innocent (Dowler 2003; Reiner 2007). Similarly, others have noted that news reporting tends to artificially emphasise the number of solved crimes, focusing upon arrests and court cases, creating a false impression of the abilities of the police to detect and solve crime (Leishman and Mason 2003). However, Reiner (2007) argued that more recently there has been a growing tendency for fiction to portray the darker side of policing, focusing on corruption, brutality and discrimination. Similarly, in the ‘factual’ media, he maintained that as stories of police malpractice have become more common, it has become increasingly difficult for the police to present them in the context of one rogue officer whose discovery was to the credit of a good system. Instead, the police have had to set such stories in the context of reform, with the police taking responsibility for past indiscretions, ensuring their continued legitimacy by promising to ‘put things right’ through reform.

Reiner (2007) argued that such negative images of the police in the mass media may aid in destabilizing police legitimacy and that putting the integrity, fairness, efficiency and effectiveness of the police on trial and criticising their ability to prevent and solve crime and to protect citizens, may raise questions in the mind of the public concerning police capability. However, as Chermak et al (2006) noted, evidence is inconclusive as to whether the media does in fact influence attitudes toward the police or not. Weitzer (2002) examined trends in confidence in policing over time from data collected in Los Angeles and New York and concluded that confidence was lower at times following publicised incidents of police misconduct, especially among African-Americans. Weitzer and Tuch (2005b) concluded that consumption of stories concerning police misconduct in the media only had a negative effect upon the confidence of African Americans, while Moy et al (1999) found that it was only the consumption of non-traditional media, such as talk shows, that had a negative effect upon public confidence in the police, television, newspaper and radio having no effect. Further questioning the potentially negative effects of the media, Escholz et al (2002) found that watching news coverage of the police actually improved evaluations of the institution.
Other studies have examined the effects of more specific incidents of police misconduct that have been widely reported in the media and provide additional evidence to suggest that the media might not have a particularly strong influence on the public's perceptions of the police. Kaminski and Jefferis (1998) analysed data collected from 500 respondents in Cincinatti every year between 1984 and 1995 (bar 1987). The last sweep of the survey in 1995 was conducted 13 weeks after a well publicised arrest of a non-white citizen using physical force. They found that in comparison to previous years, ratings of diffuse support for the police (Easton 1965; Dennis 1976) did not substantially, nor significantly change after the incident. Their only significant finding concerned non-white respondents who, after the incident, were significantly more likely to believe that the force used by police was excessive than in all but two of the ten years prior to the violent arrest. However, this finding did not hold for white respondents. Chermak et al (2006) examined a case concerning off duty police officers in Indianapolis who were accused of rowdy, drunk, racist and sexist behaviour and of repeatedly beating two males before arresting them. They analysed survey data collected one year after the incident around the time of the accused police officers' trial and found that neither knowledge about the case, reading a lot of news stories about the case, nor the frequency at which respondents read newspapers had any significant effects on confidence in the police, nor perceptions of whether officers harass citizens. However, they warned that in the year between the incident occurring and the commencement of the trial the police department had put a lot of effort into publicly apologising for the incident and into framing the accused as just a few rogue officers in an otherwise respectable and trustworthy institution.

While the media does not seem to play a strong role in the formation of citizens' attitudes towards the police, there is some evidence to suggest that the more knowledge an individual has about the police, crime and policing activities, the greater confidence they will have in the service the police provide. For example, Hough and Roberts (2007) described a scheme in Holland that managed to increase confidence in the police using the media, crime prevention vans and other events designed to inform the public about crime and policing. In other experiments, both Salisbury (2004) and Singer and Cooper (2008) conducted randomised control trials to show that confidence in the criminal justice system was higher among those who
had been provided with a booklet containing information about crime and sentencing, than among those who had not received such information.

In London, Hohl et al (2010) carried out a similar experiment to test the effect of providing citizens with police newsletters on confidence in policing. The newsletters were tailored to local areas and contained information about what the police were doing in the immediate area to identify and tackle local problems. They conducted 2836 interviews with residents in four control and three test wards, half of which were conducted in a six week period prior to the newsletters being administered in the test areas and half in a six week period immediately after the newsletters had been delivered. They found that overall confidence in the police and confidence in police-community engagement was significantly higher in the test wards after the leaflet drop than before the drop, but that levels of confidence in the control wards had stayed the same. However, they also reported that confidence in police effectiveness had decreased in the test wards after the intervention, but it was actually to a far lesser extent than the decline in the control wards.

Further evidence comes from a recent study that used survey data collected in London to show that those who felt that they were well informed about the activities of the police were more likely to report confidence in police effectiveness and police engagement with the local community, but were less likely to have confidence in police fairness, a finding which the authors attribute to high profile police scandals in the media, such as the shooting of Juan Carlos de Menezes in July of 2005 and the Stephen Lawrence Inquiry (Bradford et al. 2009a). Chapter 5 will build on this limited evidence and further examine how knowledge of crime and policing might influence attitudes towards the police.

2.3.5 Police Strategy, Behaviour and Effectiveness

The majority of researchers that have examined the antecedents of confidence in policing have focused their attention upon factors concerning individuals’ characteristics, perceptions of neighbourhood environments and perceptions and worry about crime, and many have done so with seemingly little consideration of how the police themselves, in terms of their actions, strategies and behaviour, might affect
confidence in the police service. Yet it seems entirely reasonable and pertinent to consider how perceptions of police work and behaviour might impact upon confidence in the police. It seems likely that the focus of existing research and its neglect of the effects of police work has been driven by the availability of appropriate survey data, few surveys encompassing questions that allow such research questions to be asked. Those that have done so have tended to explore citizens’ contact with the police and the manner in which the police conduct themselves when in contact with the public.

The research that has explored citizen contact with the police has tended to conclude that citizens are left dissatisfied with the police, particularly if it is the police who have initiated the contact. For example, in a survey of London residents, Fitzgerald et al (2002) found that very few people who had been stopped by the police were satisfied with the way they were treated, compared to two-thirds who had contacted the police themselves. When examining the effects of police contact on confidence in policing, the majority of researchers have tended to distinguish between police and citizen-initiated contacts and between whether citizens felt that they were treated satisfactorily or not. Skogan (2006) used survey data collected from just over 3000 respondents in Chicago in 2003 to show what he called ‘asymmetry’ in the effect of encounters with the police on confidence in policing. By this he means that no matter whether the contact was police or citizen-initiated, confidence in the police is lower among those who were unhappy with their encounter with the police (which was measured with a variety of indicators including ratings of police fairness, helpfulness and politeness), while those who were satisfied with their experience were no less or more confident in the police than those who had had no contact with the police. The regression analysis was repeated using survey data collected in seven other areas, namely Seattle, Washington DC, New York, Indianapolis, St Petersburg in Florida, St Petersburg in Russia, and those urban areas in England and Wales surveyed by the BCS. He concluded that the ‘asymmetrical’ pattern of results were generally the same, regardless of the city that was studied.

In London, Bradford et al (2009a) replicated Skogan’s study, but looked at the effect of contact on three different measures of confidence regarding police effectiveness, police fairness and police-community engagement. In line with Skogan, they found
that negatively evaluated contact with the police reduced confidence in police effectiveness, fairness and community engagement, regardless of whether this contact was initiated by citizens or the police and that positively rated police-initiated contact had no effects upon confidence in police fairness and community engagement. However, unlike Skogan, positively rated contacts, both police and citizen-initiated, had negative effects upon confidence in police effectiveness, while satisfactory citizen-initiated contacts actually increased confidence in police fairness and police-community engagement.

While many other studies have also concluded that negatively rated contacts reduce confidence in the police and that positively rated police-initiated contacts have no effects upon confidence in policing (see, for example, Hurst and Frank 2000; Reisig and Parks 2000; Schafer et al. 2003; Myhill and Beak 2008; Schuck et al. 2008), others, like Bradford et al (2009a), have found that satisfactory contacts that were citizen-initiated do actually aid in increasing confidence in the police service (see, for example, Hurst and Frank 2000; Reisig and Parks 2000; Myhill and Beak 2008). These findings provide a more positive picture from which police administrators and policy makers can build, suggesting that if the police can behave with professionalism and courtesy in their dealings with the public, they might, at the very least, maintain levels of confidence, if not actually improve citizens’ perceptions.

Thinking more theoretically about the manner in which the police conduct themselves, Tyler (2001b; 2001a; Tyler and Huo 2002; 2004; 2005) argued that when evaluating the worth and legitimacy of the police, the public primarily consider whether the police demonstrate procedural justice in their actions, meaning that the police are viewed more favourably if it is thought that they treat people fairly and with dignity and respect, and if they care about people’s concerns. Procedural justice was first linked to the courts, people being more likely to accept the decision of criminal courts when court procedures were felt to be fair (Tyler 2001a), but Tyler (2001b; Tyler and Huo 2002; 2004; 2005) applied these ideas to perceptions of the police. He argued that people judge their experiences with the police according to the motivations and intentions that they feel are situated behind the actions of officers. When the police are seen to be working in an appropriate manner and are caring, considerate and understanding, their motivations will not be questioned, they will be
deemed to be working in the best interests of the social group and they will be perceived as trustworthy.

Using a small sample of survey data collected in Oakland in the USA, Tyler (2001a) tested these ideas. He found that when considering how confident respondents' were in the job that the police were doing, they were more concerned with whether the police were caring and good natured and whether or not they belittled and harassed members of the public, than they were with how effective they believed the police were at dealing with crime. Similarly, Sunshine and Tyler (2003a; 2003b) revealed the significance of procedural justice evaluations for predicting people's views of the legitimacy of the police and their responses to questions about complying with the law, co-operating with the police and empowering the police. Tyler (2005) also identified distributive justice as important in people's evaluations of the police; this concerns the extent to which the police are thought to distribute services and outcomes fairly across all groups in society. Employing survey responses from a sample of over 1600 people living in New York, he concluded that beliefs about procedural justice and distributive justice were more important than assessments of police effectiveness, perceptions of neighbourhood conditions and socio-demographic characteristics in determining respondents' trust that the New York Police Department did its job well, cared for the public, was honest and took account of the needs and concerns of residents.

Jackson and colleagues have also taken an interest in the effects of procedural justice on confidence in policing. They used various sweeps of a survey conducted by the Metropolitan Police Service to show that perceptions that the police are fair, respectful, helpful and friendly work to increase overall evaluations that the police are doing a good job (Jackson et al. 2009; Stanko and Bradford 2009; Jackson and Bradford 2010). Similarly, Jackson and Sunshine (2007) provided evidence to suggest that perceptions of procedural justice (in terms of whether the police treat people fairly and with dignity and respect, whether they respect people's rights and clearly explain the reasons for their actions) is positively associated with perceptions that the police are effective at dealing with crime and engaging with local communities. While not specifically referring to 'procedural justice', other studies have also examined the way in which the police are perceived to treat the public.
Thomas and Hyman (1977) found that those who had witnessed or knew of the police acting inappropriately were less favourable in their evaluations of the police, while Weitzer and Tuch (2005b) carried out a multivariate regression analysis, which revealed that those who believed that police misconduct was prevalent in their area had less confidence in the police.

Although Tyler (2001a) reported that after holding constant the effects of procedural justice evaluations, perceptions of police effectiveness was not a statistically significant predictor of confidence in policing, other scholars, such as Hinds and Murphy (2007), have not found this to be the case. A number of similar studies conducted in London have consistently shown that after having taken the effects of perceptions of procedural justice into account, perceptions of whether the police are effective in performing their key tasks of tackling crime, at policing events and at responding to emergencies promptly still has a significant effect on overall evaluations of whether or not the police are doing a good job (Jackson et al. 2009; Stanko and Bradford 2009; Jackson and Bradford 2010). In these same studies the authors provided evidence to suggest that confidence in policing is higher among those that think that the police are listening to and working to meet the needs and concerns of local people. This is a finding supported by Myhill and Beak (2008) who used data collected from across England and Wales rather than just London, as well as by a number of other studies (Pate et al. 1986; Jesilow et al. 1995; Skogan and Hartnett 1997; Xu et al. 2005; Tuffin et al. 2006). Tyler (2002) argued that if the police are seen to care for the public and thought to be making an effort to listen to and respond to the needs and concerns of local communities then public trust in the motives of the police will grow. Such motive-based trust is said to generate feelings that the police are working on behalf of local communities, securing order and protecting community values, which builds confidence that they are doing a good job (Jackson and Bradford 2010).

Girling et al (2000) conducted a qualitative study of Macclesfield over two years, examining documents, observing police and conducting interviews with residents and professionals in the area. Like the quantitative studies, their findings also pointed to the importance of the police engaging with the community and concluded that people were disappointed that the police had become alienated from community life. They
also placed weight on the importance of police visibility. They reported that there was an overarching feeling that there should be a more visible police presence on the streets to watch over the local area and act as a known figurehead of the community, working to promote order, cohesion and stability. The importance of police visibility has been highlighted by a few other authors. Hawdon and Ryan (2003) carried out 130 telephone interviews in a small neighbourhood in Western Carolina and used the data to show that the more frequently residents thought that the local police patrolled their neighbourhood, the more effective they thought the police were at controlling crime. Similarly, Skogan (2009) found that those who had seen a police officer patrolling their neighbourhood over the previous week were more likely to report that the police were effective at controlling crime, helping victims of crime and keeping order on the streets. In London, Bradford et al (2009a) used linear regression analysis to demonstrate that perceptions of low levels of police visibility led to decreased confidence in police effectiveness, police fairness and police engagement with the community. These findings have also been supported by a number of evaluations of police strategy trials, which will be described in more detail in Chapter 5 (Pate et al. 1986; Bennett 1991; Skogan and Hartnett 1997; Tuffin et al. 2006). Given that large sections of the public express a desire to see more visible foot patrols across the country (Roberts and Hough 2005), the importance of police visibility to confidence in policing is not altogether surprising. As Bahn (1974) has suggested, the ‘bobby on the beat’ provides a reassuring presence, ready to apprehend criminals, prevent crime and protect local people.

The only other evidence concerning the effects of the activities and actions of the police on public confidence comes from Reisig and Parks (2000). They gathered survey data from Indiana and Florida and used it to show that confidence was higher among those who knew a police officer by name or by sight (a finding supported by Pate et al. 1986; Tuffin et al. 2006) and among those who felt that their neighbourhood received their fair share of police services in comparison to other neighbourhoods. These effects were statistically significant even after having controlled for neighbourhood crime and disadvantage, perceptions of neighbourhood environments and contact with the police.
The evidence reviewed seems to suggest that the police themselves can have an effect upon public confidence in the institution. However, the majority of studies have focused upon how the police treat members of the public when they come into contact with them. There is far less concerning how police effectiveness at dealing with crime and police activities and strategies can impact upon confidence. Where possible, I shall focus the attention of this thesis on how the police themselves, in the ways that they work and organise themselves and in their effectiveness at dealing with crime, might impact upon the public’s confidence in policing.

2.4 Summary

There are a number of different theoretical conceptions of trust and confidence, some of which have been applied to public trust and confidence in policing. Empirical research that has examined these theories and the basis of public confidence in policing has tended to suggest that confidence is a multidimensional construct, that people can have different attitudes when assessing different aspects of police work and behaviour and that key explanatory factors can have different effects on these different elements of confidence. In using secondary survey data to conduct the analyses presented in this thesis, I am restricted by the survey questions that have been asked and so will not be able to maintain the fine conceptual distinctions between trust and confidence that have been identified by social theorists. However, where possible I will take account of the multidimensional nature of confidence, using multiple measures of confidence in the police in the analyses presented in Chapters 5 and 6.

Variations in confidence in policing have been attributed to differences between individuals concerning their socio-demographic characteristics, perceptions of neighbourhood environments and cohesion among community members, perceptions and fear of crime, the media, knowledge about crime and policing, and the manner in which the police behave when they encounter members of the public. What the evidence base lacks is greater consideration of the effects that police activities and behaviour might have upon public confidence in policing. To a certain extent this is likely to be a symptom of the financial constraints that scholars face and their
subsequent reliance on secondary analysis of survey data. While I am equally limited by the availability and content of surveys and the police and crime data that is made available to the public, where the data permits, the analyses presented in this thesis will take account of police organisation and effectiveness. Chapter 4 will consider the number of police officers employed in England and Wales between 2001 and 2008, exploring whether changes in police numbers from month to month can be associated with changes in confidence. Chapter 5 will explicitly examine the effects of the neighbourhood policing strategy currently employed by the police in England and Wales on confidence, while Chapter 6 will investigate whether variations in police effectiveness, police numbers and police visibility across police jurisdictions in England are associated with variations in confidence across those same areas of police control.

The research reviewed above has provided useful indications regarding the driving forces behind public confidence in policing, but the majority of the evidence is derived from cross-sectional survey data. As Skogan (2009) highlighted, using such data that captures information regarding both the independent and dependent variables can only reveal that there is an association between the predictor and outcome variable and not which factor is actually causing which. Consequently, without disregarding the potential importance of people’s perceptions in forming attitudes towards the police, where it is possible to measure concepts of interest with reliable data that is independent of the survey responses used to measure public confidence in the police, I try to do so. For example, in Chapter 6 I employ administrative data to measure police effectiveness and organisation, as well as neighbourhood structural characteristics, eradicating the need to rely on survey respondents’ perceptions of the police and their neighbourhood.

The focus on cross-sectional survey data has also meant that there has been very little consideration of how public confidence in policing has changed over time, nor whether changes in confidence over time are caused by the factors that have been associated with between-group differences in confidence. To address this void, in Chapters 3 and 4 I explore the trend in confidence over the last few decades and investigate how confidence in policing has responded to changes in perceptions of crime and perceptions of neighbourhood conditions over time. As Skogan (2009)
suggested, the use of data collected over time, rather than cross-sectional data, should also aid in establishing more plausible evidence regarding causal order. The next chapter embarks upon this time series analysis. I begin by outlining the arguments and limited evidence concerning changes in public attitudes towards the police since its conception, before using 25 years of survey data to plot how confidence has changed since the early 1980s and to explore whether these changes are consistent across different subgroups of the population and whether the trajectory of confidence corresponds to that of its key correlates.
Chapter 3: Trends in Public Confidence in the Police

3.1 Introduction

Understanding the drivers and inhibitors of public confidence in policing has become a key concern of academic criminologists and policy makers over the past two decades, but as a result of focusing on differences in confidence between groups, researchers have paid relatively little attention to trends and changes in confidence over time. Despite this lack of evidence, a common narrative runs through the literature of a decline in public confidence in the police over the last sixty years.

The argument goes that after initial resistance to the formation of the police in the early nineteenth century, opinion changed and by the middle of the twentieth century public trust in and support for the police was very high (Newburn and Reiner 2007). Indeed, the 1950s is often referred to as a ‘golden age of police legitimacy’ (Reiner 1992a; Reiner 1992b), a time in which traditional values, social cohesion, respect for authority and law and order were strong; while the traditional ‘bobby on the beat’, often personified in the fictional character of PC George Dixon in the popular 1950s BBC series *Dixon of Dock Green*, was “the embodiment of consensus, community and order” (Loader 1997: 15) and the exemplary model of masculinity - strong, trustworthy, disciplined, dedicated and civil (Loader 1997). However, since this time, Bowling and Foster (2002) argue that the police have experienced a ‘crisis of legitimacy’ that has led to a fall in public confidence, while others have noted growing dissatisfaction with all democratic institutions, the police among them, but also with regard to parliament, the courts, political parties, the military and the church (Inglehart 1997; Newton and Norris 1999; Slapper and Kelly 2004). Of particular concern for the police is that while they seem to consistently fare better in public opinion polls than all other agencies of the criminal justice system (Roberts and Hough 2005), they may have fared worse from such declines than other public sector services. For example, Fitzgerald et al (2002) revealed that only 18% of those living in London thought that both the local and national police did a “very good job”, compared to 20% who said the same of social workers, 37% regarding doctors, 39%
regarding teachers, 64% regarding nurses and 73% who reported that firemen did a very good job.

Despite these assertions regarding historical changes in patterns of public support for the police, researchers have paid relatively little empirical attention to aggregate changes in confidence over time, nor tried to explain these changes. This chapter will explore the evidence and arguments that do exist, before using the BCS over its first 25 years to examine how trajectories in confidence in the police have evolved over time. It will also examine whether these evolutionary paths differ across subgroups of the population, providing preliminary evidence to support or refute some of the explanations for the proposed decline in confidence (detailed in section 3.3) that might be expected to apply to some groups in the population more strongly than others. Finally, it will consider the indicators that cross-sectional analyses have found to be predictors of confidence in the police, mapping the trend in confidence against the trajectories of these other indicators to determine whether rises and falls in confidence reflect the movements of its correlates.

3.2 What is the Evidence for a Beeline in Public Support for the Police?

While the notion of a golden age of policing in the 1950s and of a steady decline in police performance ever since is a popular rhetoric, and one endorsed by Reiner (1992b; 1992a), evidence to support such claims is mixed. For example, Weinberger (1995) reports that even as far back as 1929 the Royal Commission had made calls that echo those of today, emphasising the need to enhance public satisfaction with the police and reclaim the public affection for the police that had been so strong in the past. Weinberger also interviewed police officers employed between the 1930s and 1960s, revealing evidence of police corruption, violence and abuse of power, as well as tensions between the police and some sections of the public (such as the young, women and ethnic minorities) as the result of a changing moral consensus, all of which caused friction between the police and the public at the time. Loader (1997) also points to police racism during the Notting Hill race riots in 1958 and rising crime
in the post-war period as evidence that perhaps the police were not as revered as is now popularly assumed.

Other historical evidence comes from survey research. In 1955 Gorer conducted a survey of ‘English Character’, collecting data from 5000 questionnaires. In open ended responses to the question ‘What do you think of the police?’, he found that 75% expressed some kind of support for the police. Early evidence also comes from the Royal Commission of the Police in 1962, their random sample survey revealing that 83% of respondents had a great deal of respect for the police (Loader 1997). While varying methodologies make robust comparisons difficult, the British Crime Survey offers some evidence to suggest that confidence may not have declined over the following decades, the first sweep of the survey in 1982 revealing that 92% of respondents thought their local police did a very or fairly good job (Jansson 2007). On the other hand, comparing the survey results of the Royal Commission in 1962, a survey of Londoners by Belson in 1972, and a MORI poll for the Sunday Times and Police Federation in 1993 (see Slapper and Kelly 2004), all of which asked a similar question regarding respect for the police, reveals that respect did seem to decrease over the last half of the twentieth century, from 83% in the 1960s, to 73% in the 1970s, and fewer than 50% by the early 1990s. Given that the survey designs, sampling techniques and questionnaires differed across all these surveys, it would be inappropriate to draw firm conclusions from these comparisons. Nevertheless, the survey findings and qualitative accounts of policing and society in the early twentieth century provide some contradictory evidence that casts some doubt on popular sentiment and commentary that a golden age of policing and immense public affection for the police existed in the post-war period, and also provide an uncertain picture as to whether or not confidence in the police declined over the twentieth century.

What survey evidence can confirm is a decline in public confidence in the police over the 1980s and 1990s. Successive waves of the BCS have revealed that the number of respondents who thought that the police do a very or fairly good job dropped from 92% in 1982, to 75% in 2002/03 (Jansson 2007). Breaking these responses down, a more dramatic decline is evident over this same period when examining ‘very good’ responses, which dropped from 43% to 14% (Jansson 2007), while those reporting the police to be doing a ‘fairly good’ job actually remained fairly stable (Loader and
Further evidence is provided by Dowds (1995) (cited in Hough and Roberts 2004), who, using the 1995 British Social Attitudes Survey (which is the last sweep of the survey to ask about attitudes toward the police), reported that 75% of men and 82% of women were satisfied with ‘the way the police do their job’ in 1983, while by 1990 this had fallen to 66% and 75% respectively. However, more recently, there has been evidence of a turn in this declining trend, the BCS showing a slight rise in those reporting that the police are doing an excellent or good job from 47% in 2003/04 to 53% in 2007/08 (Kershaw et al. 2008).

3.3 Why Has Public Confidence in the Police Been in Decline?

Many arguments have been put forward to account for the decline in public confidence in the police, be it a decline that began in the 1960s or the early 1980s, many of which centre around a number of changes that have taken place both within the police force itself and in wider society. In terms of police operations, in the 1960s the Home Office began to encourage the use of patrol vehicles to enable the police to cover a wider geographical area than they could on foot and to respond to emergencies more quickly (Newburn, 2003). This was also accompanied by the introduction of simple technology, such as radios and computer aided dispatch, and an emphasis was placed upon responsiveness and efficiency. Gradually, over the 1980s and 1990s, more and more importance was placed upon performance, financial management, and objective led and target orientated policing (Neyroud 2008). These changes led to a reduction in police visibility and a shift in focus away from policing local level disorder, towards targets, responsiveness and crime rate reduction. It is argued that the disappearance of the bobby on the beat, who was a symbol of order, watching over the local community, left the public dissatisfied and with a feeling of estrangement from the police, a police who no longer seemed part of their community and everyday lives, nor to be tackling the issues that were important to them (Girling et al. 2000).

Since the 1950s the police have been involved in a series of incidents, which have immersed them in controversy. For example, there were a number of corruption
scandals in the 1970s, including bribery, cover ups, violence and fabrication of evidence, the damaging effects of which were exacerbated during the subsequent investigations both by the uncooperative behaviour of the police forces involved and the failure to discipline the officers at fault (Newburn 2003b). There were also a number of high profile miscarriages of justice, such as the Guildford Four and Birmingham Six (Newburn 2007) and allegations of race and sex discrimination (Newburn and Reiner 2007), as well as urban riots and industrial conflict in the 1980s, which saw very heavy handed and sometimes violent public order policing (Jones 2005). These incidents were given wide coverage in the media, adding to the already high volume and disproportionate coverage that the media gives to crime stories and the moral panics they create, all of which, Hough and Roberts (2004; 2005) have argued, contribute to a negative portrayal of police performance in the mass media. Politicians have also been accused of contributing to the destabilisation of police popularity by raising awareness of police performance in the public consciousness and by using public concerns regarding law and order and the efficiency and effectiveness of the police in election battles and political debates (Jones 2005).

Changes have also occurred in the society that the police serve. The common conception of the 1950s is one in which there was a dominant discourse, a shared consensus based around traditional values, where social order was strong, respect for law and order was paramount and there was a sense of community, cohesion and belonging (Loader 1997). This was “a land pre-Commonwealth immigration where ‘Englishness’ was apparently uncomplicated and uncontested” (Loader 1997: 14). However, over recent years, Britain has become increasingly diverse, both socially and culturally, in terms of religion, sexuality, ethnicity, nationality, and so on (Jones 2005). As such, Lowe (2002) (cited in Jackson and Sunshine 2007) explains that declining public support for the police may be a consequence of diversity, of the struggle the police face to try and meet all expectations of all groups in society, each of which have conflicting demands. One such symptom of this problem may be claims that the police use their power disproportionately against some social groups, particularly ethnic minorities (Newburn 2007).

This modern society has also been characterised as one with a ‘declining deference to authority’, where the legitimacy of institutions are no longer accepted unquestioningly.
(Hough and Roberts 2004). In this respect, it is not just the police, but also other social institutions such as the church, the army and the rest of the justice system that has experienced a decline in confidence (Van de Walle and Raine 2008).

Other explanations come from the growing use of motor vehicles and the incredulity the middle classes feel when accused of traffic offences, incensed that police should be working against them rather than protecting them from the more ‘serious’ crimes of the lower classes (Girling et al. 2000), while Inglehart (1997) argues that trends in confidence are linked with economic development. When societies are facing disaster, economic crisis, or war, they look to authorities and leaders to guide and protect them. Conversely, when society is stable and the economy is strong, the public are provided with a sense of security. They do not then feel the need for an authority figure to keep them from harm, which reduces their tendency to defer to that authority.

3.4 Analysis, Data and Method

Despite such commentaries in the literature regarding changing patterns of public support for the police since its conception, researchers have paid relatively little attention to exploring the issue empirically. Using data gathered by the British Crime Survey over its first 25 years and employing descriptive time series analysis, this chapter will explore how trajectories in confidence in the police have evolved over time and how these paths may differ for varying subgroups in the population. In addition, it will investigate whether these findings vary according to the unit of time that is analysed and, using the World Values Survey, according to the data that is employed. Finally, it will also examine some of the key correlates of confidence, such as worry about crime and victimisation, to determine whether changes in confidence since the 1980s reflect trends in these explanatory variables.

3.4.1 The Availability of Time Series Datasets

Very little data capturing public confidence in policing has been consistently collected over a long period of time. Many of the large scale surveys in the UK have included a question regarding public attitudes to the police, but have tended to do so in just one
wave of surveying. Other surveys have had a long running measure of confidence in the past, but at some point or another it has been terminated. For example, the British Social Attitudes Survey asked respondents how much they trusted the police biennially between 1994 and 2000, but it has not included such a question since. Perhaps as a result of growing interest in public confidence in policing over recent years, there are various surveys, such as the European Social Survey, that have now started to consistently ask questions about the issue. However, since such surveys are relatively new, they will be unable to shed light on changes in confidence over any significant period of time.

There are, however, two surveys that have been carried out over longer periods of time. The World Values Survey, which was conducted in 1981, 1990, 1995, 2000 and 2005 has consistently asked respondents how confident they are in the police (although not in the UK in the 1995 sweep), while the British Crime Survey first asked respondents how good a job they thought the local police were doing in 1982. The survey was repeated in 1984, 1988 and 1992, from which point it was conducted biennially, until 2001 when data collection began on a continuous basis. In addition to asking respondents to evaluate their local police, since 1996 they have also been asked how good a job the police are doing as a whole, as well as questions regarding some of the correlates of confidence, such as worry about crime and perceptions of crime and disorder, some of which have been consistently asked since the early waves of the BCS.

3.4.2 The Data

The British Crime Survey
Using stratified random sampling, the BCS surveys adults aged 16 and over, living in private households across England and Wales. The sample size has varied over its life span. The early sweeps interviewed around 11,000 respondents, which increased to approximately 15,000 in the 1990s and 19,437 in 2000. The sample size continued to rise and since the sweep of 2005/06, approximately 47,000 face-to-face interviews have been carried out per year.
The analyses presented in this chapter use data at annual and monthly time intervals that have been aggregated from the individual level responses gathered by the BCS to the population level. These point estimates are based upon percentages. Percentages were employed over the mean or another summary statistic in order to provide the most meaningful and intuitive results and interpretations. The aggregate percentages were calculated by combining the values of answer scales to provide an estimate of the proportion of respondents who had some specified degree of confidence in the police. For example, the question concerning confidence in the national police is based on a four point scale, ranging from very good to very poor. Consequently, very good and fairly good were combined to attain a percentage of those who reported some degree of confidence in the police every year and every month. Unfortunately, in 2003/04, the question measuring confidence in the local police, which is the only measure of public opinion of the police that has been included in the survey from the outset, changed from a four to a five point scale. In comparison to the previous year’s data, choosing to consider the additional mid-point on the scale as a show of confidence served to raise aggregate confidence in the police by ten percentage points, a strong indication that doing so artificially increased confidence since annual changes in the index prior to this ranged from around 1-5%. However, this was preferable to excluding it from the aggregated measure, which would have decreased confidence by 24% over the same 12 month period. Moreover, the literal meaning of ‘fairly good job’ does not indicate that respondents feel the police are doing a bad job, so to consider it a vote of no confidence would be inappropriate.

A number of variables have been associated with confidence in the literature. As such, we might expect long term trends in confidence to mirror trends in these ‘causal’ factors. Only a few of these correlates have been measured by the BCS since its early days, but they include perceptions of disorder, worry about crime, perceptions of social cohesion and perceptions of crime (precise question wordings and answer scales of the indicators used in this chapter are detailed in Appendix A). Worry about crime was measured using two indicators that have been included in the BCS since 1982 regarding how worried respondents were about having their home broken into and being mugged and robbed. The percentage of respondents who were not at all or not very worried about these crimes were averaged at each annual interval to create a time series. In 1992, questions were introduced to the BCS regarding
perceptions of crime and disorder. Using this data, a time series of perceptions of crime was created to capture the percentage of respondents who thought there was a lot less, or a little less crime in their local area compared to two years previously. Perceptions of disorder were measured using a series of questions asking how much of a problem each of the following were: litter, vandalism and graffiti, use and dealing of drugs and teenagers hanging around. The percentage that felt that disorder was not at all a problem and not a big problem were averaged across all four categories to create a time series of perceptions of disorder. To examine long-term trends in social cohesion, data were taken from a question that was included in the BCS between 1984 and 2005/06, which asked whether local people try to help each other, go their own way, or a mixture of the two. Finally, as the primary goal of the BCS is to study victimisation, it is possible to use the BCS to obtain an aggregate victimisation rate. In this study, any respondent that filled in at least one victim form (so had been a victim of at least one crime), which can include anything from theft of garden objects, to more serious crimes, such as being attacked or assaulted, were classified as victims.

The World Values Survey

Using quota sampling and face-to-face interviewing, the WVS interviewed people in 21 countries in 1981, 43 countries in 1990, 54 in 1995, 70 in 2000 and 53 countries in 2005. These countries included the UK, US, Canada and Australia, as well as other European countries, such as France, Denmark, Italy and Spain. It also covered countries such as Nigeria, Korea, Iraq and South Africa, although not all countries were included in all sweeps of the survey. In Britain, between 1000-1500 respondents were interviewed in all sweeps of the WVS and the data were weighted to ensure that they are representative of the population on the basis of known characteristics from the census. Only one question from the WVS is used in the following analysis, which asks respondents, “how much confidence do you have in the police?”, a great deal, quite a lot, not very much, or none at all. In Britain, this was asked in every sweep except for that conducted in 1995. To create a time series of confidence, the percentage of those who had a great deal and quite a lot of confidence in the police were taken from each wave of data collected in the UK. While the WVS is a useful source for examining long term trends in confidence, given the non-random sample design of the survey, caution should be exercised when interpreting the data.
3.5 Trends in Public Confidence in the Police

Before exploring how trends in confidence vary across subgroups of the population and in comparison to trends in other indicators, the analysis presented below reveals how public confidence in the police has changed over the last 25 years.

3.5.1 Trajectories of aggregate confidence in the police

As discussed above, Loader and Mulcahy (2003) note that the proportions of the public rating the local police as having done a ‘fairly good’ job have actually remained fairly stable over time, while it is the proportions of those reporting the police to be doing a ‘very good’ job that have declined since the 1980s. Figure 3.1 presents trends in the BCS ‘good job’ question, showing those who reported the police as having done a fairly good job between 1982 and 2002/03 and those reporting them as having done a very good job over this period, as well as the proportions who believe the police have done an excellent, good, or fairly good job since the answer scale of the question was changed in 2003/04. This supports Loader and Mulcahy’s observation, showing that it was ‘very good’ evaluations which declined over the 1980s and 1990s, while ‘fairly good’ evaluations remained relatively stable, even increasing in the 1980s, presumably as a result of people weakening their positive evaluations of the police from ‘very’ to ‘fairly good’. Similarly, since 2003, those
rating the performance of the police as 'excellent' or 'good' have been increasing, while 'fairly good' assessments have remained stable. Nevertheless, combining these answer scales to reveal the proportion of the population that have at least some degree of confidence in the police does indicate an overall decline in confidence over the years (shown below).

Figure 3.2: Annual confidence in the local and national police using the BCS (1982-2007/08)

![Figure 3.2](image)

Figure 3.2 uses BCS data to show how confidence in the local police has changed since 1982. It reveals that confidence steadily fell from 91% in 1982 to 80% in 1994, reaching a plateau, before falling again between 1998 and 2002/03 to 75%. Although the sharp rise in confidence between 2002/03 and 2003/04 is, in large part, likely to be an artificial rise caused by a modification to the question’s answer scale, confidence continued to rise from that point, reaching 84% by 2007/08.

The graph also reveals that confidence in the police as a whole has been consistently higher than confidence in local policing, the vast majority of respondents expressing some degree of confidence in the work that the police do. It also shows that the trajectories of confidence in the local and the national police are strikingly similar. This indicates that while levels of confidence consistently differ, the nation’s confidence rises and falls to the same degree, regardless of whether the population is thinking of the national or local police.
It would be reasonable to suspect that survey design, in terms of the order in which the questions were asked, might have contributed to the consistent difference between levels of confidence in the police as a whole and the local police (Schuman et al. 1980). However, order effects can be ruled out in this instance, as the order in which the two questions were positioned in the survey has not been consistent. Respondents were asked first about the local police and then about the police in general between 1996 and 2000, but between 2001/02 and 2007/08 the question regarding confidence in the police as a whole was asked before that regarding the local police.

Turning to more substantive explanations, Loader (1997) describes the police as having a great degree of symbolic power and argues that the public have become emotionally attached to the institution that exists to protect them and ensure order, stability and security. Such positive underlying images of the police, he argues, will ensure that they have a deep pool of public support. However, Loader (1997) also postulates that these strong symbolic images of the police are built upon unrealistic and unachievable public expectations and desires, meaning that the police can only fail to achieve and disappoint the public. Such a conception of the police may be helpful in explaining why the public express greater confidence in the national than local police. As the public are much more likely to observe police failings first hand in their local police, maybe it is through evaluations of local policing that the disappointment that Loader describes is expressed, while the deep-seated emotional attachment to the institution of policing is expressed in evaluations of the police as a whole. Another explanation comes from Hough and Roberts (2004) who argued that it is likely that responses to questions regarding the local and national police are driven by different reference points, the national police by the media and wider perceptions of the performance of government as a whole, and the local police by police visibility and personal experience. However, while the arguments of Loader (1997) and Hough and Roberts (2004) may help to explain why confidence in the national police is higher than the local, it does not necessarily follow from these arguments that trajectories of such confidence should change at the same rate over time. Instead, one might expect that confidence in the local police would vary quite considerably, reflecting variations in day-to-day on-the-ground police performance,
while confidence in the national police would remain fairly stable, reflecting the high standing the police occupy in the public’s mind.

**Figure 3.3: Comparing annual confidence in the police using the BCS (1982-2007/08) and WVS (1981-2005)**

Figure 3.3 builds on the previous graph by including data collected by the WVS. This adds weight to the evidence provided by the BCS, for while confidence is consistently lower among UK WVS respondents, which might be a result of a less robust sampling method, or a reflection of the differences between the questions used by the surveys, the data do seem to follow a similar general trend to that depicted by the BCS data, declining in the 1980s, but rising since the turn of the millennium.

This evidence of a decline in confidence goes someway to corroborate the claims from authors, such as Inglehart (1997), Newton and Norris (1999), and Slapper and Kelly (2004), that police popularity has been waning. However, if this decline began in the 1960s, as seems to be the popular discourse, and confidence truly had been diminishing for 20 years, it would seem unlikely that confidence would be as high as the BCS and WVS report in the early 1980s (91% and 87% respectively). Moreover, while the data do support assertions that confidence declined over the 1980s and 1990s, the evidence presented here seems to indicate that levels of confidence are no
longer dropping, but are on an upward incline, a trend that is evident when using two different data sources.

Figure 3.4: Monthly confidence in the local and national police using the BCS (April 2001-March 2008)

Figure 3.4 examines data on a much smaller temporal scale. Analysing data at the annual level has provided a useful picture of long term trends in public confidence in policing, but it cannot reveal how confidence might fluctuate within a 12 month period. Using BCS data at monthly intervals, Figure 3.4 shows how the trajectories of confidence changed on a month-by-month basis between April 2001 and March 2008. Taking the first 12 months between April 2001 and March 2002 as an example, the annual data would have shown that confidence in the local police decreased by 3 percentage points, but the monthly figures show that confidence actually varied quite substantially over this 12 month period. It dropped from 79% to 73% in the first month, rose back up to 76% the following month and fell as low as 72% in November 2001. While confidence in the national police is slightly more stable, the graph also highlights more noticeably just how similar the trend in confidence in both the local and national police is, both experiencing small peaks and troughs in confidence in the same months.

The literature warns of a crisis of police legitimacy over the last few decades, concerns that were echoed by the previous Labour government and which they
realized in recent neighbourhood policing policy, which was introduced, in part, to increase public confidence in the police. However, the worries and concerns of policy makers, the police and the academic community do not seem to be wholly verified by the evidence. The graphs have shown that while confidence was declining in the 1980s and 1990s, since the turn of the millennium it has gradually stabilised and has even started to increase. Perhaps this indicates that some of the reasons identified in the literature for the decline in public confidence in the police in the latter half of the twentieth century have abated. For example, perhaps there is less scandal and corruption within the police force, perhaps the media are now portraying them in a more positive light, or perhaps, as Flatley et al (2010) found, the public are finally starting to recognise that crime rates have decreased. It could also be the case that confidence is associated with the condition of the economy, confidence improving at times or prosperity and slumping in times of recession. The recent and severe downturn in the UK and global economy should soon provide some evidence to support or refute this possibility. Alternatively, perhaps the shift towards neighbourhood policing has contributed to raising confidence; the focus upon reducing local level disorder and working in partnership with the local community may have reduced worry about crime, instilled feelings of community cohesion, and given communities back their local bobby, re-igniting impressions that the police are guarding and protecting local areas, as policy makers have hoped. Looking at trajectories in some of these drivers of confidence over time and comparing them to the trajectory of confidence in the police may shed some light on what has caused the uplift in confidence, a comparison that is made below in Figure 3.9.

In sum, Figures 3.2-3.4 show that although the level of public confidence in the police varies according to the question asked and the survey data employed, the general trend in confidence is consistent across surveys: it decreased in the 1980s, rose slightly in the late 1990s, before dropping again in the millennium, but since 2003 has been slowly increasing. Levels of confidence not only differ according to the data that is used, but also the question that is asked, the BCS showing that confidence in the national police is consistently higher than in the local police. Nevertheless, comparing changes and trends in these two measures of confidence, reveals very similar results, both rising and falling by similar degrees and doing so simultaneously. Breaking the time series down into monthly intervals has revealed variation in
confidence from month to month, variation that is smoothed out at the annual level. This indicates that aggregate confidence might be influenced by ‘external shocks’, such as crime reporting in the media or police scandals, which momentarily inflate or deflate confidence before it returns to equilibrium and continues on its trend.

3.5.2 How do trajectories of confidence in the police differ for different subgroups?

The previous graphs have shown how confidence has changed over time for the population as a whole, but the aggregated data cannot reveal whether trends in confidence vary across different subgroups of the population. For example, from previous research findings (reviewed in Chapter 2), we might expect females to report consistently higher levels of confidence than men, but over the longer term, plotting trajectories might reveal whether there was ever a point in time at which men’s confidence rose higher than women’s. Moreover, if some of the arguments and explanations that have been put forward to explain the proposed decline in confidence over the latter half of the twentieth century are valid, then it might be expected that the trend in opinions of the police in some groups would be different to others. For example, if, as Girling et al (2000) suggest, the middle classes have become increasingly disgruntled with the police as more and more of this group have been accused of driving offences (as the ownership of motor vehicles has risen), then it might be expected that confidence among this sub-group would have declined further over the 1980s and 1990s than the working classes.

Only a minority of variables have consistently appeared in all sweeps of the BCS, but they include, sex, age, marital status, ethnicity, qualifications, income, employment status, housing status, victimisation, social cohesion and fear of crime. Of these variables, only a few show interesting changes over time when plotted by confidence in local policing, which are shown below. For the remainder, not presented here, the intercepts of each subgroup were different, indicating that levels of confidence varied across groups (as would be expected from the findings of past research), but their trajectories of confidence all followed broadly similar paths.
Figure 3.5: Confidence in the local police by age group using the BCS (1982-2007/08)

Figure 3.5 examines trends in confidence in the local police by age group. It shows that in 1982, those aged 60 or older were the most confident in the local police (94%), while those aged 16-29 were the least confident (88%). Between 1982 and 2000, confidence declined at a similar rate across all age groups, but between 2000 and 2001/02 the confidence of those aged 60 and over declined more sharply than those of other ages, converging with the trajectory of the middle age group. This was accompanied by an increase in confidence among the 16-29 year olds between 1998 and 2002/03. As a result, by 2002/03, a similar level of confidence in the local police was reported by all age groups. Since this time, confidence has not varied considerably between age groups, although those aged 16-29 continue to be marginally less confident than those older than themselves.
In reference to Figure 3.6, the BCS showed that in 1982 white people were far more confident in the police (91%) than those in other ethnic groups (84%). In line with the confidence of the aggregate population, the confidence expressed by both white and ethnic minority respondents declined over the next 18 years. However, between 2000 and 2001/02, the confidence of white people continued to decline (from 78% to 75%), while those in other ethnic groups expressed a sharp increase in confidence (from 72% to 81%). Since this time, the confidence of all ethnic groups rose, but those in minority groups consistently expressed a greater degree of confidence in the police than white respondents.

While these graphs show interesting trends, of note is that the traversing and converging of the trajectories occurred in 2001/02. This is the year in which the survey design of the BCS was changed somewhat. The sample size was almost doubled (from 20,000 to 37,000), the sample was stratified to include 600-700 interviews in each Police Force Area, (rather than 300 per Police Force Area), and data collection began to be collected on a continuous basis, rather than being conducted in the early part of the year as it had been previously (Bolling et al. 2002). However, it is not obvious how these changes to the survey design could have led to the trends presented in Figures 3.5 and 3.6. A non-white boost sample and a youth boost sample were also added to the survey design in 2001/02, but these boost
samples were not included in the survey data used to construct these graphs. The questionnaire could also not account for the anomaly, as the questions asked of respondents concerning ethnicity, age and confidence did not change over time (excepting the change to the confidence question in 2003/04 described above). Finally, although the data were weighted to account for any unequal selection probabilities, or differential response, there were no patterns that would suggest a large increase or decrease in the proportions of one of these ethnic groups, or age groups answering the confidence question could be attributed to the traversing or converging of these trends (see Appendix E). Nevertheless, while it is possible that these trends are in fact evidence of significant changes in sub-group attitudes, it still seems likely that they are a consequence of changes to the survey design. To confirm, the same analysis was conducted, but using data collected from the WVS, rather than the BCS.

Figure 3.7: Confidence in the police by age group using the WVS UK data (1981-2005)

The use of the WVS UK data (shown in Figure 3.7), does not produce the same trends as the BCS when examining confidence in the police by age. Rather than the trajectories converging, as the BCS data showed, they seem to follow fairly similar paths, although the trajectory of 30-59 year olds does behave slightly differently. It decreased more rapidly than the rest of the population in the 1980s, but then declined at a slower rate until the millennium. After 2000, confidence in the police continued
to decline among 30-59 year olds, while the rest of the population reported an increase in their levels of confidence, causing the confidence of those under 60 to converge.

Figure 3.8: Confidence in the police by ethnic group using the WVS UK data (1981-2005)

Estimates of confidence by ethnic group are only available within the 1981 and 2005 datasets of the WVS. Nevertheless, the traversing of trends in confidence among ethnic groups that the BCS data uncovered is not evident when employing the WVS data collected in the UK. Figure 3.8 shows that both white and ethnic minority respondents reported a decline in confidence in the police over time. While the confidence of whites declined more sharply than that of ethnic minorities, their confidence still remains higher.

To conclude, it would seem that trajectories of confidence in the police do not differ greatly between subgroups. While, as might be expected, different subgroups have different levels of confidence, such differences between subgroups do not vary significantly over time, their trajectories following similar paths. Despite examining over 30 variables, it is only when the population is divided by age and ethnicity that findings to the contrary are discovered. This casts doubt over some explanations that have been put forward to account for the proposed decline in confidence over the latter half of the twentieth century, such as changes to society, or police practice, for if
they were robust we might have expected some groups to have been affected more than others. For example, we might expect some groups to question the authority and legitimacy of the police more than others, or for some cultural or social groups to feel that their needs and expectations are not being met.

The BCS illustrates that the confidence of white and ethnic minority respondents has traversed, while trends in confidence across age groups have converged. However, this was not a finding supported by data collected in the UK by the WVS. It may be the case that such changes in attitudes across ethnic minority groups and age groups have occurred. For example, it is possible that events such as the Lawrence Inquiry in 1999 and subsequent admissions of institutional racism and promises of police reform have served to increase ethnic minority's confidence in the police, as might have the vast increase in the number of police officer recruits from ethnic minority backgrounds (Newburn 2003a). Additionally, as worry about crime and confidence in the police has been consistently linked by research studies, and since older people tend to be more fearful of crime than the young (see, for example, Box et al. 1988), perhaps the reason for a greater decline in confidence among the oldest section of the population is due to a greater rise in worry about crime. Alternatively, perhaps they are more likely to have noticed the disappearance of the local bobby that they grew up with, leading to greater dissatisfaction with the police. However, given that prior research has consistently reported that confidence is weaker among those in ethnic minorities and the older population (see, for example, Cao et al. 1996; Brown and Benedict 2002; Jackson et al. 2009), and that the trends discovered in the BCS were not corroborated by WVS data, it seems far more likely that the findings are a consequence of the survey design modifications to the BCS in 2001.

3.5.3 How do trajectories in confidence compare to trajectories in its key explanatory variables?

Much research has been conducted to examine the drivers of public confidence in the police, but has done so at the cross-sectional level. What is not clear is whether these relationships hold over time. Examining the trajectories of these explanatory variables and comparing them to the evolutionary path of confidence in the police
may provide some clues as to whether these associations persist perpetually. If they do, we might expect rises and falls in confidence over time to mirror movements in its correlates. A similar analysis was carried out by Jackson et al (2009) using data from 1994 to 2005/06, but the graph below adds to their findings by using all available data between the first sweep of the survey in 1982 and that collected in 2007/08.

Figure 3.9: Annual confidence in the local police, perceptions of disorder, worry about crime, perceptions of crime, victimisation and social cohesion using the BCS (1982-2007/08)

Figure 3.9 plots the trends of confidence in policing alongside those of perceptions of disorder, perceptions of crime, the victimisation rate, perceptions of social cohesion and worry about crime. What is striking is a general decline in all these attitudinal measures over the 1980s, not just in public confidence in the police, but it also shows some similarities between trajectories, although not all necessarily with confidence in the local police. For example, worry about crime seems to reflect trends in victimisation. When numbers reporting that they have not been victims of crime decreases, those reporting that they are not worried about crime decreases (in 1994 and 2000, for example), while an increase in the numbers reporting that they are not worried about crime is accompanied by an increase in those reporting that they have not been a victim of crime (in 1998 and 2001/02, for example). Despite numerous links being drawn between worry about crime and confidence in the police and victimisation and confidence in the police, neither explanatory variable seems to markedly reflect trends in confidence. Regardless, the link between worry and victim
rates does seem to suggest that worries about crime are not based upon ‘irrational’ fears, but upon very real possibilities of becoming victim to crime.

Confidence in policing does seem to reflect trends in perceptions of crime. For example, as confidence in policing fell between 1998 and 2002/03, so did perceptions that crime had decreased and as confidence in the police increased from this point in time, so did perceptions that crime had fallen. While the artificial increase in confidence in the police in 2003/04 due to the modification of the answer scale makes it more difficult to see, the degree to which both variables changed over time appears quite comparable, although it appears that confidence did not mirror perceptions of crime so closely in the last half of this decade. The association between confidence in the local police and perceptions of disorder follows a similar pattern. Both seem to rise and fall around a mean between 1992 and 1998, although perceptions of little disorder does so to a greater degree, before simultaneously falling quite substantially at first and then more gradually after 2000. In 2003/04, both increase sharply, although to some extent this rise in confidence is due to the addition of a middle response category to the survey question. Over the following two years this similarity ends as perceptions of no disorder falls, while confidence in the local police continues to rise. However, between 2005/06 and 2006/07 both reach a plateau, before continuing on an upward incline together again.

Some similarity in trends between confidence in the local police and perceptions of social cohesion may also be evident, although they do not run in a perfectly parallel formation. As confidence dropped over the 1980s and early 1990s, so did perceptions of social cohesion. Additionally, both confidence and social cohesion increased over the following few years, although social cohesion did so to a far greater extent and over a longer period of time, before they both fell again until 2002/03. Since this time, both social cohesion and confidence in the police have increased at similar rates, although the long-run measure of social cohesion was aborted in 2005/06.

Research using cross-sectional, individual level data has consistently found that confidence in the police is associated with perceptions of disorder, crime and social cohesion, as well as worry about crime and victimisation (reviewed in Chapter 2). What is not clear is whether these relationships hold over the long-term. Plotting the
aggregate trends of these variables has provided preliminary evidence of such relationships. For example, the time series of confidence in the local police appears to mirror the trends of perceptions of disorder and perceptions of crime quite closely and it is also clear that all the variables declined in the 1980s. One can only speculate as to why that might be. For example, it may have been a result of declining satisfaction with the Thatcher government of the time, the economic recession, or the effect of changing attitudes emanating from globalisation, modernisation and Thatcher’s emphasis on the market economy. Alternatively, it might be an indication that while a conceptual distinction can be drawn between all these variables, in practice they are measuring the same latent attitude regarding crime and policing, explaining why they appear to rise and fall in tandem. Trying to draw any robust conclusions using descriptive methods is far from definitive, but the results have provided some initial, tentative indications that some variables might exist in equilibrium with confidence.

### 3.6 Conclusions

There are arguments in the criminological literature that speak of a decline in public confidence in policing since a ‘golden age’ of police legitimacy in the 1950s. While evidence to support or refute the notion is sparse, comparing early survey data in the 1950s and 1960s to that of the BCS in the early 1980s suggests that the notion is probably overstated. Nevertheless, it does seem that confidence decreased over the two decades preceding the turn of the 21st century, but has been gradually growing since 2003. Regardless of the data used or the survey question asked, the general trend in public confidence in the police is consistent, although it is important to highlight that while their general trajectories are very similar, levels of confidence are consistently higher in the national than the local police.

Cross-sectional studies have often revealed that different subgroups have different levels of confidence in the police (discussed in Chapter 2). Analysing trends over time, I also found that different subgroups have different levels of confidence, some consistently more or less confident than others, their trajectories following the same paths. The only exceptions to this are trends in confidence across different age groups.
and ethnic groups over the last 25 years. However, it seems likely that this is a methodological artefact of the data rather than evidence of a change in attitudes.

The use of descriptive graphs provided some evidence to suggest that confidence in the police may be associated with both perceptions of crime and perceptions of disorder over the long term. However, while one can 'eye-ball' a graph in this manner and speculate that there may be long run relationships between variables, only rigorous hypothesis testing and advanced statistical methods, namely time series regression analysis, can reveal whether any long-run, systematic relationships exist between these factors. This method can also reveal whether any lag structures are present in the trends of these variables, indicating whether a change in one variable has an effect upon confidence in the police at a later point in time. The next chapter will apply this statistical technique to the BCS data and try to uncover whether changes in public confidence in the police over time are a response to movements in the explanatory variables, as initially mapped out in this chapter.
Chapter 4: A Time Series Analysis of Public Confidence in Policing

4.1 Introduction

The previous chapter outlined discussions that suggest confidence in the police has been in decline over the last sixty years and argued that despite such assertions, researchers have neglected to examine long-term trends and provide evidence to support such arguments. Using survey data, I plotted trends in confidence to show how support for the police has changed since the early 1980s and attempted to map these changes against trends in other indicators, indicators that cross-sectional analyses have found to be associated with confidence.

Scholars have identified a number of robust correlates of confidence (detailed in Chapter 2). For example, some have pointed to assessments of police effectiveness in determining public confidence, specifically in terms of the ability of the police to fight crime and disorder, reduce victimisation and the fear of crime (see, for example, Cao et al. 1996; Weitzer and Tuch 2005b; Myhill and Beak 2008). Others have suggested that the police must go further than merely fighting crime and improve neighbourhood environments by ensuring that local areas are cohesive, secure and free of those things that symbolise crime risk without in themselves being the result of criminal activity, such as rubbish and groups of teenagers hanging around on the streets (Jackson and Sunshine 2007; Jackson et al. 2009). The importance of police strategy and behaviour has also been emphasised, with researchers recommending that all members of the public be treated equally, fairly and with dignity and respect (Tyler 2004; Bradford et al. 2009a) and that a visible police presence on the streets is maintained, with police officers striving to engage and work with local communities, communicating with the public and providing them with information about their work and services (Girling et al. 2000; Bradford et al. 2009a; Stanko and Bradford 2009).

While these studies have led to some important insights regarding the nature of between-group differences in confidence in the general population, they are limited in
their generality by their almost exclusive reliance on cross-sectional survey data. For, although it is undoubtedly useful to consider differences between groups in static levels of confidence, such approaches tell us nothing about how changes in public confidence are related to prior movement in other aggregate level indicators. As it is shifts in aggregate levels of confidence that form the yardstick by which police performance is judged, this represents a surprising misalignment between research design and the phenomenon of interest.

This chapter addresses this gap in the existing empirical literature by applying time-series regression models to aggregate trends in repeated cross-sectional survey data. Approaching the study of public confidence in the police from this new perspective should complement and extend cross-sectional analyses, providing a fuller and more rounded picture of the proposed causal mechanisms underpinning confidence. While the pattern of effects might not necessarily be identical at the individual and aggregate levels (Robinson 1950), such 'triangulation' of empirical approaches is a useful way of assessing the robustness of putative causal mechanisms that have been identified using a single analytical strategy (Campbell and Fiske 1959).

The chapter begins by reviewing the limited research that has taken changes rather than levels of confidence in the police as its focus, before outlining the principles of time series regression analysis and the data employed to carry out the technique. I then present analysis which explores whether monthly changes in confidence are related to monthly aggregate movements in a range of indicators that have been found to be predictors of confidence using cross-sectional analyses.

4.2 Confidence in the Police over Time

As a result of the heavy reliance on cross-sectional survey data, research studies have paid rather scant attention to the question of how confidence has changed over time. Chapter 3 outlined arguments that suggest confidence has been steadily declining since the notional high-water mark of the 1950s (Reiner 1992a; Reiner 1992b; Weinberger 1995; Loader and Mulcahy 2003), although lack of robust data covering the period in question means that these have been largely speculative in nature. Analysis of long-term trends from the British Crime Survey showed that while there
are signs of recovery, aggregate confidence in the police has been in decline since the
early 1980s, but such descriptive approaches reveal little about potential causes of
rises and falls in confidence.

Only a few studies have taken any consideration of time into account parametrically.
In the US, a number of studies have compared trends in aggregate confidence and
crime rates (Ackerman et al. 2001), or linked changes in confidence with specific and
high profile incidents of police brutality. For example, Tuch and Weitzer (1997) and
Weitzer (2002) used Gallup poll data to show how confidence changed during the
1980s and 1990s. They attributed declines in confidence to incidents of police
brutality, such as the beating of Rodney King in 1991, and subsequent rises in
confidence over the following four or five years to police reforms and the decay of
collective memory. A more methodologically sophisticated approach was adopted by
Kaminski and Jerreris (1998) who used logistic regression to detect significant
differences in confidence in policing, year on year. They found that confidence
decayed after a highly publicised incident of police brutality in 1995 and that non­
white respondents were more likely to rate police use of force as unreasonable after
this incident.

In the UK, Jackson et al (2009) use data taken from the British Crime Survey between
1994 and 2005/06 to compile a pooled data set. They then used this combined data to
produce linear regression models, accounting for the temporal nature of the data with
the use of year dummy variables. Using this approach, they showed that the effect of
worry about crime on confidence in policing is weaker than that of perceptions of
social cohesion and much weaker than perceptions of disorder. However, while these
models have gone some way towards taking time into account, they do not speak to
the dynamic temporality of mechanisms that might be operating at the aggregate
level.

4.3 Time Series Regression

These few studies which have broached the question of change in confidence over
time have been largely descriptive in nature, or have compared the results of cross-
sectional regressions across survey years to examine whether confidence changed to a greater extent in one population sub-group compared to another. Such approaches cannot shed light on the processes through which confidence in the police changes over time, nor test for influences on such aggregate level change. To do this requires a time-series regression framework in which it is possible to model changes in aggregate level confidence over time as a function of current and prior movements in other aggregate level indicators (Ostrom 1990; Sanders and Ward 1994).

In addition to testing whether or not movements in aggregate level variables are correlated with one another, time-series methods also enable an examination of the temporal dynamics between predictor and outcome variables (De Boef and Keele 2008). For example, if police strategy changes it might take time for the public to notice these changes (through publicity and/or experience) and to modify their opinion of the police as a result. Consequently, we might expect the effect of the new strategy on confidence to lag some way behind its actual implementation. In contrast, we might expect increases in disorder and antisocial behaviour to have more immediate effects upon confidence, since this is likely to have a greater impact upon people's day-to-day experiences and quality of life. Time-series regression enables the analyst to include, simultaneously, concurrent and lagged effects between predictor and outcome in order to address questions relating to the dynamic structure of causal effects (De Boef and Keele 2008). A further advantage of the time-series regression framework is that it can test whether there are seasonal variations in a long-run trend, which cross-sectional analyses are not able to identify (Brooks 2008).

Time-series regression is a new approach to the analysis of public confidence in policing, a method associated most closely with macro-economics, but which is increasingly being applied by analysts in other social science disciplines, as time-series of sufficient length become increasingly available (see, for example, Wlezien 1995; Chanley et al. 2000; Keele 2005; Soroka and Wlezien 2005; Keele 2007; De Boef and Keele 2008). Time-series regression methods have also been used within criminology (see, for example, Becker 1968; Hale 1998; Fielding et al. 2000; Pudney et al. 2000). For example, they have been used to examine the effects of unemployment and income inequality on crime (Greenberg 2001; Jennings and Farrall Under Review), and the crime rate and police strength over time (Loftin and
McDowall 1982), but the approach has not, to date, been applied to public opinion data about the police or the criminal justice system.

4.4 The Mechanics of Time-Series Regression

Time-series regression analysis is distinguished from classical ordinary least squares (OLS) regression methods in the way that the non-independence which arises due to the temporal ordering of the data is accounted for. Key assumptions of OLS regression are that residuals are identically and independently distributed (iid), with a mean of zero and constant variance. An implication of these assumptions is that, if the residual at time \( t \) is positive, (i.e. the observed value is greater than the predicted value), then the residual at time \( t+1 \) should be just as likely to be positive as negative. However, time-series data is very likely to violate this assumption, since residuals tend to be correlated over time, meaning that a positive residual is likely to be followed or preceded by another positive residual and a negative residual is likely to be followed or preceded by another negative residual (Ostrom 1990; Sanders and Ward 1994). To take a simple but intuitive example, an individual’s income in January is highly correlated with their income in February of the same year, so if the model under-estimates predicted income in January, it is likely to do the same in February, inducing a correlation between the residuals, or errors of prediction. Such ‘autocorrelation’ in the residuals will yield biased and inconsistent parameter and variance estimates, resulting in inflated t and F statistics, both of which are likely to lead to the selection of a mis-specified model and invalid inferences (Ostrom 1990).

A necessary step in conducting time-series regression, therefore, is to account for the autocorrelation in the residuals. This ensures that the structural error term contains only what is referred to as ‘pure white noise’, meaning that the residuals of the regression contain only random error (Ostrom 1990; Brooks 2008). An autoregressive (AR1) model can be used to create such a condition. Using generalised least squares estimation, this approach models autocorrelation in an autoregressive residual equation, the results of which are used to feedback and transform estimates in the

1 The models can also be estimated using a lagged dependent variable approach. While this may be a preferable method in some circumstances, it was deemed inappropriate here, as the lagged dependent variable coefficient was negative and non-significant, and the use of AR(1) modelling produced similar estimates to the LDV approach.
corresponding structural equation (Ostrom 1990). As a result, the structural equation resembles the classical linear regression model, as in equation 1 below:

\[ y_t = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t-1} + \ldots + \beta_k x_{kt} + \beta_k x_{kt-1} + u_t \]  

(1)

In equation 1, \( y \) is the dependent variable, \( \beta_0 \) is the intercept, \( x_t \) is an explanatory variable, \( \beta_1 \) and \( \beta_2 \) are the regression coefficients for \( x_t \) and \( x_{t-1} \) respectively, and \( u_t \) is the error term. The \( t \) subscript indexes time, so \( x_{1t} \) is the explanatory variable measured at the same time as the outcome, while \( x_{1t-1} \) is the explanatory variable measured at the previous time point. For simplicity, equation 1 shows only one lag of the explanatory variables, although additional lags can easily be incorporated. The systematic errors are contained in \( u_t \), where:

\[ u_t = \rho u_{t-1} + e_t \]  

(2)

Here, \( u_t \) contains an independently distributed error term \( (e_t) \) and a lag of the systematic error \( (u_{t-1}) \). The \( \rho \) coefficient (also referred to as \( \rho \)) can be interpreted as the rate of decay after a shock to the system. For example, a well publicised case of police corruption might be followed by a sudden drop in confidence in the police, but its effects are likely to subside as time passes and the media is saturated with other stories. The smaller the \( \rho \) coefficient, the faster the effects of such a shock subside and the faster levels of confidence recover.

Model estimation proceeds by first estimating the structural equation and then using the residuals from this model to estimate the residual equation. The estimated value of \( \rho \) from the second stage is then used to transform the data and to estimate the structural equation again, followed by the residual equation. This process is repeated until \( \rho \) remains unchanged after further iterations.

Another essential aspect of time-series regression is ensuring that all variables within the model are stationary. A stationary variable is one that varies over time, but has constant variance and covariance and is 'mean reverting'. A mean reverting variable may fluctuate over time, but will do so perpetually around its own mean, always
tending towards its mean value (Gottman 1981). Conducting time-series analysis with variables that are non-stationary may result in biased coefficient estimates and inflated test statistics (Brooks 2008). If tests reveal that variables are non-stationary, as is the case in this analysis, it is necessary to induce them to a state of stationarity via differencing. Differencing subtracts the value of $x$ at time $t$ from the value of $x$ at time $t-1$. These differences are then used to form a new time-series (Sanders and Ward 1994).

4.5 Data and Measures

To conduct a time-series analysis it is recommended that the data comprise of a minimum of 50-100 observations (time points) in order to attain sufficient statistical power for hypothesis testing (Box and Jenkins 1976). Additionally, observations should be evenly spaced through time so that expected correlations between neighbouring data points will be equal across the entire series (Brooks 2008). As a result, it would be inappropriate to use the BCS annual data, as it consists of only 15 unevenly spaced data points. However, as detailed in Chapter 3, the BCS has collected data on a continuous basis since April 2001 (Bolling et al. 2009), so it is possible to derive 84 monthly observations for each variable of interest between April 2001 and March 2008. Every quarter, the BCS selects equal numbers of addresses from the postcode address file (PAF) but inevitably different numbers of interviews are conducted each month and non-response varies per month and per quarter. The data are weighted to account for this, but only at the quarterly time unit, as monthly weights are not available.

The independent variables used in the analysis are selected on the basis of having been identified as putative causes of confidence in the existing literature. Additionally, of course, they must have been included consistently in the BCS during the period in question. This means that I cannot include as large and varied a range of predictors as I would ideally like. It must, therefore, be acknowledged that several important predictors of confidence in the theoretical literature, such as police visibility and behaviour are not included in the analysis. The only measure of police operations that was available over a long period of time regards the number of police officers
employed across England and Wales. All variables are derived as population aggregate means; a mean of each variable for the aggregate population was taken at each month to create a time-series. The exception to this is the variable denoting police strength, which is included in the analysis in its original metric. Descriptions of all the variables in the analyses are provided below (precise wording and answer scales of the indicators used are presented in Appendix B).

Public confidence in the police
The measure of police performance in this chapter is the same as that used in Chapter 3, as it is the only measure that has consistently appeared in the survey since 2001 (and, in fact, since 1982 when the survey began). It asks, "Taking everything into account, how good a job do you think the police in this area are doing?". In April 2003, the question was modified slightly so that answers were given on a five rather than a four point scale, artificially inflating the mean, so I control for this in the analysis using a structural break, specified as a dummy variable for this point in the time-series.

Perceptions of disorder
Perceptions of disorder were measured using a series of questions asking how much of a problem respondents considered each of the following to be: litter, vandalism and graffiti, use and dealing of drugs, drunk and rowdy behaviour and teenagers hanging around. A mean was calculated at each month for each of the different indicators of disorder and then these four means were averaged at each month to create one single time-series.

Perceptions of social cohesion and informal social control
The only indicator of social cohesion that has consistently been included in the survey since 2001/02 asks whether the area is a close, tight knit community. Nonetheless, the answer scale for this question was changed from a five to a four point scale in 2006/07. Similarly, a measure of informal social control has been included in the BCS since 2001/02, which asks whether local people would tell children off who were causing trouble in the area. This was included until 2006/07, when it was removed and a number of other indicators of informal social control were added. As a result, the time-series we created to measure perceptions of informal social control is
comprised of the original question between 2001/02 and 2006/07 and then an average of three informal social control indicators from 2006/07 onwards. Applying this methodology in creating the time-series seems to do little, if anything, to artificially inflate or deflate trends in perceptions of informal social control around 2006/07 and the change in the answer scale of the question regarding perceptions of social cohesion also seems to have little effect. However, as mentioned above, it is possible to test for the effects of these changes using time-series analysis and to control for it if necessary.

Worry about crime

The measurement of fear of crime is an area of considerable academic debate and ‘global’ measures of fear of crime have faced fierce criticism (see, for example, Ferraro and LaGrange 1987; Farrall et al. 1997). The BCS includes a number of items which measure worry about becoming victim of specific crimes. While these items have also been criticised (see, for example, Farrall et al. 1997; Farrall and Gadd 2004), they are deemed preferable to the global measure, capturing general feelings of worry and anxiety about crime. Consequently, worry about crime was measured with a series of questions regarding how worried respondents were about being physically attacked by strangers, being mugged and robbed, having their home broken into and something stolen and being insulted or pestered in a public place. A single time-series was created to measure worry about crime in the same way as that measuring perceptions of disorder, an average across the four indicators taken at monthly intervals.

Victimisation and perceptions of crime

Perceptions of crime were measured using a single indicator which asked respondents how much they thought the crime rate in their area had changed over the previous two years. I measure the rate of victimisation regarding violent crime, property crime, theft from the person and vehicle crime separately from self-reports recorded in the BCS. Violent crime comprised those who had been subject to deliberate use of force or violence, sexual assault or attack, or domestic violence, as well as those who had been threatened to have force or violence used against them. Victims of property crime included those who had had something stolen or damaged from inside or outside of their property, or who had experienced somebody trying to get into their
property to cause damage or steal something. Victims of theft from the person included those who had had something stolen from their pockets or bag, or knew that someone had tried to do such a thing, had had something stolen from an office, a cloakroom etc, and those who had had items deliberately damaged. Finally, victims of vehicle crime comprised those who had had a vehicle stolen or something from their vehicle stolen, those whose vehicle had been tampered with or damaged and those who had had a bicycle stolen.

**Police Strength**

The Home Office have been recording the numbers of police officers employed across England and Wales for a number of years (publications can be found at: [http://www.rds.homeoffice.gov.uk/rds/policeorg1.html](http://www.rds.homeoffice.gov.uk/rds/policeorg1.html)) and have been doing so on a biannual basis since 2000. As time series regression analysis cannot account for missing data, linear interpolation was employed to replace the five missing values between each of the six monthly observations. The resulting time series remained in its original scale, denoting the total number of police officers that were employed in each month.

The time-series analysis presented in this chapter was carried out using Stata 10. This included the Augmented Dicky-Fuller, Phillips-Peron, and Kwiatkowski, Phillips, Schmidt and Shin (KPSS) tests of stationarity (Brooks 2008), which showed that the dependent variable and all independent variables were non-stationary, so were all differenced (Δ) to induce them to a state of stationarity for use in the time-series regression analysis, reported below.

### 4.6 Results

Before estimating time-series models it is always useful to carry out a descriptive analysis to examine the general shape of time-trends and to assess the *prima facie* case for interdependencies between the aggregate indicators.
Figure 4.1: Monthly confidence in the local police, perceptions of disorder, worry about crime, perceptions of crime, victimisation, social cohesion, informal social control and police strength (BCS April 2001-March 2008)

- Victim of theft from the person (% who have not been a victim)
- Victim of violent crime (% who have not been a victim)
- Victim of property crime (% who have not been a victim)
- Victim of vehicle crime (% who have not been a victim)
- Confidence in the local police (% excellent-fairly good job)
- Perceptions of social cohesion (% strongly agree, agree and neither agree nor disagree)
- Perceptions of informal social control (% strongly agree and agree)
- Perceptions of disorder (% not at all or not a big problem)
- Worry about crime (% not at all or not very worried)
- Perceptions of crime rate (% lot less or little less crime than 2 years ago)
- Police Strength (000s)
In a similar way to Figure 3.9 in Chapter 3, Figure 4.1 shows the time-trend in public confidence in the police alongside the trajectories for all the explanatory variables, but does so at monthly rather than annual intervals. It also includes a secondary axis to the right of the graph to represent the numbers of police officers employed (in thousands) at each monthly interval. The graph reveals that the percentage of respondents who had some degree of confidence in their local police remained relatively stable in the months between April 2001 and March 2003, fluctuating around the 75% level. As noted earlier, in April 2003 the answer scale for this question changed, which accounts for the apparent rapid increase in confidence at this time. Since that point, reported confidence has been gradually rising from around 80% to 88%, albeit with fluctuations around this average on a month to month basis.

As recognised in the previous chapter, it is immediately apparent that trying to identify relationships between these variables by simply examining their long-term trends by eye is a little cumbersome, to say the least. There does appear to be some evidence of similarity in the long term trends between confidence in policing and perceptions of crime, as well as between confidence and the rates of various forms of victimisation. All that can really be said with any certainty, however, is that the positive trend over time in confidence in the police is also evident in several of the predictor variables, the numbers of those who had *not* been a victim of crime also seeming to increase slightly, as well as the proportion of those who felt that the crime rate had improved, rather than worsened. Also striking in visual terms is how similar the trends in worry about crime and perceptions of disorder are, both rising between April 2003 and January 2004, before falling again and then reaching something of a plateau. While the numbers of police officers employed in England and Wales increases substantially, particularly over the first four years of the time series, its trend does not appear to correspond with that of the public’s confidence in the police. However, ‘eye-balling’ a graph in this manner cannot reveal whether there are any statistically significant long run relationships between any of these factors, nor whether fluctuations in confidence correspond with or react to month on month changes in the explanatory variables. Indeed, the difficulty of determining whether these trends have any systematic inter-relationships by simply ‘eye-balling’ them is precisely what motivates the use of time-series analysis, to which I now turn.
Time-Series Analysis

Before examining the dynamic relationships between the variables, Granger-causality testing (Granger 1969) is undertaken to address matters of causal ordering to ascertain whether confidence in the police has any effect upon the seven explanatory variables. This method rests on the central axiom of causal reasoning that, while future events cannot affect past events, a cause must precede its effect in time. The test works by first predicting $x$ using lags of both $x$ and $y$ and then running the same model, but excluding the lags of $y^2$. Since the second of these models is nested within the first, the F test can be used to determine which model is the better fit to the observed data (Keele 2005).

Table 4.1: Granger-Causality Tests

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>$\Delta$ Confidence in local police $\chi^2$</th>
<th>$\chi^2$ p-value</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta$ Social Cohesion</td>
<td>.063</td>
<td>.80</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Informal Social Control</td>
<td>1.092</td>
<td>.30</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Perceptions of Disorder</td>
<td>3.538</td>
<td>.06</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Worry about crime</td>
<td>.003</td>
<td>.96</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Perceptions of Crime</td>
<td>1.17</td>
<td>.28</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Victim of Violence</td>
<td>.576</td>
<td>.45</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Victim of Property Crime</td>
<td>.046</td>
<td>.83</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Victim of Vehicle Crime</td>
<td>.01</td>
<td>.92</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Victim of Theft from the Person</td>
<td>.0001</td>
<td>.99</td>
<td>82</td>
</tr>
<tr>
<td>$\Delta$ Police Strength</td>
<td>1.475</td>
<td>.23</td>
<td>82</td>
</tr>
</tbody>
</table>

N.B. The model also included a dummy variable to account for the structural break in public confidence in the police. Each variable was lagged one month. VAR estimates.

Source: British Crime Survey 2001:4 to 2008:3

To determine how many lags of the variables should be used in the causality testing, lag length tests employing AIC, SBIC and HQIC estimates of model fit were conducted, revealing that one lag was appropriate (Keele 2005; Keele 2007).
Table 4.1 presents the results from the Granger-causality tests. The chi square statistics are provided along with their corresponding p-value. Taking social cohesion as an example, the chi square statistic is .10, with a p-value of .75, indicating that the model which uses earlier measures of cohesion and confidence to predict future values of cohesion fits no better than the model using lags of cohesion alone. Thus, we cannot reject the null hypothesis of zero effect of the lagged endogenous variable and must conclude that public confidence in policing does not 'Granger-cause' perceptions of social cohesion. Since none of the test statistics are statistically significant (at the 95% level), the results as a whole indicate that change in aggregate confidence does not directly influence worry about crime, perceptions of crime, disorder, social cohesion, or informal social control, nor rates of victimisation or police strength. Consequently, the dynamics of these variables can be modelled without concern that feedback loops exist from the dependent variable.

Based on the evidence from the cross-sectional literature, we might expect that if perceptions of cohesion and informal control, or police strength weaken (or strengthen), if perceptions of crime or disorder, worry about crime, or the crime rate increase (or decrease), then confidence will fall (or rise). Therefore, we would expect the statistical relationships reported below to show that improved societal conditions and crime rates are accompanied by increases in confidence.

While the theoretical and empirical literature tells us how various factors, such as perceptions of disorder and crime affect confidence in the police, what is not clear is how earlier values of these variables might also play a part in determining levels of aggregate confidence, nor which are likely to have the largest effects in the long run. Since the substantive literature cannot help to determine the appropriate dynamic structure, a general-to-specific approach to model building was used (Brooks 2008). This approach begins with a large number of exogenous variables and lags of these variables before gradually removing non-significant predictors to arrive at the most parsimonious model. As such, it makes no assumptions regarding which lags of the exogenous variables might influence the dependent variable, placing no arbitrary restrictions upon the model. Moreover, since the models are nested within one another (as each model specification contains the same terms as the previous model with the exclusion of one lagged term) the validity of each restriction can be tested to
ensure that it does not worsen the fit of the model. This can be done using t-tests, F-tests, or information based measures such as the Akaike Information Criteria (AIC) (Hendry 1995).
<table>
<thead>
<tr>
<th></th>
<th>Full Model (S,E)</th>
<th>Parsimonious Model (S,E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.004 (.005)</td>
<td>.002 (.003)</td>
</tr>
<tr>
<td>Rho</td>
<td>-.186</td>
<td>-.209</td>
</tr>
<tr>
<td>Δ Worried about Crime 1</td>
<td>-.123 (.166)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Worried about Crime t-1</td>
<td>-.031 (.168)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Disorder 1</td>
<td>-.238 (.141)</td>
<td>-.239* (.105)</td>
</tr>
<tr>
<td>Δ Disorder t-1</td>
<td>-.011 (.138)</td>
<td>-.022 (.102)</td>
</tr>
<tr>
<td>Δ Social Cohesion 1</td>
<td>.085 (.074)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Social Cohesion t-1</td>
<td>.092 (.076)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Informal Social Control</td>
<td>-.081 (.065)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Informal Social Control t-1</td>
<td>-.036 (.049)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Perceptions of Crime 1</td>
<td>-.184* (.088)</td>
<td>-.158* (.077)</td>
</tr>
<tr>
<td>Δ Perceptions of Crime t-1</td>
<td>.047 (.086)</td>
<td>.039 (.077)</td>
</tr>
<tr>
<td>Δ Victim of Violent Crime</td>
<td>.192 (.872)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Victim of Violent Crime t-1</td>
<td>1.29 (.862)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Victim of Property Crime</td>
<td>-.121 (.544)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Victim of Property Crime t-1</td>
<td>.005 (.507)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Victim of Vehicle Crime</td>
<td>-.416 (.482)</td>
<td>-.357 (.409)</td>
</tr>
<tr>
<td>Δ Victim of Vehicle Crime t-1</td>
<td>1.195* (.472)</td>
<td>1.049* (.402)</td>
</tr>
<tr>
<td>Δ Victim of Theft from the Person</td>
<td>-.456 (.804)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Victim of Theft from the Person t-1</td>
<td>.83 (.812)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Police Strength</td>
<td>-.00003 (.0001)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Police Strength t-1</td>
<td>.00003 (.0001)</td>
<td>-</td>
</tr>
<tr>
<td>Δ Questionnaire change (April 2003)</td>
<td>.501** (.039)</td>
<td>.504** (.033)</td>
</tr>
<tr>
<td>Δ Questionnaire change (April 2006)</td>
<td>-.044 (.058)</td>
<td>-</td>
</tr>
<tr>
<td>Observations</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>F</td>
<td>15.14**</td>
<td>51.72**</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>.79</td>
<td>.81</td>
</tr>
<tr>
<td>Durbin Watson</td>
<td>2.03</td>
<td>2.03</td>
</tr>
<tr>
<td>AIC</td>
<td>-317.33</td>
<td>-334.01</td>
</tr>
</tbody>
</table>

* p<.05; ** p<.01
Source: British Crime Survey 2001:04 to 2008:03
Table 4.2 shows the parameter estimates from the full model, which includes all the explanatory variables and one lag for each of these variables, as well as two dummy variables to control for the question design changes in the dependent variable in April 2003 and in perceptions of social cohesion and informal social control in April 2006. I experimented with a number of lag structures, using AIC, BIC and HQIC estimates of model fit to determine the most appropriate number of lags to use in the structural modelling process (De Boef and Keele 2008). Specifically, I tested models that included up to six lags of the explanatory variables, as it seemed reasonable to assume that their effects upon public evaluations of the police would not operate at a lag of longer than 6 months, revealing that actually only a lag of one month was appropriate. Consequently, it can be concluded that, at the aggregate level at least, confidence is driven by relatively short-term fluctuations in these aggregate level indicators. There is no evidence of 'slow-burn' effects that take several months or more to manifest as impacts on confidence, although this conclusion cannot, of course, be generalised beyond the somewhat limited set of explanatory variables that are available here.

Following the general-to-specific model building procedure, having specified a full model, explanatory variables with non-significant coefficients (at the 95% level of confidence) should then be removed from the full model one-by-one, testing the validity of each removal with AIC estimates and t statistics\(^3\). If the fit of the model was significantly worsened by the removal of an explanatory variable, it was re-incorporated while variables that had no effect on model fit were excluded from the final model. The final specification is presented alongside the full model in Table 4.2. It reveals that only aggregate perceptions of disorder, perceptions of crime and the vehicle crime rate have any long-run predictive relationship with public confidence in the police. Police strength did not reach statistical significance, nor did the coefficients for aggregate worry about crime, perceptions of social cohesion and informal social control and non-vehicle related forms of victimisation. Consequently, counter to evidence from cross-sectional studies, it appears that changes in these variables at the aggregate level cannot explain monthly changes in public confidence in the police in England and Wales between April 2001 and March 2008. It should be

\(^3\) The AIC estimates are consulted in favour of the R\(^2\) and adjusted R\(^2\), as time series data, as opposed to cross-sectional data, are well known for producing exceptionally high R\(^2\) estimates (as appears to be the case here), and so should not be taken as an indication of good fit (Brooks 2008)
noted that the lack of significant effects for these variables was not due to the conditioning effect of other variables in the model, as none of these variables were significant in bivariate models that excluded all the other predictors.

The coefficients of the explanatory variables (presented in Table 4.2) show the short-run effects of a unit change in \( x_t \) on \( y_t \) at a given \( t \). For example, an increase in mean perceptions of disorder at time \( t \) decreases mean confidence in policing by .239 in that same month, while an increase at time \( t-1 \) decreases mean confidence the following month by .022, although this lagged effect did not reach statistical significance. Similarly, when the population believes that crime is rising, mean confidence falls by .158 in that same month, but has no significant lagged effect. Finally, an increase in the numbers reporting being a victim of vehicle crime at time \( t-1 \) leads to an increase in mean confidence of 1.049 the following month, but rates of vehicle victimisation have no statistically significant contemporaneous effects upon confidence in policing. This last result seems highly counter-intuitive and so robustness checks were performed. These showed that the same pattern of coefficients is evident when the 4 crime categories are combined into an overall crime rate and when the crime rate (disaggregated or combined) is included as the only predictor in the model. Moreover, diagnostic statistics do not indicate model mis-specification. Consequently, I conclude that the finding is robust and consider possible explanations for this effect in the discussion section of the chapter.

The dummy variable which controls for the structural break in the dependent variable in April 2003 shows that the change in the answer scale increased mean confidence in policing by .504 (changing the measurement of informal social control and social cohesion in 2006 had no statistically significant effects upon the trends of these variables). The rho coefficient (-.209) is close to 0, which indicates that the effects that any shocks to the system have on the public's confidence in policing (such as sudden increases or decreases in predictor variables as a result of a high profile crime in the media) decay very quickly. Finally, tests for seasonality effects revealed no evidence to suggest that confidence is systematically higher or lower in some months of the year than it is in others.
4.7 Discussion

There is substantial evidence in the existing criminological literature to suggest that confidence in the police is driven by a broad range of individual and area level characteristics, such as perceptions of disorder, crime, collective efficacy, policing practice and experience of and sources of information about the police. However, this body of research is based almost entirely on analyses of cross-sectional survey data. This is problematic in two major respects. First, because of its essentially static nature, cross-sectional regression can say nothing about change in confidence over time. And, second, because confidence in policing as a measure of police performance is assessed by population average, rather than individual level preferences, the cross-sectional evidence does not speak directly to the level at which confidence in the police service is actually assessed. This chapter has attempted to address these methodological and substantive limitations through the application of time-series regression to aggregate trends in public opinion about the police, using a range of putative causes identified in the existing literature as predictors of confidence.

The analyses show that between 2001 and 2008, monthly fluctuations in perceptions of crime, perceptions of disorder, and rates of vehicle crime are significant predictors of change in confidence in the police. Cross-sectional investigations have often concluded that those individuals who are more concerned about crime are less confident in the police, a relationship that appears to hold at the population level and when introducing a time dimension to the analysis. The findings reveal that when the public believe (whether correctly or incorrectly) that crime is rising, public confidence in policing is also lower. This is, perhaps, unsurprising. Given that the core objectives of the police are to prevent crime, apprehend criminals and keep members of the public from harm, the public’s confidence in their ability to perform such roles should be lower at times when more citizens express anxiety about the volume of crime in society.

In contrast, however, it seems highly counter-intuitive that increases in rates of victimization should serve to raise public confidence in policing, particularly as this is the opposite of what has been found using cross-sectional evidence (Cao et al. 1996; Myhill and Beak 2008). Despite conducting a broad range of specification checks and
diagnostic tests, the effect still held. I propose both a methodological and substantive explanation for the finding. Methodologically, it might be that confidence and the crime rate are tied to one another in equilibrium, so that if one rises (or falls), the other responds in a manner which pushes the series back towards equilibrium. In this case, it might be that a rise in crime at time $t$ has a contemporaneous negative effect on confidence, which is then pushed back up to equilibrium the following month. While AR models are widely used and have advantages of their own, such as the ability to provide estimates of lagged short term effects, the use of an error-correction model would have accounted for any equilibrating relationships present in the data (De Boef and Keele 2008). Substantively, it might be that this positive lagged effect is the result of media coverage of the police, since much of the public's knowledge regarding crime and the CJS comes from this source (Roberts and Hough 2005). Allen et al (2006) show, for example, that the majority of citizens obtain most of their information about the police from newspapers, television and radio. When the crime rate rises, the police are likely to feature more heavily in the media, defending their position and providing positive accounts of the measures they are taking to reduce crime. Moreover, television reports are likely to be accompanied by images of the police patrolling, talking to citizens, making arrests and so on, all positively reinforcing the idea that the police are working hard to keep us safe. Indeed, some research has suggested that watching news coverage about the police improves evaluations of their service (Escholz et al. 2002) and that news reporting tends to emphasise the number of arrests that are made and crimes that are solved by, for example, situating reporters outside courts and police stations. This gives rise to a focus on solved cases, leading to an inaccurate impression of police effectiveness, strengthening their perceived social value (Dowler 2003; Reiner 2007). The mediated nature of this proposed mechanism might also help to explain why the positive effect on confidence is only observed a month after any increase in the actual victimization rate.

Turning next to the effect of neighbourhood disorder, the analysis corroborates findings in the literature that perceptions of disorder (teenage gangs, graffiti, litter, drug-taking etc.) are far more important in driving confidence in the police than are worries about becoming a victim of crime, with increases in perceptions of disorder having a strong, contemporaneous and negative impact upon the public's confidence,
while worry has no significant effects. Research examining levels of confidence between individuals has suggested that confidence is higher among those who provide more positive evaluations of their neighbourhood in terms of social cohesion, informal social control, and disorder. As such, it has been argued that the public understand it to be the job of the police not simply to solve and prevent crime, but also to protect and maintain the stability, order and cohesiveness of communities (Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009). However, such relationships do not seem to hold for the population as a whole when explaining changes in confidence over time. In fact, aggregate perceptions of social cohesion and informal social control were unrelated to confidence in the time series models; it is only increases in perceptions of disorder that are associated with declines in confidence. Consequently, it seems that when considering these relationships at the population level, confidence is less a product of emotive concerns regarding the stability and condition of society and more a function of concerns about the extent of the crime problem and the prevalence of those things that signal crime.

One of the key aims of this thesis is to examine how the strategies and behaviour of the police might contribute to public confidence in policing. While time series data are not available in order to measure changes in factors such as police visibility and police engagement with the public, it was possible to measure changes in police strength over time. Intuitively, one might think that confidence in the police would be higher when more officers are employed, increasing the capacity of the police to provide a visible presence on the streets and prevent crime and disorder. However, the numbers of officers employed across England and Wales had no such effect upon aggregate confidence in the police, even when the controlling effects of the other variables were removed from the model. It may be the case that the public are less concerned with (or even unaware of) the capacity of the police as a whole and more concerned with the numbers of police officers that are visibly patrolling the streets. Chapter 6 will explore the effects of police strength on confidence further, as well as that of police visibility.

The models also revealed no evidence of seasonality in confidence in police performance, which suggests that the public's confidence is unaffected by the time of year, being no less likely to be confident in the police in the summer months than over
the Christmas period, for example. It is also noteworthy that public confidence in the police does not seem to influence aggregate perceptions of disorder, crime, cohesion, social control, nor worry about crime one month into the future. This implies that if, in fact, there are causal pathways flowing from confidence into these factors, they must work to influence such perceptions contemporaneously. Instead, the public seem to base their assessments of the police on the strength of what has occurred over the past month, their aggregate perceptions of the state and condition of society and crime more than one month previously seeming to play no part in confidence evaluations. In short, the public appear to have a ‘short memory’ when it comes to assessing the performance of the police.

This has positive implications for police strategy, as the public appear to be fairly forgiving and will respond quickly to any improvements that the police make in delivering their service. By the same token, however, long-term strategies implemented with the aim of increasing public confidence are likely to count for little if high profile events exert a ‘short-sharp shock’ to confidence. Given that policy makers and the police tend to respond to aggregate rather than individual opinion, these findings, which focus upon population rather than individual level estimates, also imply that the police need to focus heavily upon tackling anti-social behaviour, physical disorder and neighbourhood crime to increase feelings of safety and security. Moreover, ensuring that the public are kept well informed about crime and the work that the police are doing to fight crime may go a long way to dismantling any incorrectly held assumptions about the crime rate and the effectiveness of police work.

The inconsistencies between the results of this study and those of cross-sectional studies, regarding the null relationship between confidence in the police and perceptions of social cohesion, informal social control and worry about crime, cannot be taken as invalidating the evidence that has been acquired from such cross-sectional surveys. It is commonly observed that we should not necessarily expect aggregate level relationships to hold at the individual level, for this would be to indulge in the so-called ‘ecological fallacy’ (Robinson 1950), and it may well be that the causal mechanisms operating at each level are very different. However, it is well known that the static nature of cross-sectional data renders it highly problematic for drawing
causal inferences. Consequently, in cases where a putative cause from a cross-sectional analysis becomes non-significant when scaled up to the population aggregate level, it may indicate that the cross-sectional relationship is not robust. On the other hand, where a proposed causal variable is a strong and significant predictor at both the individual and aggregate levels, as is the case for neighbourhood disorder and the perceived crime rate, it strengthens the evidence in support of the hypothesised mechanism.

Finally, it is essential to note that the variables included in this analysis were determined as much by their availability in the data set as by theory. Other key exogenous variables, such as police visibility, procedural justice evaluations, police-community engagement and media coverage of the police, to name but a few, would likely have made valuable contributions to explaining variability in confidence in policing over time given their importance at the cross-sectional, individual level. Perhaps over the coming years a time-series of these variables will develop and be made available to analysts, but, in the meantime, it points to the need for survey researchers to bear in mind how the changes they make to questionnaires over numerous survey sweeps hinders research, limiting the use of data and the findings that can be drawn.

While such data is not available over time, cross-sectional survey data has been collected that can take account of the effects that police strategy and police effectiveness have on public confidence in the police. The next chapter will analyse this data, examining how the principles behind neighbourhood policing, a strategy introduced in England and Wales over the last five years, might effect individuals' (rather than aggregate level) confidence, as well as examining the influence of perceptions of police effectiveness, the extent to which the police are thought to engage with local communities and perceptions that the police act with procedural justice. While the use of cross-sectional data increases the likelihood of identifying relationships that are endogenous, making it difficult to make any strong causal claims, unlike time series data it has the advantage of allowing differences between individuals to be taken into account, rather than treating the population as a homogenous group.
Chapter 5: Does Neighbourhood Policing Increase Public Confidence in the Police?

5.1 Introduction

The literature has identified a variety of robust indicators that are associated with public confidence in policing. These can be crudely summarised as the extent of crime, direct contact with the police, knowledge and sources of information about the police and perceptions of local neighbourhoods regarding the degree of low-level disorder and more emotive concerns about social cohesion and informal social control. However, while the police play a role in creating these conditions, there is less research and evidence that has examined how the strategies and activities of the police can influence citizen opinion of the service. Nevertheless, 'neighbourhood policing' has been introduced in the UK over the last five years (described in Chapter 1), which advocates the implementation of specific police strategies in order to raise public confidence in the police, as well as to reduce anti-social behaviour, worry about crime and perceptions of crime and disorder (Quinton and Morris 2008).

The limited academic research that has been conducted in this area was outlined in Chapter 2. In sum, a few quantitative studies have taken the influence of police visibility into account and concluded that those who see police officers patrolling more often are more confident in the police (Hawdon and Ryan 2003; Bradford et al. 2009a; Skogan 2009) and that confidence is higher among those who are familiar with local police officers (Reisig and Parks 2000), while qualitative work explains that local residents strongly emphasise a desire for a dedicated, well-known 'local bobby' embedded within their community, watching over the local area and ensuring law and order (Girling et al. 2000). Others have looked at the ways in which the police work with local communities, revealing that respondents who believe the police are responding to the needs of their local community and working with local residents to prevent crime tend to be more confident in the police (Weitzer and Tuch 2005b; Myhill and Beak 2008; Jackson et al. 2009), as are those who are kept informed of police activity with newsletters (Hohl et al. 2010). The remaining evidence regards
police encounters with the public, with research emphasising the negative effect that contact with the police can have upon confidence (Fitzgerald et al. 2002; Skogan 2006; Myhill and Beak 2008; Bradford et al. 2009a) and the importance of the police acting with respect and fairness in all exchanges with the public (Tyler and Huo 2002; Tyler 2004; Jackson and Sunshine 2007).

Despite the limited evidence, it is assumed that neighbourhood policing will increase confidence in the police by establishing a visible, accessible and familiar neighbourhood policing team in every area of England and Wales and by emphasising problem-orientated policing, engaging with communities to tackle the problems that are of importance to them and keeping them informed of police efforts (HMIC 2008; Bullock 2010). This chapter aims to empirically test these assumptions and add to the evidence base concerning the influence of police activity and strategy on public confidence in policing.

I first review the evidence that has looked at the effects of similar policing strategies upon public confidence, evidence which has come from evaluating police trials and initiatives, before introducing structural equation modelling, a more advanced and rigorous statistical method than the intervention evaluations have employed, to explicitly test the relationships between the underlying elements of the neighbourhood policing strategy and confidence. I also examine other well known correlates of confidence, which are themselves hoped to be improved by neighbourhood policing, exploring both the indirect impact of neighbourhood policing upon confidence through the effects it is intended to have upon worry about crime and perceptions of crime, disorder and community cohesion, as well as the direct effects of all these factors upon confidence.

5.2 The Evidence for Neighbourhood Policing

Academic work has provided some evidence to suggest that enhancing police visibility and ensuring that the police are perceived to be engaging with the community and treating members of the public with respect can increase public confidence in their service. The only other evidence for a neighbourhood policing
increasing confidence comes from evaluative studies that have examined changes in attitudes as a result of the implementation of community policing interventions.

In 1982 a number of policing strategies were implemented in Houston and Newark in the US in order to reduce perceptions of crime and disorder, reduce fear of crime and increase residents’ confidence in the police. Neighbourhood police stations were opened, residents were asked to identify local problems, newsletters containing information about crime, crime prevention and police efforts were deployed, and local areas were assigned dedicated police officers (Pate et al. 1986). Analysing survey data, collected both pre and post intervention, Pate et al (1986) showed that net of the effects of demographic characteristics and perceptions of the police pre-intervention, confidence in the police was higher in areas where the police engaged with the public and where local police officers were working to familiarise themselves with local residents and were regularly patrolling on foot. In contrast, newsletters, police community stations and intensified order-maintenance policing to tackle physical and social disorder did not appear to have significant effects upon confidence.

Neighbourhood policing has drawn heavily from the ideas and strategies of Chicago’s Alternative Policing Strategy (CAPS). CAPS assigned police officers to small beat areas, emphasised community involvement in identifying problems at the neighbourhood level and working in collaboration with local residents and partnership organisations to find solutions to these problems. Skogan and Hartnett (1997) initially evaluated the strategy over a period of 3 years between 1992 and 1995. Panel data collected just before CAPS was implemented and again one year later revealed that evaluations of the police seemed to become more favourable. The number of respondents reporting that the police were responsive to local concerns and were helping local people to solve local problems increased over the two waves of the survey. The authors also indicated that greater police visibility increased positive assessments of the police. Conversely, there were no real significant increases in positive assessments of police demeanour (regarding the degree to which they were believed to be fair, helpful and polite) as a result of the police intervention, nor in assessments of police effectiveness at fighting crime relative to assessments in control wards.
In Australia, Mazerolle et al (2003) evaluated Queensland's model of community policing, called 'beat policing', which gave individual police officers responsibility for policing their own small geographic area and implementing strategies to solve local problems and the underlying causes of crime. Survey responses to a number of questions concerning satisfaction with police-community engagement, the prevention of crime and disorder and the politeness of police officers were compared across those living in control sites and those in beat policing areas. The authors concluded that while the public supported and praised the scheme, it did not raise the proportion of overall confidence in the police above that of those in control areas.

In the UK, Bennett (1991) evaluated a programme trialled in London and Birmingham that aimed to enhance police presence on the streets and contact between residents and police officers. Using pre- and post-programme panel data, he compared mean confidence in the police both before and after the intervention, concluding that the strategy had succeeded in improving satisfaction with the police.

More recently, a number of evaluations have been carried out by the Home Office as a result of the recent emphasis in the UK upon reassurance and subsequently neighbourhood policing. This began with the National Reassurance Policing Programme (NRPP), which aimed to reduce fear of crime, reduce anti-social behaviour and increase confidence in the police by introducing visible, accessible and familiar policing teams and engaging with local communities to identify and tackle local problems (Tuffin et al. 2006). The programme was trialled in 16 wards across England between 2004 and 2005 and was evaluated by Tuffin et al (2006) using panel survey data collected in both the trial sites and across 6 control wards. The first sweep was conducted before the intervention began and the second conducted one year later. Data was only analysed from respondents who had participated in both waves of the survey, equating to around 180 respondents in each site. Using a question which asked respondents how good a job they felt their local police were doing, they found that confidence rose by 3% in the control sites, but by 15% in the trial sites. The data from the experimental wards were used in logistic regression analysis to show that confidence was higher among those whose perceptions of a number of factors had increased since the first wave of the survey, including
perceptions of regular foot patrols, of teenagers hanging around and of police efforts to find out what local people think. Conversely, improved perceptions of other indicators, including measures of perceptions of disorder, perceptions of crime, worry about crime, familiarity with the local police and perceptions of police-community engagement had no statistically significant effects upon confidence post-intervention. The reassurance policing trial was extended for a second year in four of the most successful wards and a third sweep of the survey was carried out at the end of the period. Quinton and Morris (2008) reported that the positive effect of the programme was largely sustained after this second year of the intervention.

Quinton and Morris (2008) also evaluated the Neighbourhood Policing Programme (NPP). They explained that after the success of the NRPP, the NPP was implemented between 2005 and 2008 to oversee the implementation of neighbourhood policing across England and Wales. Similarly to the NRPP, it emphasised working with communities, the introduction of familiar, accessible and visible policing teams and also the adoption of problem-orientated policing, tackling the objectives set by local communities and working with local people and partnership organisations to achieve them. The primary aim of the NPP was to increase public confidence in the police. At the beginning of this three year period, each police force chose one basic command unit (BCU) within which to concentrate early implementation efforts. Surveys were conducted both before and one year after the initial implementation of neighbourhood policing, with between 174 and 350 respondents in each of the chosen BCUs, as well as in five control BCUs. Confidence in the police was measured using a question modelled on that in the BCS, which asked how good a job the local police were doing. It revealed very few significant differences in confidence between neighbourhood policing and control BCUs. In addition to possible methodological limitations, this null finding was hypothesised to be a result of the early stage of neighbourhood policing implementation and it was argued that it was too soon for the strategy to have had an effect upon attitudes. An evaluation was also carried out at the national, rather than BCU level, but again, there was no evidence of a change in confidence. Furthermore, Mason (2009) carried out a second evaluation of the NPP one year after the initial evaluation and 2 years after the NPP was first implemented and reported that there were still no statistically significant increases in confidence in the police as a result of the strategy. Again, this was attributed to time, the intervention not having
been in place long enough to have had an effect upon assessments of the police and because some forces were making slow progress in its implementation.

5.3 Analytic Strategy

The primary aim of the neighbourhood policing strategy employed by the police over the past few years has been to increase public confidence in the police (Mason 2009). Academic writing has not tended to focus upon the effects of police strategy on public opinion of the police, but evaluations of policing trials have provided some evidence for the neighbourhood policing approach. Nevertheless, this evidence is not conclusive, some studies finding that the community policing intervention had succeeded in increasing confidence (Pate et al. 1986; Skogan and Hartnett 1997; Tuffin et al. 2006), while others found no evidence to suggest that the strategy had any such effects (Mazerolle et al. 2003; Quinton and Morris 2008; Mason 2009). Moreover, Skogan and Hartnett (1997) produced a mix of positive and null findings depending upon the measure of confidence that was used, while both Pate et al (1986) and Tuffin et al (2006) concluded that it was only specific elements of policing strategy that worked to increase confidence in the police, with other facets having no effect. These diverse findings imply that it is necessary to look more closely at exactly which elements of neighbourhood policing might influence public confidence in the police and exactly which elements of confidence it is that neighbourhood policing is affecting.

All of the evaluative studies rely on panel survey data, interviewing residents before the policing program was introduced and then again after the strategy had been in place for a period of time. As such, it is possible that respondents were more attuned to the police, and more aware of crime and disorder after the first wave of surveying, which may have influenced their responses in the second wave. Consequently, it may be that the results of these studies cannot be generalised to a wider population (Skogan 2009). In addition, most of the evaluations relied upon simple statistical methods, such as comparing means or proportions of confidence across survey waves or control and test areas. While this can reveal whether of not levels of confidence have changed over the course of the intervention, such experimental approaches can
tell us little about why these changes may or may not have occurred. Tuffin (2006) did conduct some regression analysis in this vein (reported above), but used pre and post intervention panel data, employed just a single measure of confidence as the outcome variable and used measures of police-community engagement as independent variables that are actually often used as outcome variables to measure a specific aspect of confidence in policing (see Bradford et al. 2009a; Jackson et al. 2009; Stanko and Bradford 2009).

The analysis presented below uses cross-sectional survey data to examine the complex mechanisms that might underpin people’s confidence in the police, explicitly testing the assumptions behind neighbourhood policing. This will reveal whether police visibility and familiarity, police-community engagement and keeping the public informed about police activity does in fact influence confidence in the police, as well as whether it can influence perceptions of crime and neighbourhood conditions, the other secondary aims of neighbourhood policing (Mason 2009). However, given that these secondary factors have themselves been identified as drivers of confidence in the police, the effects of worry about crime and perceptions of crime, disorder and collective efficacy upon confidence will also be taken into account. In so doing, the direct effects of neighbourhood policing and perceptions of crime and neighbourhood upon confidence can be examined, as well as the indirect effects that neighbourhood policing might have on confidence through its impacts upon perceptions of crime and neighbourhood.

Chapter 2 summarised discussions regarding the meaning and measurement of confidence; whether it should be measured with an overall, global measure, or whether it should be split into more specific elements of support for the police, as well as whether trust and confidence are distinct or interchangeable concepts. While research in this area is limited, it has been suggested that confidence is a ‘fuzzy’ concept (Worrall 1999), such that it is inadequate to consider it as a single ‘thing’, since the police have a multiplicity of roles that the public may think differently about in terms of their effectiveness at performing those roles (Worrall 1999; Fitzgerald et al. 2002; Bradford et al. 2009a; Stanko and Bradford 2009). Taking these arguments into account, I shall use a number of measures of confidence in policing in this analysis.
Bradford and colleagues (Jackson et al. 2009; Stanko and Bradford 2009), who used data collected from an earlier sweep of the same survey as that which will be used in this analysis, specified a model that examined the effects of a number of covariates on three measures of, what they term, ‘trust’ in police fairness, effectiveness and community engagement, which, in addition to perceptions of disorder, were hypothesised to be causes of an overall measure of confidence in the police as a whole. I shall follow this model in my analysis, with two exceptions. Firstly, while many researchers use survey measures of confidence that mention neither the word ‘trust’, nor ‘confidence’, the question set from which Bradford and colleagues draw their indicators of trust in the police does not mention the word ‘trust’, but does include a question containing the word ‘confidence’. My intention in this chapter is not to untangle whether or not ‘trust’ and ‘confidence’ capture different thoughts, ideas and attitudes, but if they are in fact distinct concepts, it seems unreasonable to assume that these questions are measuring trust as opposed to confidence. Consequently, I shall refer to these three factors as ‘confidence’ rather than ‘trust’ in police fairness, effectiveness and community engagement. Secondly, the analysis will extend their work to examine whether it is just the three measures of specific confidence and perceptions of disorder that have a direct effect upon confidence in the police as a whole, as they assumed, or whether other explanatory variables might also influence the overall measure.

Figure 5.1 diagrammatically presents these hypothesized relationships. The arrows running from the four neighbourhood policing variables (at the far left of the diagram) depict the direct effects that they are hypothesized to have upon the four elements of confidence in the police, as well as perceptions of crime and perceptions of neighbourhood conditions, while the paths running from worry about crime and perceptions of crime, disorder and collective efficacy, show the direct effect they themselves are hypothesized to have upon confidence in the police. The diagram also shows how neighbourhood policing might have an indirect effect upon confidence, first working to influence perceptions of crime and neighbourhood, which themselves, in turn, might influence opinion of the police.
While Figure 5.1 proposes patterns of causal ordering, given the use of perception measures and the static cross-sectional nature of the survey data that will be used to test this model, it is difficult to make any strong causal claims. Undertaking a cross-sectional study requires the researcher to hypothesise which of the variables are the explanatory variables and which is the response variable. While much research has made the assumption, as I have done here, that it is confidence in the police that is this outcome variable, it is possible that the causal direction of some relationships sit in reverse. For example, while a relationship might exist between worry about crime and confidence in the police it could actually be that a lack of faith in the ability of the police causes people to be fearful of crime, rather than fear of crime causing scepticism of police competence (Skogan 2009). However, it is difficult to determine the direction of any relationships that are uncovered without the use of time series or panel data (which would reveal whether a change in one variable preceded a change in another at a later point in time) (Sanders and Ward 1994), or the use of explanatory variables that are measured independently of survey responses to the dependent.
variable (for example, while it is possible that a respondent's perception of crime is caused by their confidence in the police, it is exceedingly unlikely that an individual's confidence could cause an increase in the recorded crime rate) (Sampson and Raudenbush 1999; Sampson and Raudenbush 2004).

5.4 Data and Method

5.4.1 Structural Equation Modelling

To examine the relationships between neighbourhood policing and confidence in the police, structural equation modelling (SEM) was employed. This is an analytical method, which can examine relationships not only between manifest (observed) variables, but also between latent variables using observed data. Latent variables, such as fear of crime, are hypothetical constructs that are believed to exist, but have no physical presence and cannot be directly observed. Since these concepts tend to be multi-faceted, SEM measures them using a number of observable indicators. In sum, SEM tests both the extent to which observed indicators can be said to measure latent concepts and also, simultaneously, tests relationships between the latent and manifest variables. Consequently, it can be understood as a method incorporating both confirmatory factor analysis (CFA), since researchers specify \textit{a priori} the latent constructs they hypothesise lie behind specified observed indicators, and regression analysis (Maruyama 1998; Loehlin 2004; Schumacker and Lomax 2004). As such, it may be more beneficial than more basic statistical techniques, such as simple linear regression, as it accounts for measurement error when estimating relationships between variables. Additionally, the path analysis component of SEM can examine relationships between multiple independent and dependent variables to test complex theory, estimating many regression equations simultaneously and calculating both the direct effect one variable has on another, as well as the indirect and total effects it might have through an intervening variable. For example, variable $x_1$ might have a direct effect upon $x_2$, but both $x_1$ and $x_2$ might also be directly related to $x_3$. As such, $x_1$ will have a direct effect on $x_3$, but also an indirect effect, through its effects on $x_2$. The indirect effect is calculated by multiplying the coefficients of the paths running between $x_1$ and $x_2$ and between $x_2$ and $x_3$, while adding this product to the direct effect of $x_1$ on $x_3$ gives the total effect of $x_1$ on $x_3$ (Maruyama 1998; Schumacker and Lomax 2004).
This feature enables the analysis of the complicated set of relationships that are hypothesised to exist between neighbourhood policing, perceptions of crime and neighbourhood, and confidence in the police.

SEM employs slightly different terminology than classical regression analysis, precisely because it can take into account multiple 'dependent' variables. Exogenous variables are those that might otherwise be referred to as independent variables, since they are not thought to be caused by variables within the model. Endogenous variables, on the other hand, are those which are thought to be caused by other variables in the model, but, unlike dependent variables in more simplistic statistical techniques, endogenous variables may also be the cause of other endogenous variables in the model (Loehlin 2004). In addition, like path analysis, SEM uses graphical symbols to represent statistical models. All latent variables are represented as ellipses and observed indicators as rectangles. Correlations are shown as double headed arrows, while regression paths are shown as single headed arrows. Each endogenous variable also has an associated error, or disturbance term, which corresponds to the remaining variance in the variable that is not explained by its explanatory variables. Since structural equation models can estimate relationships between latent constructs, each measured by a number of observed indicators, each of these indicators also has an associated error term. This corresponds to the unexplained variance that cannot be accounted for by its latent variable, which explains how SEM accounts for measurement error, as each factor contains only the 'true score' and not the error of each of its indicators (Maruyama 1998).

SEM uses the variance-covariance matrix of observed data to estimate model parameters. In specifying a model, the researcher places constraints upon specific parameters that are hypothesised to generate the observed covariance matrix. This observed covariance matrix is then compared to that implied by the constrained model. If there is a discrepancy between the two, beyond that due to sampling error, then the theoretical model has been misspecified (Byrne 2010). SEM can be implemented with a variety of different estimators, but the most widely used (and the estimator that will be used in the analysis presented in this chapter) estimates parameters using maximum-likelihood estimation. This iterative procedure produces estimates that maximise the likelihood that the observed variances and covariances
were drawn from a population that is assumed to be the same as that inferred by the implied variance-covariance matrix. The iterative procedure aims to ‘improve’ on each previous set of estimates to ensure that the overall fit of the model to the observed data is enhanced (Kline 2005).

Before the overall fit of the model can be tested, the model must be ‘over-identified’, meaning that there must be more known information available (from the variances and covariances of observed variables) than unknown parameters that need to be estimated. Once this is achieved, the overall fit can be estimated using Chi Square, where a non-significant Chi Square indicates that there is little difference between the observed and implied covariance matrices, indicating that the model is a good fit. However, Chi Square is sensitive to sample size, with large samples tending to produce significant Chi Square values (Maruyama 1998; Loehlin 2004; Schumacker and Lomax 2004). Consequently, other approximate fit statistics are also recommended, such as the Comparative Fit Index (CFI), which should be equal to or greater than .95, and the Root Mean Squared Error of Approximation (RMSEA), which should be equal to or less than .08 (see, Hu and Bentler 1999), both of which will be used in this analysis.

5.4.2 Data

The data for use in this analysis were taken from the Metropolitan Police Service (MPS) Public Attitudes Survey (PAS) carried out between April 2008 and December 2009 by mrruk, a market research agency. The survey was developed to assess people’s attitudes to policing across the 32 London boroughs in the MPS district, fielding questions regarding perceptions of neighbourhood, crime and fear of crime, attitudes toward the police, and experiences of crime and police contact. As such, it is similar to the BCS, but asks a broader range of questions regarding attitudes toward the police, which are of particular importance to this analysis in trying to distinguish between various facets of confidence in the police. Data were collected from 160 residents in each borough every quarter, providing a dataset comprising responses from 35,840 face-to-face structured interviews. Respondents were selected using systematic random sampling, randomly selecting addresses from the Postcode
Address File and then selecting an adult (aged 15 or over) for interview at each address on a random basis using the ‘next birthday rule’ (mruk 2008).

5.4.3 Derivation of variables

The CFA component of SEM accounts for measurement error by using a number of indicators to measure latent constructs. The indicators used to measure the concepts comprising neighbourhood policing, as well as perceptions of crime, disorder and cohesion, worry about crime and confidence in the police were all taken from the PAS and are described below. All indicators were measured on a four, five, or seven point ordinal scale, or were dichotomous in nature, ensuring that they were suitable for use in SEM (Schumacker and Lomax 2004). A table indicating precise question wordings and answer scales can be found in Appendix C.

Confidence in the Police

Following the findings of Jackson et al (2009) and Stanko and Bradford (2009), who also used the PAS in their studies, confidence in the local police and trust in the police (or components of confidence, as I prefer) were measured separately, since each component has been found to respond differently to the same explanatory variables. Overall confidence in the police was measured using one variable, which asked, “Taking everything into account, how good a job do you think the police in this area are doing?”.

Three latent variables were also constructed to measure the extent to which respondents had confidence that the police were effective, working towards the needs of the community and conducting themselves properly. Perceptions of police conduct were measured with four variables, which asked to what extent respondents agreed that the local police “treat everyone fairly regardless of who they are”, “are helpful”, “are friendly and approachable” and whether they “would treat you with respect if you had contact with them for any reason”. To measure perceptions of police effectiveness, indicators were used which asked how well respondents believed the MPS “responds to emergencies”, “tackle gun crime”, “tackle drug dealing and drug
use”, “tackle dangerous driving”, and how well they “support victims and witnesses”

Finally, perceptions of police-community engagement were measured by respondents’
answers to questions which asked to what extent respondents agreed that the local
police “listen to the concerns of local people”, “are dealing with the things that matter
to people in this community” and whether the police “understand the issues that affect
this community”.

Police Familiarity, Visibility and Accessibility
The PAS only included one appropriate measure of police familiarity (‘Do you know
a local police officer?’, which was recoded from ‘yes, by name’, ‘yes, by sight’ and
‘no’ into a dichotomous yes/no variable). To measure police visibility, an additive
scale derived from two variables was created, one of which concerned the frequency
of sightings of police on foot and bicycle in the local area and the other the frequency
of police in cars in the local area (r = .64, p=.001). A latent measure of police
visibility was not considered appropriate, since one cannot assume that an underlying
idea of police visibility causes the reported frequency of sightings of both police on
foot/bicycle and in vehicles. For example, if an individual reports seeing police on
foot, it cannot be assumed that they are also more likely to see them in vehicles. In
addition to police familiarity and visibility, neighbourhood policing also emphasises
accessible policing. While the PAS does include a measure of police accessibility, it
is asked within a series of questions regarding attitudes toward the police, many of
which have been used to measure perceptions of police conduct, effectiveness and
engagement with the community. Consequently, it is likely that perceptions of police
accessibility, which would be used as an explanatory variable, would be highly
correlated with the measures of confidence in policing, so a measure of police
accessibility was not included in the model.

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4 Stanko and Bradford (2009) also included measures of how well the MPS were thought to prevent
terrorism and police major events in their latent variable of police effectiveness. They are not included
here as, similarly to Stanko and Bradford, I found that their factor loadings were not as high as those
for the other indicators and that their inclusion lowered model fit statistics. In addition, how well the
MPS were thought to provide a visible patrolling presence was also excluded on account of the fact that
it is a very similar question to that measuring the concept of ‘police visibility’, so was likely to be
highly correlated.
Citizen Engagement with the Police

Another of the core elements of neighbourhood policing is to ensure that the police are engaging with local communities, which, in turn, is hoped to increase confidence. Therefore, we might expect those who had had some form of involvement with local police to have greater confidence than those who have not. A dummy variable was created to indicate whether each respondent had engaged with the police in any of the following ways: attended a neighbourhood policing residents’ meeting, taken part in a neighbourhood policing resident survey, visited a neighbourhood policing market stall, contacted their local neighbourhood policing team, attended a local meeting with a police presence, or chatted to local officers.

Knowledge of Crime and Policing

A latent variable of respondents’ knowledge of the local police and crime was also specified using two indicators which asked respondents how well informed they felt about “the levels of crime in your local area” and about “what the police in this area have been doing over the last 12 months”.

Perceptions of Disorder and Crime and Worry about Crime

Following Sampson and Raudenbush’s (1999) findings, perceptions of disorder were measured using a series of questions asking how much of a problem respondents considered each of the following to be: rubbish and litter, vandalism and graffiti, use and dealing of drugs, teenagers hanging around and people being drunk and rowdy in public places. They also found that vacant housing should be included in this list, but unfortunately this was not incorporated in the MPS questionnaire.

Perceptions of crime were gauged using a single indicator which asked respondents how much they thought the crime rate in their area had changed over the previous two years. Worry about crime was hypothesised to underlie indicators regarding how worried respondents were about being burgled, being physically attacked by strangers, being mugged and robbed and being insulted or pestered (Robinson et al. 2003). However, the factor loading of the indicator measuring burglary was considerably smaller than the loadings of the other three indicators, so was removed from the model, improving the approximate fit estimates. It is possible that this was because
the question concerned property crime, while the other three indicators regarded crimes against the person.

**Perceptions of Social Cohesion and Informal Social Control**

Perceptions of social cohesion and informal social control were originally specified as separate latent constructs, but structural models revealed evidence of multicollinearity, informal social control appearing to have negative effects upon confidence in the police, which was unexpected given previous research and, more specifically, previous research that had used data from the PAS (see Jackson et al. 2009). Consequently, the indicators measuring these two concepts were pulled together to measure one underlying latent variable called ‘perceptions of collective efficacy’ (Sampson et al. 1997). Its seven indicators regarded the extent to which neighbours from different backgrounds get on with each other, whether neighbours can be trusted, whether neighbours are courteous, whether local people and authorities have control over the neighbourhood, whether neighbours look after their local environment, whether they would help if they sensed trouble and whether they would call the police if someone were acting suspiciously.

**Socio-Demographic Variables**

Empirical studies have identified a number of socio-demographic characteristics that are important in the production of confidence in the police. A number of dummy variables were created to account for these, controlling for the effects of working status, marital status, ethnic origin, age, gender and whether or not the respondent had been a victim of crime. In addition, an ‘ACORN’ (A Classification Of Residential Neighbourhoods) variable was included to control for the geographical area in which respondents lived. ACORN classifies a neighbourhood on a scale of 1-56, where higher scores signify poorer, less desirable areas and lower scores indicate richer, more desirable areas. While not the focus of this study, research has also revealed the impact that citizen contact with the police can have on confidence. Therefore, two dummy variables were created, one of which captured those who were satisfied to some extent with contact they had had with the police as a result of asking for information, being a victim, a witness, or having been arrested, or for an ‘other’ reason, and the other variable captured those that were dissatisfied to some extent with the contact they had had with the police during the same instances.
All ‘don’t know’ and ‘refused’ responses were coded as missing, but full information maximum likelihood (FIML) was employed in estimating the structural equation models, an estimation procedure which uses all observed data values in estimation, reducing bias and increasing efficiency (Wothke 1998). The following SEM analysis was carried out using the computer program AMOS 6.0.

5.5 Results

The structural equation model presented below examines the effects of neighbourhood policing on perceptions of neighbourhood and crime and upon confidence in the police, as set out in Figure 5.1. Each of the exogenous control variables were allowed to correlate with one another and have a direct effect on all the factors in the model. The disturbance terms of mediating variables were also allowed to correlate (these correlations capture interrelationships between the mediators that are over and above those that are due to their common causes (Schumacker and Lomax 2004), but none of these correlations are shown in Figures 5.2-5.5 in order to provide a clearer presentation of the results. Also note that Figures 5.2-5.5 only present paths and coefficients that were statistically significant (p=<.05).

The overall fit statistics showed that the structural equation model, outlined in Figure 5.1, fits reasonably well according to the CFI (.95) and RMSEA (.03) approximate fit indices, both falling within the bounds recommended by Hu and Bentler (1999). In total, the socio-demographic control variables and the four neighbourhood policing factors were able to explain 8% of the variance in perceptions of crime, 8% in worry about crime, 6% in perceptions of disorder and 13% in perceptions of collective efficacy. In turn, all these variables explained 37% of the variance in confidence in police conduct, 40% in police-community engagement and 36% in confidence in police effectiveness. Finally, the amount of variance explained in general confidence in the police by all the variables in the model was 42%, a considerable amount for a social science study (Stanko and Bradford 2009). These and the rest of the model results are presented below. While all effects were modelled simultaneously, to
provide a clearer presentation, the effects of each of the policing variables upon the outcomes of neighbourhood policing are presented separately in Figures 5.2-5.5.

Before examining the effects of neighbourhood policing upon confidence, it is worth briefly considering the control variables. They have been excluded from Figures 5.2-5.5 for visual ease, but their effects are tabulated in Appendix F. The effects of these variables are generally in line with previous research. Women were more confident than men and those over 59 years of age tended to have more confidence in the police than those under 60. Those in full and part time employment were more confident than students or those who were unemployed, while White and Asian respondents seemed to have more favourable attitudes toward the police than those of different ethnic origins.

However, while dissatisfactory contact with the police reduced confidence in all four components, satisfactory contact increased confidence in all but the overall measure of confidence in the police. This is somewhat contrary to the findings of Skogan (2006), who revealed that positively rated contact with the police had no effects upon confidence, while Bradford et al (2009a) showed that satisfactory contact only had positive effects upon assessments of police conduct and community engagement and only when it was citizen, rather than police initiated contact, a distinction that I have not made in this analysis.

While most research concludes that victimisation has a negative effect on confidence, Bradford et al (2009a) revealed that victimisation actually had a positive effect upon confidence in police conduct, a finding corroborated by the results of this study, although I also find a positive association between victimisation and confidence in police effectiveness. Despite this, victims of crime remained less confident in the police overall, although the results do suggest that the effect of victimisation on confidence is not necessarily wholly negative.
In line with Figure 5.1, the effects of the four components of neighbourhood policing upon the hypothesised outcomes were modelled simultaneously. However, to ensure that the presentation of results is clear, I show the effects of each of these four components separately, beginning with visible policing in Figure 5.2. As expected, police visibility has an effect upon all the intended outcomes of neighbourhood policing. It is a strong predictor of confidence in the police, particularly on confidence in police effectiveness, with a standardised effect of .42, and has the largest effect of all the neighbourhood policing variables on all aspects of confidence (shown in Figures 5.3-5.5). Police visibility also works to decrease perceptions of and worry about crime and increase perceptions of collective efficacy. Unexpectedly,
however, a one standard deviation rise in police visibility increases perceptions of disorder by .08 of a standard deviation. However, rather than being an indication that the visible presence of police officers produces concern about levels of disorder, this association could indicate that police officers are more likely to patrol areas with high levels of disorder.

As hypothesised and in concurrence with prior research findings (see, for example, Cao et al. 1996; Weitzer and Tuch 2005b; Myhill and Beak 2008; Jackson et al. 2009), the latent variables measuring perceptions of crime and neighbourhood conditions have some effects upon confidence in the police themselves. Of these four perception variables, perceptions of crime had the strongest effect upon overall confidence in the police, with a standardised estimate of -.07, indicating that those who think crime is increasing have less confidence in the police as a whole. The latent variable measuring perceptions of crime has similar negative effects upon confidence in police conduct and police-community engagement, but it is not a statistically significant predictor of confidence in police effectiveness. In contrast, worry about crime does work to lower confidence in police effectiveness and, to a lesser degree, confidence in police conduct, but it has no effects upon confidence in police-community engagement, or overall confidence in the police. Jackson et al (2009) found similar results, providing evidence to suggest that once the negative effects of perceptions of disorder and positive effects of social cohesion and informal social control had been taken into account, such ‘instrumental’ concerns about crime and risk were far less important in shaping confidence in the police. Indeed, perceptions of disorder had a negative effect upon all four of the confidence latent measures, but is a particularly strong predictor of confidence in police effectiveness, every one standard deviation increase in perceptions of disorder reducing confidence in police effectiveness by .20 of a standard deviation. Similarly, perceptions of collective efficacy has positive effects upon confidence in police effectiveness and overall confidence in the police and is a very strong predictor of confidence in police conduct and police-community engagement, with standardised coefficients of .42 and .41 respectively.

Figure 5.2 also shows the effects of the components of confidence upon overall confidence in policing. The model reveals that confidence in police conduct has the
largest effect upon the general measure of confidence with a standardised coefficient of .27, while confidence in police-community engagement and effectiveness also have positive, although slightly smaller effects (.13 and .19 respectively). Employing data from an earlier sweep of the PAS than this analysis, Jackson et al (2009) used these same four measures of confidence in their study of public confidence in the police, as well as many of the same latent variables regarding perceptions of crime and neighbourhood. However, they found that confidence in police conduct (or trust in police fairness, as they chose to label their same latent construct) had a negative effect upon overall confidence, which is contrary to my findings and to the work of Tyler (2001a; 2005) who suggested that procedural justice evaluations would improve overall evaluations of the police. In trying to identify the discrepancy between our results, I excluded the two variables that control for contact with the police from the model and found a similar negative effect to that reported by Jackson et al (2009). It is not clear whether or not Jackson et al (2009) controlled for contact with the police, or any other socio-demographic indicators, but if not, it is possible that their measure of confidence in police conduct (which refers to expectations regarding whether the police will act with respect and fairness and will be friendly and helpful) was picking up the negative effects that would otherwise have been attributed to dissatisfactory contact with the police.
To reiterate, the effects of the four components of neighbourhood policing upon perceptions of crime and neighbourhood conditions and on confidence in the police were modelled simultaneously, but, for clarity, they are presented separately. As such, the results shown in Figure 5.3 are the same as those in Figure 5.2 with the exception that it presents the direct effects of police familiarity, rather than police visibility. Police familiarity has the hypothesised effect of reducing perceptions of crime and disorder and increasing perceptions of collective efficacy, while also directly increasing confidence in police conduct and police-community engagement. Contrary to the expected outcomes of neighbourhood policing, knowing a police officer by name or by sight is associated with an increase in worry about crime, a reduction in confidence in police effectiveness and a slight reduction in overall confidence in the job that the local police are doing. However, it is possible that it is
not the case that knowing a police officer instils greater worry about crime and less confidence in the police, but instead that those who are worried about crime, or lack confidence in the police are those that are more likely to know a police officer. For example, they may have sought a police officer out to discuss their concerns about local crime issues and policing in their area.

Figure 5.4: The Effects of Engaging with Police upon Public Confidence in Policing

Engagement with the police also has mixed effects upon these outcomes, shown in Figure 5.4. Those that have engaged with the police are likely to perceive greater collective efficacy in their area and are less likely to think that crime is increasing. Engagement is also positively associated with three elements of confidence; those who have engaged with the police report higher levels of confidence in the police
overall and are more likely to have confidence that the police are working with local communities and conducting themselves in a friendly, respectful, fair and helpful manner.

Net of the effects of any satisfactory or dissatisfactory contact with the police or victimisation, having engaged with local police officers or neighbourhood policing teams appears to be positively associated with perceptions of disorder and worry about crime, and negatively associated with confidence in police effectiveness. While Figure 5.4 suggests a pattern of causal ordering, specifically that engaging with local police officers ‘causes’ perceptions of disorder, worry about crime and confidence in police effectiveness, it may be the case that associations between these variables indicate that those who are worried about crime and disorder and those who lack confidence in police effectiveness are more likely to have engaged with police officers.
Figure 5.5: The Effects of Self-Assessed Knowledge of Crime and the Police upon Public Confidence in Policing

Neighbourhood policing aims to keep local people informed about local crime and the activities of the police; the effects of such knowledge are shown in Figure 5.5. Those who feel informed about crime and policing are likely to perceive less crime and disorder in their area, have fewer worries about becoming victim to crime and perceive greater levels of collective efficacy in their neighbourhood. In fact, of the four elements of neighbourhood policing measured here, self-assessed knowledge of crime and policing has the largest impact upon perceptions of collective efficacy, with a standardised coefficient of .15. Self-assessed knowledge is also positively associated with confidence in police effectiveness and overall confidence in the police, implying that the more information people are given about the police and
crime, the more likely they are to have confidence that the police are doing a good job. Nevertheless, counter to the hypothesis behind neighbourhood policing, it has no statistically significant effects upon confidence in police conduct, or confidence that the police are engaging with the local community.

Table 5.3: Standardised Total Effects

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<tbody>
<tr>
<td>Confidence in police conduct</td>
<td>.22*</td>
<td>.11*</td>
<td>.12*</td>
<td>.06*</td>
<td>-.06*</td>
<td>-.02*</td>
<td>-.04*</td>
<td>.42*</td>
</tr>
<tr>
<td>Confidence in police-community engagement</td>
<td>.24*</td>
<td>.09*</td>
<td>.13*</td>
<td>.08*</td>
<td>-.09*</td>
<td>-.004</td>
<td>-.08*</td>
<td>.41*</td>
</tr>
<tr>
<td>Confidence in police effectiveness</td>
<td>.45*</td>
<td>-.04*</td>
<td>-.04*</td>
<td>.11*</td>
<td>-.001</td>
<td>-.10*</td>
<td>-.20*</td>
<td>.10*</td>
</tr>
<tr>
<td>Overall Confidence in local policing</td>
<td>.28*</td>
<td>.02*</td>
<td>.09*</td>
<td>.07*</td>
<td>-.10*</td>
<td>-.02*</td>
<td>-.07*</td>
<td>.21*</td>
</tr>
</tbody>
</table>

*p < .05

In addition to the direct effects that have been described, the total effects of all the explanatory variables on confidence in the police can be calculated by summing the coefficient of the direct path with the product of all the indirect paths. These are shown in Table 5.3. Examining the standardised effects enables comparisons to be made across these variables. Column 2 shows the total effects of police visibility upon the three specific components of confidence in the police, as well as the general measure. Of the four neighbourhood policing variables it appears to have the largest effect upon all elements of confidence. Its standardised effect size of .43 on confidence in police effectiveness is particularly large. This comes directly from police visibility itself, as well as indirectly via its effects on perceptions of crime, disorder, collective efficacy and worry about crime. Perceptions of disorder also plays a large part in producing (or, more specifically, reducing) confidence in police effectiveness, although its effect is still less than half that of police visibility. Of note is that the direct effect of police familiarity on overall confidence, shown in Figure 5.3, was negative, but the total effect, which also takes into account its indirect effects through its influence on the mediating variables, is still small, but positive, indicating that this element of neighbourhood policing can have a positive impact upon
confidence. Similarly, self-assessed knowledge of crime and policing had no statistically significant effects upon confidence in police conduct, nor confidence in police-community engagement, but does have significant total effects, highlighting the importance of examining the indirect as well as the direct effects of these variables.

Perceptions of collective efficacy has the greatest single influence on both confidence in police conduct and police-community engagement, holding all other variables constant. The standardised effect sizes are .42 and .41 respectively, which is nearly twice that of the effects of police visibility and far greater than the effects of the explanatory or intervening variables. This means that the degree to which people feel their local neighbourhood is cohesive and that informal social control mechanisms are engaged is crucial in determining their confidence in these specific components of confidence in the police.

Police visibility has the largest total effect upon overall confidence in policing, although perceptions of collective efficacy also plays a large role. In fact, highlighting its importance to confidence in the police further, the total effect of police visibility on overall confidence is larger than even the direct effects of any of the three components of confidence. Similarly, the total effect of perceptions of collective efficacy on the overall confidence measure is larger than the direct effects of confidence in police-community engagement and police effectiveness.

In general, the total effects of all the explanatory variables follow a similar pattern to their direct effects and tend to confirm the hypothesised model regarding neighbourhood policing and its outcomes. In line with much prior research, perceptions of disorder and to a lesser extent, perceptions of crime and worry about crime have negative effects upon confidence in the police, while perceptions of collective efficacy work to increase confidence. On the whole, the strategies behind neighbourhood policing do appear to have positive effects upon public confidence in the police, although this varies according to the specific facet of neighbourhood policing that is examined and the component of confidence that is measured; those elements of neighbourhood policing that involve some form of contact with the
public, specifically police familiarity and engagement, having negative direct and total effects upon confidence in police effectiveness.

5.6 Discussion

Neighbourhood policing was introduced in the UK over the last few years with the express intention of improving public opinion of the police. Through the introduction of visible, familiar and accessible policing teams that work with local communities, keep them informed of policing efforts and take a problem-oriented approach, it was hoped, primarily, that public confidence in the police would increase, but also that anti-social behaviour, worry about crime and perceptions of crime and disorder would be reduced (HMIC 2008; Quinton and Morris 2008; Mason 2009; Bullock 2010). However, there is little evidence to support such a hypothesis, particularly from academic investigations. Evaluations of policing trials have provided some indications of success, but such experimental approaches were designed to investigate whether interventions produced a change in attitudes, rather than to explore why such changes might have occurred. Their mixed conclusions illustrate the need to explore the mechanisms underpinning such changes, examining exactly what it is about community policing strategies, such as neighbourhood policing, that might increase public confidence in the police and what aspects of confidence in police work and behaviour they will succeed in increasing.

This chapter has explicitly tested the assumptions behind neighbourhood policing to determine whether or not police visibility and familiarity, engaging with the public and keeping them informed of crime and policing news can serve to increase confidence in the police and reduce perceptions of crime and risk. In addition, it has added to the measurement model of public confidence in policing put forward by Bradford and colleagues (Jackson et al. 2009; Stanko and Bradford 2009). Rather than proposing that explanatory factors will only have effects upon perceptions of police conduct, police-community engagement and police effectiveness, which will then, in turn, drive overall evaluations of confidence in the police as a whole, I explored whether neighbourhood policing and other putative causes also have direct effects upon the overall, general measure of confidence. The findings show that, on
the whole, the strategies behind the neighbourhood policing initiative are associated with higher confidence in the police and more positive perceptions of neighbourhood conditions and crime, although there are some specific exceptions to this general conclusion. Significantly, the results also indicate that in addition to the specific elements of confidence and perceptions of disorder, other explanatory variables also have direct effects upon the overall, general measure of confidence.

The public have consistently called for more visible policing on the streets (Fitzgerald et al. 2002; Roberts and Hough 2005), a return to a time when the police were integrated within the community and a known figure offered a visible patrolling presence, watching over local areas, protecting local people and keeping order and discipline (Girling et al. 2000). Indeed, the findings of this study are consistent with this observation; if they see the police frequently patrolling and if police officers are known by name or by sight, the public seem to have greater confidence in the service the police provide, the attitudes and demeanour of the police and their commitment to the needs of local communities. Engaging with local policing teams has similar effects. Prior research has concluded that the police were neglecting lower level, localised crime and disorder issues (Povey 2001) and were not seen to be taking the worries and concerns of citizens seriously (Girling et al. 2000). Neighbourhood policing aims to increase police-community engagement to identify and tackle such concerns and it seems that confidence is higher among those who have engaged with local, neighbourhood policing teams. The findings of this study are also in line with a number of quasi-experimental studies that have examined the effects of providing the public with newsletters about crime, policing and sentencing, on attitudes toward the police and criminal justice system (Salisbury 2004; Singer and Coopers 2008; Hohl et al. 2010). Those who feel more informed about crime and policing tend to have more confidence in the work that the police are doing; as Hohl et al (2010) describe, citizens generally have little contact with the police, if any at all, so keeping the public informed ensures that the roles, actions and activities of the police are transparent, understood and well-recognised, fostering more positive attitudes towards them.

Consequently, it would seem that neighbourhood policing, with its underlying strategies of providing a visible and familiar service, engaging with local communities
and ensuring that local people are kept informed of police efforts, should improve confidence in policing, the results of the analysis showing that it does so directly, as well as indirectly, through its effects on perceptions of crime, disorder and collective efficacy and through its effects on worry about crime. However, as Skogan and Hartnett (1997), Tuffin et al (2006) and Pate et al (1986) revealed in their evaluations of police interventions, to some extent the success of neighbourhood policing in increasing confidence is dependent upon the specific strategy that is being examined and the specific element of confidence that is being measured. Those who knew a local police officer by name or by sight and those that had engaged with local police had less confidence in police effectiveness. One plausible explanation for this counter-intuitive finding might be that there is an unmodelled common cause that is inducing the negative association. For example, this relationship may have disappeared if I were able to control for local recorded crime rates. A local crime or disorder problem might lead people both to contact their local policing teams in order to confront them about the issue, and to lose confidence in the effectiveness of the police at dealing with crime.

Similarly, while the four strategies of neighbourhood policing analysed in this study generally had positive effects on these secondary aims, reducing perceptions of crime and disorder, reducing worry about crime and increasing perceptions of social cohesion and informal social control, police familiarity and engaging with police both worked to increase worry about crime, while engaging with police also increased perceptions of disorder. However, again, it may be that these people have had contact with the police precisely because they are fearful for their safety and worried about local disorder, rather than that their fears grew stronger as a result of having engaged with the police. Equally, those who report seeing police on patrol are also those who are more concerned about low-level disorder in their area, but this association is not necessarily an indication of cause and effect; it may be that there are more police officers patrolling in their area precisely because it is an area that suffers crime, disorder and deprivation, rather than the case that seeing the police patrolling the streets instils concerns about disorder. This highlights a more general point, discussed in section 5.3, that one has to be cautious about drawing causal inferences from observational data of this nature.
Away from neighbourhood policing, the findings lend support to much research that has drawn links between confidence in policing and perceptions of crime, disorder and collective efficacy and worry about crime (see, for example, Cao et al. 1996; Weitzer and Tuch 2005b; Chermak et al. 2006; Myhill and Beak 2008). It seems that evaluations of the police are a function of concerns about the extent of the crime problem, confidence weakening when it is felt that crime rates are increasing, or when people fear for their personal safety, a clear signal that the police are failing in their fundamental crime prevention role. Nevertheless, reinforcing the findings of Jackson et al (2009) and Jackson and Bradford (2009), the results presented here appear to suggest that judgements regarding some abstract sense of the crime problem and the risk of becoming subject to a serious crime are less important in evaluating police performance and worth than are people’s everyday experiences and notions of community and neighbourhood stability. Signs of a fractured community, loss of control over the physical environment, evidence of rule breaking, disrespect and lack of regard for moral codes of conduct all work to induce an impression that the police are unable to protect the moral structure of the community and to instil a sense of order and stability, reducing confidence in their service (Jackson and Bradford 2009; Jackson et al. 2009).

The research also contributes to evidence which suggests that it is important to consider confidence as more than just a single, one-dimensional construct (Dennis 1976; Chermak et al. 2006; Bradford et al. 2009a; Jackson et al. 2009; Stanko and Bradford 2009). Employing a measurement model of confidence developed by Stanko and Bradford (2009) and utilised by Jackson et al (2009), I identified three facets of confidence, as well as a more general measure, revealing that explanatory factors had varying effects of size and direction upon these measures of confidence. However, unlike these authors, I allowed the explanatory variables to have an effect upon the overall measure of confidence, in addition to the influence of perceptions of disorder and confidence in police conduct, community engagement and effectiveness. In doing so, I showed that other explanatory variables do have direct effects upon the overall measure and as a result, I was able to explain 8% more of the variance in the overall measure than Jackson et al (2009) (although it is also possible that this difference in the $R^2$ was a result of using data collected in a different year).
Employing these four measures of confidence has also added to the limited research that has examined the effects of perceptions of police behaviour and effectiveness on confidence in policing. Tyler (2001b; 2001a; Tyler and Huo 2002; 2004; 2005) argues that confidence is higher among those who believe that the police act with procedural justice in encounters with the public, meaning that the police are viewed more favourably if it is thought that they treat people fairly and with dignity and respect, and if they care about people’s concerns. The findings of this study lend further empirical support to his arguments. However, Tyler (2001a) also reported that once evaluations of procedural justice have been accounted for, perceptions that the police are effective at preventing crime have no effect on confidence in policing, but the results reported in this chapter do not echo this finding. Like a number of other scholars (Hinds and Murphy 2007; Jackson et al. 2009; Stanko and Bradford 2009; Jackson and Bradford 2010), I find that in addition to procedural justice, confidence in policing is predicted by the extent to which the police are perceived to be effective at tackling crime, responding to emergencies and dealing with victims and witnesses. Finally, the results suggest that confidence in policing is higher among those who think that the police are listening to and working to address the concerns of local people. Tyler (2002) and Jackson and Bradford (2010) have argued that these conditions breed ‘motive-based’ trust, feelings that the police are trying to work in the best interests of local people and trying to protect local values, which builds confidence that they are doing a good job.

For policing and policy, the results of this study could be very positive. While the coalition government have seen fit to take the focus of policing away from confidence, they continue to support the neighbourhood policing strategy (Home Office 2010c; Home Office 2010a). However, with recent cuts to police budgets and resultant proposals to reduce the numbers of police officers employed in England and Wales (ACPO 2010), it may be the case that neighbourhood policing (and consequently public confidence in policing) suffers, as less police officers are available to patrol the streets and engage with communities. If these services can be protected and the public can continue to be supplied with visible and familiar police officers who are engaging with local communities and keeping the public informed about their activities, confidence in the police should improve, as should perceptions of crime, disorder and social cohesion, and worries about crime and risk should
lighten. In line with Tyler’s (2001a; 2005) arguments concerning procedural justice, I also provide further evidence to suggest that the police must ensure that they act with respect and fairness and treat everyone equally to earn the public’s confidence in their service.

Nevertheless, the results of this analysis are not conclusive. The data used were collected from residents of London, so it would be inappropriate to generalise these findings to police forces and citizens living outside of the capital. Moreover, neighbourhood policing consists of other factors that the survey data did not allow the measurement of, such as problem-oriented policing and police accessibility. Of those factors that could be accounted for, the survey dataset did not always contain enough relevant variables to allow them to be measured with multiple indicators. As a result, the model is not as robust as it might otherwise have been if measurement error had been attenuated in all factors. The reliance on cross-sectional survey data also means that the model is not testing whether neighbourhood policing is actually achieving its original goals and whether its implementation has actually seen a rise in confidence, but instead tests whether the principles behind the strategy are likely to have an effect upon confidence. For example, rather than using independently recorded data regarding the amount of time police officers spend patrolling the streets to assess whether levels of confidence vary across time as a result of increasing patrols, or across geographical areas as a result of regional differences in the provision of police patrols, I rely on survey perceptions, which are likely to vary from person to person living in the same area and served by the same police officers.

As mentioned prior to the analysis, the use of cross-sectional survey data also makes it difficult to draw robust conclusions of cause and effect. For example, the results revealed that those who had engaged with local policing teams were more aware of low-level physical and social disorder. While it might well be the case that engaging with local police heightens one’s awareness of local disorder, it would also seem plausible that those who are concerned about the extent of physical and social disorder are more likely to make contact with local policing teams in order to make their concerns known. Nevertheless, given that many of the community policing intervention evaluations reviewed at the beginning of this chapter found that levels of confidence in the police increased relative to levels prior to the intervention, it does
not seem unreasonable to assume that confidence in policing is the ‘dependent’ variable in this study. As such, the results provide some tentative indications that the police themselves can have some effect upon public confidence in their service, both in the strategies they employ, the activities they undertake and the manner in which they behave.

In line with other empirical studies, this chapter has also suggested that confidence in the police varies according to perceptions of one’s neighbourhood regarding disorder, crime and collective efficacy. Consequently, we might conclude that all residents living in neighbourhoods suffering high levels of incivility and crime and in those lacking social cohesion will be less confident in the police. However, the variables used in this chapter measure perceptions, subjective assessments that may differ widely between different individuals living in the same neighbourhood. The next chapter will model confidence in the police in a multilevel framework, examining not only the importance of differences between individuals in determining confidence in the police, but also between neighbourhoods, revealing how the structural characteristics of the neighbourhoods in which we live might influence our attitudes, over and above our individual characteristics. Furthermore, it will incorporate a measure of the police jurisdiction in which respondents live to indicate whether confidence differs across these jurisdictions and whether differences might be a result of the ratio of police officers to residents within each area.
Chapter 6: The Effects of Police Organisation and Effectiveness on Confidence in the Police

6.1 Introduction

Chapter 5 provided evidence to suggest that confidence in the police is influenced by the actions, strategies and abilities of the police; confidence was higher among those who were familiar with local police officers, who saw police officers patrolling their neighbourhood frequently, and who thought that the police were engaged with the needs of the community and fighting crime successfully. As such, it would seem reasonable to suggest that confidence in the police might vary across police jurisdictions, reflecting differences in their success and ability to provide such services. Indeed, until the election of the coalition government in May 2010, the Home Office (2009b) published annual performance data to compare confidence in policing across the 43 police forces of England and Wales. The figures show that in 2007/08 confidence in policing ranged from 38%-54% across Police Force Areas, where the performance of some police forces was significantly different from the national average of 46%. Despite this evidence, scholars have not explored any further how confidence in the police varies across local police jurisdictions in the UK, nor whether any differences can be attributed to the characteristics, effectiveness, or strategies employed by different police units.

Chapter 5 also provided further evidence to support conclusions widely reported in the literature that concerns about neighbourhood environments shape assessments of the police. These findings suggest that anxieties about neighbourhood crime, the extent of physical and social disorder and the strength of community cohesion all work to influence confidence in the police service and the ability of its agents to control crime and protect the safety of citizens. Without denying the potential importance of these perceptions, research has found that perceptions of disorder, for example, can vary widely among residents living within the same neighbourhood (Reisig and Parks 2000; Sampson 2004; Sampson 2009), so can tell us little about actual neighbourhood conditions, nor how ecological neighbourhood structures might be associated with evaluations of the police. In fact, few studies have attempted to
examine the effects of neighbourhood structural characteristics, such as crime rates, poverty and ethnic diversity, upon residents' opinions of the police, particularly in the UK.

This chapter will outline the existing research that has attempted to incorporate ecological measures into models of public confidence in the police and will argue that it lacks depth in its exploration of neighbourhood effects, fails to take into account geographical differences in police organisation and effectiveness and incorporates common methodological limitations that render conclusions unreliable. I then introduce the multilevel model to understand how public confidence in the police is shaped, which can overcome such methodological problems, and also review the limited research that has employed the technique. Utilising the BCS, I present multilevel models to assess the extent to which confidence in the police varies across local neighbourhoods and local police units, before exploring how differences in the size, effectiveness and visibility of police units, as well as neighbourhood structural characteristics influence residents' levels of confidence, over and above their individual characteristics.

6.2 The Influence of Neighbourhood Environments on Confidence in Policing

Criminological research is clear that neighbourhood environments have a strong role to play in informing residents' opinions of the police (reviewed in Chapter 2), but the majority of this evidence is based upon survey data measuring respondents' perceptions of their local neighbourhoods. Without questioning the idea that the concerns of individuals are likely to be embedded in their evaluations of the police, such perceptions do not necessarily capture the true likeness of an area, or reveal real differences between geographies to enable the identification of neighbourhood characteristics that promote or inhibit confidence in the police among residents. Sampson and Raudenbush (1999) sent trained researchers with video cameras to systematically observe physical and social disorder across neighbourhoods in Chicago, recording where they saw evidence of disorder, including litter on the streets, evidence of graffiti and abandoned cars. Comparing this data to the
perceptions of survey respondents living in those same areas, they reported a
significant positive correlation between these observations of disorder and residents’
perceptions of disorder in those same areas (r = .55 (p<.01) in terms of physical
disorder and r = .56 (p<.01) in terms of social disorder). However, Reisig and Parks
(2000) showed that people living within the same neighbourhood had quite different
ideas regarding the extent of disorder within it, while Sampson (2009) and Sampson
and Raudenbush (2004) demonstrated that perceptions of neighbourhood disorder
were more strongly associated with the racial composition of the area than with actual
(independently observed) levels of disorder. As a result of such uncertainties,
employing administrative or independently observed data might reveal relationships
between area level characteristics and public evaluations of the police that are
contrary to, or that could not be captured by, those uncovered using just survey data.

A very limited number of studies have attempted to use neighbourhood level data that
were collected independently of the survey data to which they are linked. Jesilow et
al (1995) conducted interviews with residents living within the jurisdiction of the
Santa Ana Police Department in San Francisco. In addition to asking respondents
open ended questions about their perceptions of the police and neighbourhood,
investigators observed the neighbourhoods that respondents lived in and categorised
them as either ‘residential’, meaning that homes were large and well-maintained with
relatively new cars, or ‘working class’, meaning that homes were small and run down
and were interspersed with business properties. They concluded that those living in
large well-kept homes were more likely to speak positively about the police than
those who lived in smaller unkempt dwellings, while residents’ perceptions of the
area had no such effects. Conversely, it was negative perceptions of neighbourhoods
that were associated with negative comments about the police, while the
independently observed neighbourhood data had no statistically significant effects.

Reisig and Giacomazzi (1998) observed four neighbourhoods, identifying two areas
that were orderly and cohesive and characterised by residents who were older, well
educated, well-off, owned their own homes and who had been living in the area for a
long period of time, and another two neighbourhoods that were disorderly and less
integrated, populated by young residents on a low income, who were less educated,
living in rented accommodation and had only recently moved to the area. They
constructed four measures of confidence in the police from survey data and compared means across the four neighbourhoods. The data revealed significant differences in confidence regarding police-community engagement and procedural justice evaluations; those living in areas with older, well-off, long-term residents rating the police more favourably than the younger, mobile, lower income neighbourhoods.

While not taking neighbourhood differences as their focus, other studies have used neighbourhood statistics as control variables in their analyses of confidence in the police. Findings have been mixed (see Chapter 2), but these studies have provided some evidence to suggest that those living in more affluent neighbourhoods (Bradford et al. 2009a) and those living in urban areas (Myhill and Beak 2008) are more confident in the police, while those whose neighbourhoods are suffering from high crime are less confident in the service their local police are providing (Schafer et al. 2003).

Finally, over the last 60 years, a large amount of the research that has investigated public confidence in the police has identified and attempted to explain why ethnic minorities tend to have more unfavourable attitudes toward the police. While not corroborated by the findings of Chapter 5, several studies have provided evidence to suggest that such relationships are spurious and disappear once perceptions of neighbourhood are controlled for (Cao et al. 1996; Weitzer and Tuch 2005b). However, little research has attempted to examine the relationship between the racial composition of neighbourhoods and residents’ confidence in the police. The power that ethnic diversity can have upon perceptions has been researched in other substantive areas of interest such as perceptions of disorder (Sampson 2009), fear of crime (Brunton-Smith and Sturgis 2011), trust (Alesina and La Ferrara 2000; Pennant 2005) and life satisfaction (Duffy 2004). Theorists contend that the presence of different ethnic groups creates feelings of tension, hostility and distrust, causing residents to isolate and extract themselves from community life, eroding neighbourhood cohesion (Goodhart 2004; Putnam 2007). Given the evidence to suggest that communities which are not cohesive are more likely to experience crime, fear of crime and lack confidence in the police service, it might be expected that residents of ethnically diverse neighbourhoods would be less confident in the police. However, Pennant (2005) did not find such a relationship, a null finding echoed in
work that has explored ethnic diversity and social capital (Letki 2008; Sturgis et al. 2011), as well as perceptions of antisocial behaviour (Taylor et al. 2010).

The research reviewed has provided evidence to suggest that neighbourhood characteristics and conditions can impact upon residents’ confidence in the police. However, these studies tend to exhibit a number of limitations. Firstly, most lack any independent assessments of the structural characteristics of neighbourhoods, relying instead on residents’ perceptions and self-reports measured in surveys. Additionally, those that do incorporate some independent contextual data, discussed in section 6.2, tend to do so by identifying the geographical areas in which each respondent resides and linking them to contextual data collected in the data gathering process or from other sources, such as the census. In so doing, they are able to use single level regression models to ascertain how neighbourhood level characteristics impact upon the confidence of individuals. However, constructing a dataset in this manner means that individuals who are sampled from the same area will share exactly the same area level characteristics. This violates the assumption of ordinary least squares regression that observations are independent of one another. Consequently, standard errors are likely to be underestimated, which may lead researchers to declare relationships statistically significant when in fact they are not (Hox 2002). Moreover, this method also assumes that the measures of neighbourhood characteristics that are used are capturing information about all possible differences between neighbourhoods, which is unlikely given the magnitude of ways in which one neighbourhood can vary from another (Snijders and Bosker 1999).

Employing multilevel modelling (sometimes referred to as hierarchical linear modelling) can overcome these problems, as the method allows the inclusion of both individual and contextual level measures in the same model, by incorporating the contextual variables at a higher level of influence than those at the individual level (Hox 2002). However, to my knowledge, only four studies have applied this approach to the study of neighbourhood influences on confidence in policing, all of which have been carried out in the US.

The pioneers were Sampson and Jeglum-Bartusch (1998). Using survey data from 8782 residents living across 343 neighbourhoods in Chicago, they tested the
hypothesis that those living in areas of disadvantage, high crime and population instability and in areas with a high proportion of immigrants would express less satisfaction with the police than those who did not. They found that their ecological variables, which were constructed from census data, accounted for 82% of the between-neighbourhood variation in confidence in the police, while the socio-demographic variables could only explain 2% of the within-neighbourhood variance. At the neighbourhood level, residential stability had a small positive effect upon satisfaction, but was not statistically significant. However, concentrated disadvantage (which incorporated data on poverty, unemployment, single parent families, age profile and the proportion of Black residents), the violent crime rate and, to a lesser extent, immigrant concentration, all significantly reduced confidence in the police. Moreover, they found that adding these contextual level effects to the model removed the significant effects of the individual level variables denoting ethnicity; suggesting that it may not be race that causes confidence in the police, but ecological conditions. Women, those married, separated or divorced, long-term residents and younger persons were also found to be significantly less satisfied with the police, even after controlling for the effects of neighbourhood context.

Away from Chicago, Reisig and Parks (2000) used a multilevel framework to analyse data drawn from 6215 residents living in 50 neighbourhoods across Indianapolis in Indiana and 12 neighbourhoods across St Petersburg in Florida. Neighbourhoods were defined in accordance with police jurisdiction lines. Like Sampson and Jeglum-Bartusch (1998), their aim was to examine the contextual effects neighbourhoods can have upon residents’ satisfaction with the police. However, they extended the original work to include many more factors at the individual level, factors that extant research has shown to be important in determining confidence, such as perceptions of neighbourhood disorder and contact with police officers, as well as socio-demographic factors. In contrast, they limited their contextual effects to those measuring the homicide rate and concentrated disadvantage, which were derived from census data. In comparison to Sampson and Bartusch (1998), this raised the level of within-neighbourhood variation that they could explain to 42%, but decreased the explained between-neighbourhood variation to 57%.
At the neighbourhood level, they showed that concentrated disadvantage significantly reduced confidence in the police, but, unlike Sampson and Jeglum-Bartusch, they concluded that the rate of homicide had no effect. At the level of the individual, and after controlling for neighbourhood differences in the homicide rate and disadvantage, Reisig and Parks (2000) found that it was perceptions of one's neighbourhood that were most important in predicting confidence in the police, explaining the biggest proportion of within-neighbourhood variance. Those who were worried about crime, perceived crime and disorder as a problem in their area and those unhappy about living in their neighbourhood were all less confident in the police. Contact with the police also aided in explaining confidence, as did knowing a local police officer by name or by sight and perceptions that police services were equally distributed across geographical areas. However, they did not find evidence to support the findings of Sampson and Jeglum-Bartusch (1998) that neighbourhood differences confound the relationship between race and satisfaction with the police. Finally, having tested for what are called ‘random coefficients’ (defined in section 6.5), they report that all these individual level effects were constant, or ‘fixed’, across neighbourhoods, meaning that they had the same impact upon confidence, regardless of the neighbourhood in which a respondent lived.

Again focusing on Chicago, Schuck et al’s (2008) multilevel analysis took data from 479 respondents living across 69 communities. After controlling for socio-demographic differences and neighbourhood disadvantage, they found that perceptions of disorder reduced confidence in the police, as did dissatisfactory encounters with police officers, while positive vicarious experience of the police increased confidence. Similarly to Reisig and Parks (2000), they showed that it was perceptions of disorder that explained the most variation in confidence in the police. At the area level, they reported that those living in more socio-economically deprived areas were less likely to be satisfied, even after controlling for perceptions of disorder, contacts with the police and socio-demographic characteristics of individuals. They also concluded that the ethnicity of individuals was not a statistically significant predictor of confidence in neighbourhood police once these environmental factors had been accounted for, but did remain important for perceptions of the police in general.
The fourth multilevel study of confidence in policing, by Dai and Johnson (2009), concentrated on the city of Cincinnati in Ohio, surveying 614 respondents from 29 neighbourhoods. In line with the previous studies, they found that those living in disadvantaged neighbourhoods were significantly less confident in the police, while the crime rate had no effect. At the individual level, they concluded that those who were worried about crime and disorder and those unhappy about living in their neighbourhood were less satisfied, as were the young and those who had had negatively evaluated encounters with the police; these relationships were not found to vary across neighbourhoods.

While these multilevel analyses are methodologically innovative, they do incorporate a number of limitations. They have tended to rely on just one or two indicators of neighbourhood level conditions, namely crime rates and socio-economic disadvantage. Furthermore, none include any independent measures of neighbourhood disorder, the authors relying on the perceptions of survey respondents. This may be problematic for two reasons. Firstly, as the research evidence regarding the degree to which perceptions can adequately reflect the true extent of neighbourhood disorder is not clear, it would seem sensible to include an independently assessed measure of disorder in these models (Reisig and Parks 2000; Sampson and Raudenbush 2004; Sampson 2009). Secondly, relationships between perceptions of disorder and confidence in policing may be endogenous. When drawing information about respondents’ perceptions of disorder and confidence in policing from the same cross-sectional survey data, it is difficult to determine the direction of causality, for while it is possible that perceptions of disorder cause confidence, it may be the case that confidence causes perceptions of disorder, or that such perceptions are linked reciprocally with confidence. Additionally, it could be that both perceptions and confidence are linked with other information, beliefs or contextual cues (Sampson and Raudenbush 2004; Skogan 2009).

Finally, and significantly, data about the police are absent from the multilevel studies, none of which make any reference to how geographical differences in police organisation and strategy might impact upon confidence. Since criminological research has shown that police behaviour and visibility are key to confidence in policing at the individual level, and since the police are split into geographically
defined units, each with different police officers, strategies, budgets and environments to control, it would seem highly plausible that variables measuring area level police statistics might contribute to explaining variation in confidence across geographical areas. For example, citizens’ confidence in the police may be directly correlated with the number of police officers that are employed and working to prevent crime in their local area. Moreover, it may be the case that police strategy, effectiveness and organisation moderate the effects that neighbourhood characteristics have upon confidence. For example, the multilevel studies described found that confidence was lower in disadvantaged neighbourhoods, but it may be the case that the negative effects of disadvantage are weaker in areas that are more frequently patrolled by the police.

6.3 Analytic Strategy

It seems clear from these multilevel studies that neighbourhood context plays a key role in determining residents’ confidence in the police. Findings consistently showed that confidence was lower in neighbourhoods with a high rate of unemployment, poverty, single-parent families and black residents. Similarly, perceptions of neighbourhood environments regarding the extent of disorder and crime in the area had persistently strong effects. However, questions are raised regarding how far one can generalise from these studies given that they all focus on data taken from a relatively small number of respondents living in just one or two cities. For example, none report any evidence of random coefficients, but perhaps the effects of the independent variables would differ across neighbourhoods if a wider geographical area were considered, incorporating many cities, towns and rural areas, each with different population structures, policing strategies and crime profiles. Furthermore, all of these studies employ data collected from cities within the United States, so it is unknown if the relationships found between neighbourhood level structures and confidence in the police are evident in the UK context.

In addressing these gaps, this chapter will incorporate measures of neighbourhood structural characteristics to reveal how ecological processes are associated with confidence when modelled in a multilevel framework, using data collected not from
the US or from just one city, but from across England as a whole. This represents the first multilevel study of public confidence in policing in the UK. It will also extend the few studies that have used multilevel modelling in the US by including a wider range of variables at the neighbourhood level, capturing data regarding neighbourhood disadvantage, urbanisation, population mobility, housing profile, age profile, ethnic diversity, crime rates and assessments of local disorder made by survey interviewers. In addition, it will include area level police statistics, regarding police strength, police visibility, crime rates and the crime clear-up rate, to ascertain how the organisation and effectiveness of police units might affect confidence at both the individual and area level. In so doing it will add a third level to the models employed by the American scholars, examining variations in confidence in the police across police jurisdictions. Finally, where possible, I will use administrative data collected in the census and by the police to measure these area level variables, as opposed to aggregating neighbourhood perception data gathered by surveys. This should increase the likelihood of capturing real neighbourhood and police jurisdiction differences, rather than differences that are reflections of the characteristics of the respondents that are living within each area.

As a result of the evidence reviewed, the following hypotheses are specified:
H1: confidence in policing is negatively associated with recorded crime rates.
H2: confidence in policing is positively associated with the crime clear-up rate.
H3: confidence in policing is positively associated with police visibility.
H4: confidence in policing is positively associated with police strength.
H5: the effects of neighbourhood characteristics are moderated by police organisation and effectiveness (in terms of crime rates, crime clear-up rates, police visibility and police strength).

In relation to H5, while I do not have specific hypotheses regarding which elements of police organisation and effectiveness will moderate the effects of which neighbourhood characteristics, nor hypotheses concerning the direction of these effects, one might expect, for example, that police visibility would have an effect on the way neighbourhood disadvantage influences residents’ confidence in policing.
6.4 The Multilevel Model

At the heart of multilevel modelling is the observation that individuals are often clustered within larger units of measurement. For example, individuals are clustered within neighbourhoods and those neighbourhoods nested within geographical regions, while pupils are clustered within schools, which are grouped within local education authorities. At each level of aggregation, individuals in the same cluster are exposed to very similar conditions and stimuli, creating dependence among them. Ordinary least squares regression assumes that observations are independent of one another, an assumption that would be violated in these examples. A multilevel analysis accounts for this interdependence among those situated within the same cluster by allowing variation at the cluster level/s, producing reliable estimates of standard errors (Hox 2002; Rasbash et al. 2009; Tarling 2009).

In a multilevel model, a subscript \( j \) is added to the standard linear regression equation (shown in equation 3) to recognise that the data originate across two different levels (I will refer to the second level in terms of geographical areas, but the second level unit could just as well be schools, or employers, etc). This shows that the data refer to the \( i^{th} \) individual in the \( j^{th} \) area (this two-level model could be extended to include additional levels of clustering without loss of generality):\(^5\)

\[
Y_{ij} = \beta_0 + \beta_1 X_{ij} + \epsilon_{ij}
\]

\(^5\) What follows is a brief explanation of the mechanisms of multilevel modelling and its notational form. For a fuller explanation, see Hox (2002), Rasbash et al (2009) and Tarling (2009), from which the following has been derived.
Adding a subscript \( j \) to the intercept coefficient (shown in equation 4) allows the intercept to vary across areas. This is shown in line two of the equation, where \( \beta_0 \) refers to the mean intercept across all areas, and \( u_{0j} \) refers to the residual difference between the intercepts of each area and the average intercept.

\[
\begin{align*}
  y_{ij} &= \beta_0 + \beta_1 x_{1ij} + e_{ij} \\
  \beta_{0j} &= \beta_0 + u_{0j} \\
  u_{0j} &\sim N(0, \sigma^2_{u0}) \\
  e_{ij} &\sim N(0, \sigma^2_e)
\end{align*}
\]  

(4)

In addition to this higher level residual term there is also an error term associated with the individual level, \( e_{ij} \). Both of these error terms are assumed to be independent and normally distributed with mean of 0 and variances denoted \( \sigma^2_{u0} \) and \( \sigma^2_e \), shown in lines three and four of equation 4.

Equation 4 is referred to as the random intercept model. Allowing the intercept of each area to vary from the overall mean intercept enables areas to vary from one another and individuals within the same area to be influenced by the same ecological structures. Consequently, the effect that an area has on the response variable will be the same for each individual residing in that area.
As well as assessing the direct effects of both individual and neighbourhood characteristics on the outcome variable (controlling for the other variables in the model), multilevel modelling can also identify whether relationships between individual level factors and the dependent variable vary across areas. So, for example, on average white people might be more confident in the police than those from ethnic minorities, but in some neighbourhoods those from ethnic minorities might be more confident than whites. This ‘random coefficients’ model is summarised in equation 5:

\[ y_j = \beta_{0j} + \beta_{1j}x_{1j} + e_j \]

\[ \beta_{0j} = \beta_0 + u_{0j} \]

\[ \beta_{1j} = \beta_1 + u_{1j} \]

\[
\begin{bmatrix} u_{0j} \\ u_{1j} \end{bmatrix} \sim N(0, \Omega_u) \quad \Omega_u = \begin{bmatrix} \sigma_{u0}^2 & \sigma_{u1}^2 \\ \sigma_{u01} & \sigma_{u11} \end{bmatrix}
\]

\[ e_j \sim N(0, \sigma_e^2) \]

This adds to the random intercepts model (in equation 4) by including a subscript \( j \) on the individual level regression coefficient, \( \beta_i \), allowing the coefficient to vary across areas. Line three of equation 5 shows that \( \beta_{ij} \) refers to the average effect of the independent variable on the response variable across all areas, \( \beta_i \), and the residual difference from the average effect, \( u_{ij} \), which is assumed to be normal, independently and identically distributed with a mean of 0.

This addition to the model means that there is not only an individual level residual error term, \( e_{ij} \), with variance \( \sigma_e^2 \), but also a matrix of variances, \( \Omega_u \), representing the area level variances. This consists of a residual term for the intercept, \( u_{0j} \), which has a variance \( \sigma_{u0}^2 \), and a residual term to account for the unexplained variance in the regression coefficient, \( u_{1j} \), which has a variance \( \sigma_{u1}^2 \). In addition, there is now a covariance term between the unexplained variances of the intercept and coefficient, \( \sigma_{u01} \).
'Cross-level interactions' can be added to equation 4 to determine whether all individuals experience the effects of contextual variables to the same degree, or whether they have different effects upon different individuals or groups. For example, it may be the case that the difference in confidence between ethnic groups is a function of the number of police officers in the local area who are of an ethnic minority group. Another way of thinking about cross-level interactions in this context is that neighbourhood level variables can be used to explain the variability in the random slopes.

Unlike single level models, an additional advantage of multilevel analysis is that it can partition the variance in the dependent variable at each level, so in the case of neighbourhoods it can estimate both the between-neighbourhood variation in the dependent variable \(u_{0j}\) and also the within-neighbourhood variation in the dependent variable \(e_{ij}\), as well as assessing the relative explanatory strength of the ecological factors that are modelled to account for the area level variation. These variance components can be calculated for the random intercept model in equation 4 as follows (equation 6):

\[
VPC = \frac{u_{0j}}{(u_{0j} + e_{ij})}
\]  

(6)

In a three level model, the variance partition coefficient (VPC) equation takes the form of equations 7 and 8, where \(u_{0k}\) refers to the variance at the third and highest level:

\[
VPC_{level2} = \frac{u_{0j}}{(u_{0j} + u_{0k} + e_{ij})}
\]

(7)

\[
VPC_{level3} = \frac{u_{0k}}{(u_{0j} + u_{0k} + e_{ij})}
\]

(8)
It is important to note that all covariates in the models presented in this chapter are
grand-mean centred. Centring variables is important when including random
coefficients in a model. When coefficients vary across neighbourhoods, each will
have its own estimated intercept variance and covariance, but this can change
depending on the value of x at the intercept. Traditionally the intercept is interpreted
as the value of y when all covariates are equal to 0, but if each coefficient is measured
on a different scale (some scales, such as age, not even including a value of 0), the
value of the intercept becomes meaningless. Grand mean centring subtracts the
overall mean of a given variable from all values of that same variable. This ensures a
meaningful interpretation of the intercept term, since the intercept is now the expected
value of confidence when all covariates are at their mean, or, put another way, the
expected value for the ‘average person’. The transformation also changes the
interpretation of the VPC from an estimate of the unexplained variation in confidence
attributable to differences at various levels of geography, to the unexplained variation
in confidence attributable to area for the average person (Hox 2002).

6.5 Data and Measures

6.5.1 The British Crime Survey

Data for the analysis are taken from the 2006/07 and 2007/08 BCS, which is one of
the largest social surveys carried out across England and Wales. The first sweep of
the survey was in 1982 and since 2005/06 it has been collecting data from around
45,000 individuals every year, employing a multistage sampling design. It uses
postcode sectors as primary sampling units (PSUs), which are stratified by police
force area, as well as population density and the proportion of adults in non-manual
occupations, with selection probability proportional to size. Thirty two addresses are
then sampled within each selected PSU and one individual adult aged 16 and over is
selected at each address using the Kish grid method (Bolling et al. 2008). Response
rates have remained fairly stable and comparatively high relative to other UK surveys
in recent years, achieving a response rate of 75% in 2006/07 and 77% in 2007/08.

While BCS data are available from across England and Wales, only the data collected
in England will be used in this analysis. This is because recorded crime data
(described in section 6.6.3) is only available at the neighbourhood level in England. Consequently, data collected in Wales is excluded from the analysis in favour of better understanding how neighbourhood crime levels might affect residents’ confidence in their local police force.

6.5.2 Defining ‘Neighbourhood’ and Police Jurisdictions

Neighbourhood differences in confidence in the police cannot be examined without first defining neighbourhoods and neighbourhood boundaries. How this should be done is an area of considerable debate. Qualitative studies place emphasis upon individuals and their differing lived experiences and understandings of what constitutes their ‘neighbourhood’ (Chaskin 1998; Weiss 2007). The definition of ‘neighbourhoods’ in quantitative studies, on the other hand, have been largely driven by the availability of data and the geographical unit of measurement from which such data are drawn (such as electoral wards and postcode sectors), as well as trying to achieve meaningful comparisons by ensuring that geographical areas are of similar population size (Lupton 2003). As such, Openshaw (1984) argues that the spatial boundaries within which contextual data have been aggregated to are often arbitrary and so the results of any analysis will be partly determined by the geographical boundaries that are used. This is known as the modifiable areal unit problem (MAUP).

In this analysis, I use ‘middle layer super output areas’ as the neighbourhood geography. Output Areas (OA) are geographical areas developed for the census to distribute local area statistics. They were constructed on the basis that the population of each area should be consistent in size and that households within them should be of a similar type and tenure. Using this same principle, OAs were combined to form larger lower layer super OAs (LSOA) and even larger middle layer super OAs (MSOA). When constructing MSOAs, in addition to taking social homogeneity into account, local authorities and local residents were consulted to ascertain whether MSOAs were meaningful to those living within them and to ensure that they did not cross physical boundaries, such as major roads or rivers (ONS n.d). At the level of OA, areas contain, on average, 264 individuals (Vickers and Rees 2007), while
LSOAs contain an average of 1500 individuals, and MSOAs consist of approximately 7200 households (ONS n.d).

Since BCS data are only released by the Home Office at the level of MSOA, rather than LSOA, MSOAs are employed in this analysis as a measure of ‘neighbourhood’ so that census data can be used to measure neighbourhood level characteristics. Across the two waves of the survey, there are 86,846 individuals, living within 4786 MSOAs in England, with an average of 18 respondents and a range of 1 to 110 within each MSOA. The variable sample size across MSOAs is not problematic in multilevel modelling methodology, as the model accounts for these differences by shrinking the unreliable influence of areas which contain few respondents towards the sample mean (Rasbash et al. 2009).

It is hypothesised that it may not only be the neighbourhood in which one lives that can impact upon confidence in the police, but also the police jurisdiction, since each will contain varying numbers of police officers, strategies, budgets and so on. Across England and Wales the police are organised into 43 police forces, each of which are split into a number of Basic Command Units (BCUs). BCUs are local policing areas that cover a range of geographical locations, from densely populated areas and areas experiencing high rates of crime, to large areas of sparsely populated countryside. There are over 200 BCUs in England and Wales, some of which are staffed by over 1000 police officers, while others are policed by under 100 officers (Home Office 2008b).

Since MSOAs are nested within BCUs it is possible to incorporate them into the multilevel analysis to show whether or not confidence varies across local police jurisdictions and, by employing data about the police at the level of BCU, to determine whether differences in confidence across BCUs is a result of differences in police organisation and effectiveness. This will also control for dependency between neighbourhoods, since those in close proximity are likely to be similar to one another, sharing certain characteristics. Neglecting to account for this dependency may produce underestimated standard errors of contextual effects (Griffith et al. 2003). The sample consists of data from 199 of 217 BCUs across England, each encompassing between 9 and 2657 individuals, with an average of 425 respondents in
each BCU. It was not possible to include data from the remaining 18 BCUs as the police either changed the geographical boundaries of the areas they presided over between the collection of BCS data and the publication of the official statistics that are attached to each BCU in this analysis, or they covered airports within which survey respondents do not live.

6.5.3 Individual Level Covariates

In order to understand how and why confidence in the police might vary across neighbourhoods and police jurisdictions, information is needed regarding both the characteristics of these geographical areas and the characteristics of those living within them.

As discussed in Chapter 2, a number of individual level covariates have been found to be important in the analysis of confidence in the police including socio-demographic characteristics and crime victimisation. Measures of these characteristics were constructed using single variables in the BCS (detailed in Appendix D). Incorporating these individual level variables also aids in reducing the effects of ‘selection bias’. This recognises that people are not randomly distributed across neighbourhoods, but, based on their individual characteristics, consciously ‘select in’ or ‘select out’ of living within a particular neighbourhood, bringing about the uneven distribution of individual level characteristics across neighbourhoods. Consequently, any differences in confidence in policing between neighbourhoods may not actually be a consequence of higher level neighbourhood characteristics, but a cause of individual characteristics (Sampson et al. 2002). Including the socio-demographic characteristics of respondents in the multilevel model, such as socio-economic status, ethnicity and marital status, goes some way towards adjusting for selection bias, although it is of course possible that other unobserved variables might still bias results (Brunton-Smith and Sturgis 2011).

In line with existing research, measures of confidence in the police and disorder were derived by combining a number of different indicators. Unlike recorded crime, there are no systematically collected measures of physical disorder in the UK. Instead, I include an independent assessment of neighbourhood disorder made by BCS
interviewers. At each sampled address, interviewers answer questions regarding how common each of the following is in the immediate area: litter or rubbish lying around, vandalism, graffiti or deliberate damage to property and homes in poor condition/run down. While still a subjective measure, it is nevertheless independent of the survey respondents ratings of the police, meaning that confidence in the police cannot be endogenous to (or the cause of) the measure of physical disorder as it may have been if I were to rely on respondents’ own perceptions of disorder.

The dependent variable was also constructed from a number of indicators in the BCS in order to tap into different elements of public confidence in the police, such as crime fighting, procedural justice and community engagement. The results reported in Chapter 5 and the existing research has consistently shown that these factors are important in constituting what the public understand as the police doing a ‘good job’. Both the analysis presented in Chapter 5 and the work of Jackson and colleagues (Bradford et al. 2009a; Jackson and Bradford 2009; Stanko and Bradford 2009) show that it is best to measure each of these components of confidence separately and with a number of indicators, since each component can respond differently to independent variables. However, the BCS only includes single items to measure different elements of confidence, so to reduce the potential impact of random measurement error they were combined into one single measure of public confidence in the police. The indicators ask how much respondents agree or disagree that the local police would treat them with respect if they had contact with them, that they would treat everyone fairly regardless of who they are, that they can be relied upon to deal with minor crimes, that they understand the issues that affect the local community and that they are dealing with the things that matter to local residents. The measure also includes responses to two overall evaluative questions, one of which asks respondents how much, after taking everything into account, they agree or disagree that they have confidence in the local police, while the other asks how good a job the police in the local area are doing.

The derived scales measuring confidence and objective assessments of disorder were constructed using principal components analysis. Table 6.1 shows that both scales are reliable measures, since the indicators load highly on their respective factors. The
derived variables are based on factor scores and as such are standardised with a mean of 0.

Table 6.1: Principle Components Analysis: Individual Level Factor Loadings

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONFIDENCE IN THE POLICE</strong></td>
<td></td>
</tr>
<tr>
<td>How good a job are the police doing in this area?</td>
<td>.777</td>
</tr>
<tr>
<td>The police in this area can be relied on to be there when you need them</td>
<td>.779</td>
</tr>
<tr>
<td>The police in this area would treat you with respect if you had contact with them for any reason</td>
<td>.676</td>
</tr>
<tr>
<td>The police in this area treat everyone fairly regardless of who they are</td>
<td>.669</td>
</tr>
<tr>
<td>The police in this area can be relied on to deal with minor crimes</td>
<td>.739</td>
</tr>
<tr>
<td>The police in this area understand the issues that affect this community</td>
<td>.764</td>
</tr>
<tr>
<td>The police in this area) are dealing with the things that matter to people in this community</td>
<td>.824</td>
</tr>
<tr>
<td>Taking everything into account I have confidence in the police in this area</td>
<td>.880</td>
</tr>
<tr>
<td><strong>Number of cases</strong></td>
<td>85,465</td>
</tr>
</tbody>
</table>

| **INTERVIEWER ASSESSMENTS OF DISORDER**                              |                |
| Rubbish or litter lying around                                       | .877           |
| Vandalism, graffiti or deliberate damage to property                 | .910           |
| Homes in poor condition                                             | .898           |
| **Number of cases**                                                 | 85,466         |

6.5.4 Neighbourhood and Police Jurisdiction Characteristics

To identify how the characteristics of neighbourhoods might influence the confidence of those living within them, data are taken from the 2001 census and the index of multiple deprivation. I use measures of MSOA characteristics that were developed by Brunton-Smith (2008). Applying a factorial ecology approach (Rees 1971) to the census, he extracted five factors denoting socio-economic disadvantage, urbanisation, population mobility, age profile and housing profile. Socio-economically disadvantaged neighbourhoods were more likely to have high proportions of residents who were unemployed, single-parents, on income support and living in local authority housing, and who were less likely to own cars, be in professional/managerial roles, or to live in owner occupied housing. Areas of urbanisation were densely populated, had high proportions of domestic property, consisted of far less areas defined as 'green-
'space' and had fewer residents working in agriculture. Areas of population mobility were defined by high volumes of in and out migration, high proportions of single person, non-pensioner households, overcrowded housing and high proportions of commercial property. The fourth factor regarded the age profile of the area, areas scoring highly representing neighbourhoods with a low proportion of residents over the age of 65, high proportions under 16 and low proportions of owner occupied housing. The final factor accounted for the housing profile of the area, indicating the proportion of terraced housing, vacant property and the number of flats in the neighbourhood.

Brunton-Smith (2008) also derived a measure of ethnic diversity from census data, calculated using a fractionalisation index based upon the Herfindahl concentration formula. It produces area level scores on a scale of 0 to 1, yielding the probability of two randomly drawn individuals in the same area belonging to different ethnic groups. Higher scores indicate that an area is more ethnically diverse. Finally, he used the crime index from the 2004 indices of multiple deprivation to provide a measure of recorded crime in each MSOA, based upon 33 different offences which comprise levels of burglary, theft, criminal damage and violence. Unfortunately this index only covers England and not Wales and no other measures of recorded crime are available at such a low geographical level, which is why BCS data collected in Wales are excluded from this analysis.

The conclusions of Chapter 5 and other research have highlighted the important influence of social cohesion and perceptions of informal social control in determining confidence in the police. However, measures of these factors cannot be incorporated into this analysis as questions were only asked of 25% of the total BCS sample in a 'follow-up module'. Incorporating these questions into the analysis at the individual level would result in losing 75% of the sample in each sweep of the survey, leaving too few individuals nested within each neighbourhood area, which would severely reduce the reliability of the results.

6 By aggregating responses to the neighbourhood level it would be possible to incorporate a measure of perceptions of social cohesion and informal social control without losing such a large proportion of sample data. However, the aggregated scales were not found to be reliable (Goldstein et al. 2008).
At the BCU level, a number of measures are used to capture elements of police organisation and effectiveness. A scale denoting the average recorded crime at the level of BCU was created by aggregating MSOA recorded crime rates. Including a measure of crime at both the MSOA and BCU level should reveal whether confidence in the police is more strongly related to crime in one’s local community, or wider policing jurisdiction. As well as crime rates, I use crime clear-up rates (which the Home Office call 'sanction-detections') as a measure of police effectiveness. The measure was generated from Home Office (2008a) statistics by taking the average number of recorded offences that were detected and sanctioned (meaning that an offender had been charged, cautioned, reported for summons, reprimanded, or had been issued a fixed penalty notice) in each BCU across five key offences (namely violence against the person, robbery, domestic burglary, theft of a motor vehicle and theft from a vehicle) between April 2006 and March 2008.

To produce a measure of police strength, data published by the Home Office (2008b) was used that lists the number of police officers per 100,000 of the population within each BCU between April 2007 and March 2008. Finally, a measure of police visibility was created from responses to a BCS question asking how often police officers were seen patrolling on foot in the area. The question was only included in a follow-up module, so to avoid losing a large amount of survey data, responses were aggregated to produce an estimate of mean perceptions of police visibility in each BCU. As such, it is possible that this measure is capturing differences in police visibility across BCUs that are a result of respondent characteristics, rather than real differences in police strategy. However, means were taken from a fairly large number of respondents (an average of 202 respondents in each BCU, which is 50% of the average number of respondents that were interviewed in each BCU in total) and produced an estimated scale reliability of .857.

\[ \rho = \frac{n \sigma^2}{(n \sigma^2 + \sigma^2_{ea})}, \text{ where } n=202 \]  
This was calculated using Goldstein et al's methodology, where \( \rho \) denotes the variance at the BCU level.
To conduct this multilevel analysis, I use the statistical software package MLwiN version 2.20 and the maximum likelihood iterative generalised least squares estimation procedure (Rasbash et al. 2009). The computer programme produces log-likelihood estimates, which will be used to assess model fit. Since models are nested within one another, calculating the change in log-likelihood provides an indication of whether model modifications have improved model fit.

### 6.6 Results

Before attempting to explain variation in confidence in policing across neighbourhoods and policing jurisdictions, a variance components model was estimated to assess whether or not there is in fact any significant variation in confidence across neighbourhoods and BCUs. As shown in equations 6-8, a variance components model shows how the variance in confidence is partitioned between individuals, neighbourhoods and BCUs before any covariates have been included in the model.

<table>
<thead>
<tr>
<th>Table 6.2: Unconditional Random Intercepts Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Confidence in the Police</strong></td>
</tr>
<tr>
<td><strong>Effect (S.E)</strong></td>
</tr>
<tr>
<td><strong>RANDOM EFFECTS</strong></td>
</tr>
<tr>
<td>BCU Level</td>
</tr>
<tr>
<td>Neighbourhood Level</td>
</tr>
<tr>
<td>Individual Level</td>
</tr>
<tr>
<td><strong>-2*Loglikelihood</strong></td>
</tr>
<tr>
<td><strong>Number of cases</strong></td>
</tr>
</tbody>
</table>

***p=<.001; **p=<.01; *p=<.05

The results are presented in Table 6.2. It reveals that over 4% of the total unexplained variability in confidence is a result of area level differences. Of this, equal proportions are a result of differences between the neighbourhoods that people live in and the BCU that neighbourhoods are grouped within. The estimates of this variability are statistically significant, indicating that the characteristics of the
neighbourhood and policing jurisdiction in which one lives might make a significant contribution to confidence in the police.

Table 6.3: Random Intercept Model

<table>
<thead>
<tr>
<th>FIXED EFFECTS</th>
<th>Model 1: Random Intercept Effect (S.E)</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
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<tr>
<td>Aged 15-34</td>
<td>.07 (.01)***</td>
</tr>
<tr>
<td>Aged 35-64</td>
<td>.12 (.01)***</td>
</tr>
<tr>
<td>Gender (Ref: Male)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>.13 (.01)***</td>
</tr>
<tr>
<td>Ethnicity (Ref: White)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>-.32 (.02)***</td>
</tr>
<tr>
<td>Black</td>
<td>-.21 (.03)***</td>
</tr>
<tr>
<td>Mixed/Other</td>
<td>-.11 (.03)***</td>
</tr>
<tr>
<td>NS-SEC (Ref: Professional/managerial)</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>.05 (.01)***</td>
</tr>
<tr>
<td>Routine and Manual</td>
<td>.02 (.01)**</td>
</tr>
<tr>
<td>Unemployed</td>
<td>.02 (.03)</td>
</tr>
<tr>
<td>Marital Status (Ref: Married)</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>-.02 (.01)*</td>
</tr>
<tr>
<td>Widowed</td>
<td>-.15 (.01)***</td>
</tr>
<tr>
<td>Separated/Divorced</td>
<td>-.03 (.01)***</td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>Length of Residence</td>
<td>-.03 (.002)**</td>
</tr>
<tr>
<td>Year (Ref: 2008/09)</td>
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<tr>
<td>Survey Sweep</td>
<td>.05 (.01)***</td>
</tr>
<tr>
<td>Victimisation (Ref: Non-victim)</td>
<td></td>
</tr>
<tr>
<td>Victim of Crime</td>
<td>-.24 (.01)**</td>
</tr>
<tr>
<td>Interviewer Rated Disorder</td>
<td>-.07 (.004)**</td>
</tr>
<tr>
<td>RANDOM EFFECTS</td>
<td></td>
</tr>
<tr>
<td>BCU Level</td>
<td>.019 (.002)***</td>
</tr>
<tr>
<td>Neighbourhood Level</td>
<td>.018 (.002)***</td>
</tr>
<tr>
<td>Individual Level</td>
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<td>Number of cases</td>
<td>200087.07</td>
</tr>
<tr>
<td></td>
<td>72322</td>
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</table>

Model 1 in Table 6.3 adds individual level covariates to the variance components model. This ensures that the disparities in sample composition across MSOAs and BCUs are controlled when estimating the area level contributions to confidence in the police and ensures that variations in confidence that are a result of individual level differences are not spuriously associated with neighbourhood or BCU level variation (Hox 2002). Indeed, the proportion of unexplained variance that is partitioned at the neighbourhood level for the average resident falls by 18% (from .022 to .018) and by

---

8 As the dataset consists of data collected over two years, all the models in this chapter control for the sweep in which the data were collected.
9% at the BCU level (from .021 to .019), a symptom of the uneven sample composition across clusters. Nevertheless, a statistically significant proportion of the variance has still been partitioned at the neighbourhood (1.8%) and BCU level (1.9%), indicating that average levels of confidence in the police do vary across different neighbourhoods and across different policing jurisdictions.

Providing support for prior research and the findings in Chapter 5, the results show that women are more confident in the police than men, while those in minority ethnic groups are less confident in the way the police perform their job than white people. Those aged 65 and over are the least confident in the police and those aged 35-64 are the most confident. Those who are married have more positive perceptions of the police than those who are in some way single, while those in an intermediate or routine and manual socio-economic classification are more confident in the police than those in other groups. The model also controls for the length of time individuals have lived in their neighbourhood, confidence being lower among long-term residents.

Although some studies have concluded that victimisation has no effect on confidence in policing, the results presented here corroborate the findings of Jackson et al (2009), Sprott and Doob (2009) and Ren et al (2005), and suggest that those who have been a victim of crime are less confident in the police than those who have not. While it is often concluded that perceptions of disorder reduce confidence in policing, scholars have relied on the perceptions of survey respondents to measure disorder, so it is possible that the relationship is endogenous. Using a measure of visible physical disorder that is independent of survey responses measuring the dependent variable, the results in Table 6.3 show that confidence is indeed lower among those who live in streets with evidence of physical disorder as assessed by survey interviewers.

Having demonstrated the importance of modelling variation in individuals’ perceptions of the police across neighbourhoods and BCUs, explanations of these differences can be explored. To do so, I incorporate a number of measures to capture neighbourhood characteristics, crime and disorder at the neighbourhood level and measures of police visibility and effectiveness at the police jurisdiction level (shown in Models 3 and 4 in Table 6.4).
Table 6.4: Contextual Effects Models

<table>
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</thead>
<tbody>
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<td></td>
</tr>
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<td>.61 (.07)***</td>
</tr>
<tr>
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<td>.07 (.01)***</td>
</tr>
<tr>
<td>Aged 15-34</td>
<td>.12 (.01)***</td>
<td>.12 (.01)***</td>
</tr>
<tr>
<td>Aged 35-64</td>
<td>.13 (.01)***</td>
<td>.13 (.01)***</td>
</tr>
<tr>
<td>Gender (Ref: Male)</td>
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<td>.07 (.01)***</td>
</tr>
<tr>
<td>Female</td>
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<td>.12 (.01)***</td>
</tr>
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<td>-.32 (.02)***</td>
</tr>
<tr>
<td>Asian</td>
<td>-.32 (.02)***</td>
<td>-.32 (.02)***</td>
</tr>
<tr>
<td>Black</td>
<td>-.22 (.03)***</td>
<td>-.22 (.03)***</td>
</tr>
<tr>
<td>Mixed/Other</td>
<td>-.11 (.03)***</td>
<td>-.11 (.03)***</td>
</tr>
<tr>
<td>NS-SEC (Ref: Professional/managerial)</td>
<td>.05 (.01)***</td>
<td>.05 (.01)***</td>
</tr>
<tr>
<td>Intermediate</td>
<td>.02 (.01)</td>
<td>.01 (.01)</td>
</tr>
<tr>
<td>Routine and Manual</td>
<td>.01 (.03)</td>
<td>-.03 (.03)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>-.03 (.03)</td>
<td>-.01 (.03)</td>
</tr>
<tr>
<td>Student</td>
<td>-.02 (.01)</td>
<td>-.02 (.01)</td>
</tr>
<tr>
<td>Widowed</td>
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<td>-.16 (.01)***</td>
</tr>
<tr>
<td>Separated/Divorced</td>
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<td>-.03 (.01)***</td>
</tr>
<tr>
<td>Mobility</td>
<td>.03 (.02)***</td>
<td>.03 (.02)***</td>
</tr>
<tr>
<td>Year (Ref: 2008/09)</td>
<td>.04 (.01)**</td>
<td>.01 (.01)</td>
</tr>
<tr>
<td>Victimisation (Ref: Non-victim)</td>
<td>-.04 (.01)***</td>
<td>-.04 (.01)***</td>
</tr>
<tr>
<td>Interviewer Rated Disorder</td>
<td>-.07 (.004)***</td>
<td>-.07 (.004)***</td>
</tr>
<tr>
<td><strong>NEIGHBOURHOOD EFFECTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbourhood Characteristics</td>
<td>.04 (.01)***</td>
<td>.04 (.01)***</td>
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<tr>
<td>Socio-economic disadvantage</td>
<td>.02 (.01)**</td>
<td>.02 (.01)**</td>
</tr>
<tr>
<td>Urbanisation</td>
<td>.04 (.01)**</td>
<td>.04 (.01)**</td>
</tr>
<tr>
<td>Population Mobility</td>
<td>.003 (.01)</td>
<td>.003 (.01)</td>
</tr>
<tr>
<td>Housing Profile</td>
<td>-.03 (.01)**</td>
<td>-.03 (.01)**</td>
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<tr>
<td>Ethnic Heterogeneity</td>
<td>.05 (.06)</td>
<td>.05 (.06)</td>
</tr>
<tr>
<td>Crime</td>
<td>-.03 (.01)*</td>
<td>-.03 (.01)*</td>
</tr>
<tr>
<td><strong>BASIC COMMAND UNIT EFFECTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police Organisation</td>
<td>.11 (.03)***</td>
<td>.08 (.03)***</td>
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<tr>
<td>Perceptions of police visibility</td>
<td>.00003 (.0001)</td>
<td>.00003 (.0001)</td>
</tr>
<tr>
<td>Police officers (per 100,000)</td>
<td>.13 (.02)***</td>
<td>-.08 (.02)***</td>
</tr>
<tr>
<td>Recorded Crime</td>
<td>.01 (.002)**</td>
<td>.01 (.002)**</td>
</tr>
<tr>
<td><strong>RANDOM EFFECTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCU Level</td>
<td>.014 (.002)***</td>
<td>.013 (.002)***</td>
</tr>
<tr>
<td>Neighbourhood Level</td>
<td>.018 (.002)***</td>
<td>.015 (.002)***</td>
</tr>
<tr>
<td>Individual Level</td>
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<td>.913 (.005)**</td>
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<td>-2*Loglikelihood</td>
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<td>198356.08</td>
</tr>
<tr>
<td>Number of cases</td>
<td>71749</td>
<td>71749</td>
</tr>
</tbody>
</table>

***p<.001; **p=.01; *p=.05

Model 2 provides initial support for hypotheses H1 to H3. Residents living in police jurisdictions where the police were perceived to be frequently patrolling the streets reported significantly higher levels of confidence in the police than residents with
similar individual characteristics living in areas where the police were perceived to be less visible. Similarly, residents are most confident in the police when they live within the jurisdiction of police units that report low levels of recorded crime and high rates of sanction-detections (which refers to the crime clear-up rate).

However, despite the numbers of police officers per 100,000 of the population varying across each BCU (see Appendix G), this variation was not significantly associated with variations in confidence in the police. This finding held even when perceptions of police visibility were excluded from the model, providing evidence to suggest that it is not the volume of officers as a whole, but the numbers that are perceived to be visibly policing the streets that induces confidence in policing. Indeed, the correlation between police strength and police visibility across BCUs shows that they are only weakly correlated \( r = .22; p = .01 \), meaning that areas with a greater number of police officers are not necessarily those where more police officers are seen patrolling the streets. Exploring the null finding further, an interaction term was introduced to the model between the variable measuring police strength and that measuring crime rates. This was incorporated in order to show whether police numbers per 100,000 of the population were more important in driving residents’ confidence in the police in high crime areas, but this also produced a very small, non-significant coefficient.

Model 4, in Table 6.4, adds variables to the model that measure neighbourhood characteristics. Doing so slightly reduces the effect sizes of the variables measuring police visibility and recorded crime rates at the BCU level, but their statistical significance remains unchanged; confidence in policing is higher among residents living within BCUs that report low levels of recorded crime and high rates of sanction-detections, and where police officers are more frequently seen patrolling the streets. However, the numbers of police officers per 100,000 of the population that are employed within a BCU continues to have no effect upon confidence in policing.

At the neighbourhood level, confidence is lower among those living in areas of socio-economic disadvantage. Importantly, this effect is over and above that of the socio-economic status of individual respondents; having controlled for this individual level influence, the status of others living in an individual’s neighbourhood has an
additional effect upon their perception of the police. The effect of housing profile is also negative, indicating that confidence is lower among those living in areas with large proportions of vacant property and terraced housing. However, measures of neighbourhood age profile and ethnic heterogeneity have no significant effects on confidence.

The effects of population mobility and urbanisation are positive. This means that confidence is higher among those who live in neighbourhoods that are more transitory and that have a high population density and few areas defined as green-space. These results seem somewhat counter-intuitive, so the area level variables were entered into the model in various sequences to uncover how the contextual effects responded to inclusion. Largely this had no impact upon results, so I conclude that the finding is robust. However, it is interesting to note that urbanisation had no statistically significant effects upon confidence when the recorded crime rate at the neighbourhood level was omitted from the model. It seems likely that this is evidence of a suppressor effect. When adding a variable to a model strengthens the effect of an existing covariate, the new variable, in this case the crime rate, is said to have been ‘suppressing’ the true effect of the original explanatory variable. This can occur when one of the explanatory variables is positively correlated with the dependent variable and the other covariate is negatively correlated with the dependent variable, but when both covariates are also positively correlated with one another (Astin 1991). Given that crime rates and urbanisation are positively correlated \((r = .42; p = <.01)\), that the crime rate is negatively associated with the dependent variable and that urbanisation is positively associated with confidence, it seems likely that this is a suppression effect, the exclusion of crime rates from the model thereby masking the impact that urbanisation has upon confidence.

Finally, recorded crime has a negative effect, implying that residents living in neighbourhoods with higher levels of crime will be less confident in the police than similar residents living in areas with lower crime rates, an effect which is over and above the crime clear-up rate. Moreover, this negative effect is in addition to the negative effects that having been a victim of crime has upon an individual’s perception of the police.
The contextual measures incorporated into the model are able to explain 30% of the variance in confidence in the police at the area levels. The statistically significant fall in the deviance statistic of 8056 with 12 degrees of freedom \((p=<.001)\) also confirms the importance of these contextual level variables in explaining individuals’ perceptions of the police. The models presented in Tables 6.5 and 6.7 investigate whether some of the individual level correlates of confidence are moderated by the neighbourhood characteristics of the area in which individuals live and whether neighbourhood characteristics are moderated by the performance of BCUs within which neighbourhoods are situated. For example, we might expect the negative effects of low-level disorder on confidence in the police to be stronger for those living in areas of socio-economic disadvantage.

Given the limited research evidence in this area and that the few multilevel studies that have been conducted to examine public confidence in the police have either found no evidence of any random coefficients, or have not reported whether they even tested for random coefficients, an exploratory approach was taken to identify which effects might vary across neighbourhoods or police jurisdictions. As such, each coefficient was allowed to vary at the area level on its own, examining the change in the \(-2\times \text{loglikelihood}\) and the chi square test to determine its significance (Hox 2002). The \(-2\times \text{loglikelihood}\) was adjusted for the loss of 2 degrees of freedom, as a random coefficient also includes a covariance term with the intercept (Snijders and Bosker 1999). Any random coefficients that resulted in a significant drop in the deviance statistic were then estimated together in a single model. Only those that reached statistical significance at this second stage were subsequently free to be random at the area level. This variable-by-variable approach is taken to avoid estimation problems, as it is likely that a model would not converge if all random coefficients were estimated simultaneously (Hox 2002). It also produces a parsimonious model that maintains as many degrees of freedom as possible (Snijders and Bosker 1999). When more than one individual level coefficient varies across neighbourhoods, or more than one neighbourhood level coefficient varies across BCUs, a covariance term is produced between the random coefficients. When there is no theoretical interest or justification for estimating these covariance terms, as is the case here, it is recommended that they be constrained to 0, reducing the number of degrees of
freedom that are lost and producing a more parsimonious model (Snijders and Bosker 1999).

Table 6.5: Random Coefficients Model

<table>
<thead>
<tr>
<th>Random Coefficient Effects (S.E)</th>
<th>Variance Covariance (S.E)</th>
</tr>
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<td><strong>FIXED EFFECTS</strong></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.61 (.07)***</td>
</tr>
<tr>
<td>Age (Ref: 65 years plus)</td>
<td></td>
</tr>
<tr>
<td>Aged 15-34</td>
<td>.07 (.01)***</td>
</tr>
<tr>
<td>Aged 35-64</td>
<td>.12 (.01)***</td>
</tr>
<tr>
<td>Gender (Ref: Male)</td>
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</tr>
<tr>
<td>Female</td>
<td>.13 (.01)***</td>
</tr>
<tr>
<td>Ethnicity (Ref: White)</td>
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</tr>
<tr>
<td>Asian</td>
<td>-.31 (.02)***</td>
</tr>
<tr>
<td>Black</td>
<td>-.22 (.03)***</td>
</tr>
<tr>
<td>Mixed/Other</td>
<td>-.11 (.03)***</td>
</tr>
<tr>
<td>NS-SEC (Ref: Professional/managerial)</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>.05 (.01)***</td>
</tr>
<tr>
<td>Routine and Manual</td>
<td>.01 (.01)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>-.003 (.03)</td>
</tr>
<tr>
<td>Student</td>
<td>-.01 (.03)</td>
</tr>
<tr>
<td>Marital Status (Ref: Married)</td>
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</tr>
<tr>
<td>Single</td>
<td>-.02 (.01)</td>
</tr>
<tr>
<td>Widowed</td>
<td>-.15 (.01)***</td>
</tr>
<tr>
<td>Separated/Divorced</td>
<td>-.03 (.01)**</td>
</tr>
<tr>
<td>Mobility</td>
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<tr>
<td>Year (Ref: 2008/09)</td>
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</tr>
<tr>
<td>Survey Sweep</td>
<td>.05 (.01)***</td>
</tr>
<tr>
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<tr>
<td>Victim of Crime</td>
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<tr>
<td>Disorder</td>
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<tr>
<td>Interviewer Rated Disorder</td>
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</tr>
<tr>
<td>.01 (.002)***</td>
<td>.01 (.002)***</td>
</tr>
<tr>
<td>NEIGHBOURHOOD EFFECTS</td>
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<tr>
<td>Neighbourhood Characteristics</td>
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</tr>
<tr>
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<td>Urbanisation</td>
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<tr>
<td>Crime</td>
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<td>Local Recorded Crime</td>
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<td>BASIC COMMAND UNIT EFFECTS</td>
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<td>Police Organisation</td>
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<tr>
<td>Perceptions of police visibility</td>
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<tr>
<td>Police officers (per 100,000)</td>
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<td>Police Effectiveness</td>
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<td>-2*Loglikelihood</td>
<td>198196.44</td>
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<td>Number of cases</td>
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***p<.001; **p<.01; *p<.05
Table 6.5 presents the results of this procedure. The column named ‘Variance (S.E)’ and ‘Covariance (S.E)’ shows the estimated variances and standard errors of the random coefficients and their covariance with the random intercept. H5 hypothesised that police organisation and strategy would moderate the effects of neighbourhood characteristics on confidence. For example, it was thought that a higher concentration of police officers patrolling the streets might have offset the negative effects of living in a disadvantaged neighbourhood. However, looking at the variance and covariance columns shows that none of the individual level, or neighbourhood level variables were found to vary at the BCU level, indicating that the effects of socio-demographic characteristics and neighbourhood environments on confidence in policing are no weaker or stronger in one police jurisdiction compared to another. For the police, these null findings have important implications, suggesting that nothing they might have done over the survey period in terms of reducing crime, increasing the numbers of solved crimes and increasing police visibility lessened the negative effects of neighbourhood disadvantage, housing profile and recorded crime on residents' confidence in policing, nor did it enhance the positive effects of living in neighbourhoods characterised by urbanisation and population mobility.

While the individual level effects were not found to vary at the BCU level, Table 6.5 shows that the effects of victimisation and living in streets with visible signs of physical disorder are not experienced uniformly across all individuals, but vary significantly across neighbourhoods. Employing the method of Snijders and Bosker (1999: 85), the degree to which these individual level relationships with confidence vary across neighbourhoods can be examined using the following formula: Middle 95% of neighbourhoods = \( \text{effectsize} \pm 1.96 \times \sqrt{\text{variance}_{u/j}} \).
Table 6.6: Variance across middle 95% of Neighbourhoods

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<td>.14</td>
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</tbody>
</table>

Table 6.6 presents the range of coefficient values across the middle 95% of neighbourhoods. On average, across all neighbourhoods, a one unit increase in interviewer rated disorder results in a .06 unit decrease in confidence in policing, while on average, across all neighbourhoods, victims of crime are .24 units less confident in the police than those who have not been a victim of crime. However, random coefficients for these variables show that the strength of these effects are different across different neighbourhoods, so that in some neighbourhoods the negative effect of these variables is even stronger, while in others the relationship actually works in the opposite direction to the population average. For example, the average effect across all MSOAs of being a victim of crime upon confidence is -.24. However, in some neighbourhoods this negative effect is nearly three times as strong, while in others those who have been a victim actually have greater confidence in the work that the police are doing than those who have not been subject to crime. The positive covariances of these random coefficients indicate that in areas where confidence in the police is lower, the negative relationship between these two individual level variables and confidence will be stronger, and vice versa.

Having identified that some individual level relationships with confidence are moderated by neighbourhood, the introduction of cross-level interactions between the individual and contextual effects can aid in explaining this variability. Statistically significant cross-level interactions are shown in Table 6.7.
Table 6.7: Cross Level Interactions Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Fixed Effect (S.E)</th>
<th>Variance Covariance (S.E)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RandomCoefficient</td>
<td>Effect (S.E)</td>
</tr>
<tr>
<td>Constant</td>
<td>.61 (.07)**</td>
<td></td>
</tr>
<tr>
<td>Age (Ref: 65 years plus) Aged 15-34</td>
<td>.07 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Aged 35-64</td>
<td>.12 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Gender (Ref: Male) Female</td>
<td>.13 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Ethnicity (Ref: White) Asian</td>
<td>-.31 (.02)***</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-.22 (.03)***</td>
<td></td>
</tr>
<tr>
<td>Mixed/Other</td>
<td>-.11 (.03)***</td>
<td></td>
</tr>
<tr>
<td>NS-SEC (Ref: Professional/managerial)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>.05 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Routine and Manual</td>
<td>.01 (.01)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>-.004 (.05)</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>-.004 (.03)</td>
<td></td>
</tr>
<tr>
<td>Marital Status (Ref: Married)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>-.02 (.01)</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>-.15 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Separated/Divorced</td>
<td>-.03 (.01)**</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Residence</td>
<td>-.03 (.002)***</td>
<td></td>
</tr>
<tr>
<td>Year (Ref: 2008/09) Survey Sweep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victimisation (Ref: Non-victim)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewer Rated Disorder</td>
<td>-.06 (.01)***</td>
<td>.03 (.01)***</td>
</tr>
<tr>
<td>MSOA CONTEXTUAL EFFECTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Disorganisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio-economic disadvantage</td>
<td>-.03 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Victim of Crime</td>
<td>-.06 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Disorder</td>
<td>-.01 (.004)**</td>
<td></td>
</tr>
<tr>
<td>Urbanisation</td>
<td>.02 (.01)*</td>
<td></td>
</tr>
<tr>
<td>Population Mobility</td>
<td>.04 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Age Profile</td>
<td>.01 (.01)</td>
<td></td>
</tr>
<tr>
<td>Housing Profile</td>
<td>-.03 (.01)***</td>
<td></td>
</tr>
<tr>
<td>Ethnic Heterogeneity</td>
<td>.05 (.06)</td>
<td></td>
</tr>
<tr>
<td>Crime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Recorded Crime</td>
<td>-.04 (.01)**</td>
<td></td>
</tr>
<tr>
<td>BCU CONTEXTUAL EFFECTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police visibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of police visibility</td>
<td>.08 (.02)***</td>
<td></td>
</tr>
<tr>
<td>Police officers (per 100,000)</td>
<td>.00003 (.0001)</td>
<td></td>
</tr>
<tr>
<td>Recorded Crime</td>
<td>-.08 (.02)***</td>
<td></td>
</tr>
<tr>
<td>Sanction-Detections</td>
<td>.01 (.002)**</td>
<td></td>
</tr>
<tr>
<td>RANDOM EFFECTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCU Level</td>
<td>.012 (.002)***</td>
<td></td>
</tr>
<tr>
<td>Neighbourhood Level</td>
<td>.015 (.002)***</td>
<td></td>
</tr>
<tr>
<td>Individual Level</td>
<td>.901 (.01)***</td>
<td></td>
</tr>
<tr>
<td>-2*Loglikelihood</td>
<td>198150.72</td>
<td></td>
</tr>
<tr>
<td>Number of cases</td>
<td>71749</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.7 shows that two cross-level interactions were found to have statistically significant effects, demonstrating that differences in confidence in the police based on
interviewer assessments of disorder and crime victimisation are directly related to the degree of socio-economic disadvantage in the neighbourhood in which people live. Their inclusion in the model decreased the deviance statistic by 47 with 2 degrees of freedom (p<.001). This improvement in model fit indicates that it is important to consider local contexts when examining individual level relationships with confidence.

The negative effect of living in socio-economically deprived areas on confidence in the police is stronger for victims than non-victims. This can be shown graphically by plotting levels of confidence against socio-economic disadvantage separately for those who have and have not been a victim of crime. The fitted values are for the average resident (when all other variables in the model are set to 0).

Figure 6.1: Confidence in the police by victimisation and level of neighbourhood socio-economic disadvantage

![Figure 6.1: Confidence in the police by victimisation and level of neighbourhood socio-economic disadvantage](image)

Figure 6.1 shows that in contrast to victims of crime, the level of confidence among non-victims is fairly stable, regardless of the degree of socio-economic disadvantage within the neighbourhoods in which they live. However, the slope for victims is much steeper, showing that the neighbourhood environment in which victims live has a large influence upon whether the experience damages their confidence in policing. If victims live in more prosperous areas (towards the left of the graph) their confidence in the police is only slightly lower than non-victims, but if victims live in
very disadvantaged areas (towards the right of the graph), the difference in confidence in the police is stark, victims being much less confident in the police than non-victims.

Table 6.7 also shows a significant negative interaction between interviewer ratings of disorder and neighbourhood levels of socio-economic disadvantage. This means that the negative effect of disorder on confidence in the police is larger in areas that experience a greater degree of disadvantage. Figure 6.2 reveals that the difference in confidence between those who live on disorderly streets and those who do not, is much larger among those living in disadvantaged neighbourhoods than those living in prosperous neighbourhoods. Furthermore, irrespective of the degree of disadvantage in their neighbourhoods, levels of confidence are relatively stable among those who do not face disorder in their immediate area. In contrast, disorder magnifies the effect of disadvantage; among those who do live on disorderly streets, confidence is significantly lower in areas of above average disadvantage, but significantly higher than average among those living in more prosperous areas.

Having incorporated contextual variables and random coefficients, Table 6.7 shows that there is still significant unexplained variation in levels of confidence in policing across BCUs (1.2%) and neighbourhoods (1.5%). The failure to explain all area level
variance in confidence may be a result of the limited data available to measure contextual effects. Nevertheless, in comparison to the random intercept model (Model 1 in Table 6.3), the contextual effects that have been measured have been able to explain 17% of the MSOA level variation in confidence in policing and 37% of the BCU level variation in confidence.

6.7 Discussion

Criminological studies have consistently pointed to the importance of neighbourhood environments in shaping residents' confidence in the police, but none have examined how residents' confidence is influenced by the organisation and effectiveness of the local police unit that serves their neighbourhood. Research has provided some evidence to suggest that the strategies employed by the police and perceptions of their success in carrying out their roles plays a significant part in shaping an individual’s assessment of the police service (see Chapter 5), but the analysis presented in this chapter is the first to consider whether variations in confidence across police jurisdictions reflect the organisation and the successes and failures of local policing teams. Moreover, in assessing police effectiveness and neighbourhood environments, researchers have predominantly relied on survey perception data, typically neglecting any examinations of more objective measures, making it difficult to draw robust conclusions about cause and effect. Where objective measures have been employed to capture neighbourhood characteristics, scholars have often used statistical methods that cannot take the hierarchical structure of the data into account.

This chapter addresses these methodological and substantive limitations, and in doing so, uses indicators of neighbourhood characteristics, disorder, crime and police effectiveness that are collected independently of the perceptions of survey respondents. The findings show that variations in confidence in the police can, in part, be attributed to the local neighbourhoods within which people live and the local policing units that serve those neighbourhoods; the visibility and effectiveness of the police and the structural characteristics of neighbourhoods all work to influence residents’ confidence in the police.
As might be expected, residents’ confidence varies across police units in accordance with the sanction-detection rate and across both police units and neighbourhoods in accordance with the crime rate. Prior research has tended to rely upon perceptions of crime and perceptions of police effectiveness, rather than more objective measures of police performance, and have concluded that confidence is higher among those individuals who believe the police are effective. The multilevel studies reviewed earlier in this chapter did use more objective measures of crime, but produced mixed findings concerning whether or not confidence was higher among those living in neighbourhoods with low crime rates (Sampson and Jeglum-Bartusch 1998; Reisig and Parks 2000; Schuck et al. 2008; Dai and Johnson 2009). However, rather than relying on data taken from just one US city, the findings presented in this chapter were based upon a representative sample of all neighbourhoods in England, which may account for the divergence in results. They suggest that, in England, the public are aware of the successes and failures of their local policing teams in carrying out their role of crime detection, which has implications for the police in ensuring that they publicise their successes sufficiently to keep residents informed. Nevertheless, the fact that the crime rate affects confidence over and above the detection rate implies that the police can be highly effective at solving crimes, but confidence in their service will still be reduced if crime rates are high.

Variations in police strength across police units (measured by the numbers of police officers employed per 100,000 of the population) were not related to variations in residents’ confidence. It would be reasonable to assume that police units with more officers would be more successful in fighting crime and providing a visible, reassuring presence for residents, thereby improving confidence. However, even when the controlling effects of crime, disorder and perceptions of police visibility were removed from the multilevel models, police strength had no impact upon residents’ confidence in the police. The data provided by the Home Office (2008b) was a measure of the number of police officers per 100,000 residents in each BCU, but it is possible that if a different denominator was used, police strength would have had an effect on confidence. For example, it is possible that calculating the ratio of police officers to the number of crimes in each BCU would have produced different results, although when an interaction term between police strength and crime was added to the model, it had no significant effect, indicating that police strength was no
more important in predicting confidence in high crime BCUs than in low crime
BCUs. Other denominators may also have produced different results, such as
population density, or the number of police officers per square mile. Given that
police numbers are now going down and given the degree of speculation about the
effects that this may or may not have on crime rates, public confidence and so on,
future research might usefully explore the effects of police numbers on confidence
when using different denominators.

In contrast, police visibility had a strong effect, confidence being much higher in
those areas where the police are frequently seen patrolling on foot. A number of
studies have suggested that increasing police visibility will raise confidence in the
police (Bennett 1991; Hawdon and Ryan 2003; Bradford et al. 2009a) and this study
adds weight to such arguments. However, like these previous studies, the conclusions
are reliant upon respondents’ perceptions of police visibility rather than any more
objective records of police activities and movements. This means that I cannot clarify
the extent to which survey responses to questions concerning police visibility are
distinct from responses regarding confidence in the police, nor whether they are a
reflection of respondents’ characteristics rather than of police activity. However, it is
hoped that aggregating responses to the level of BCU has minimised the effects of any
extreme differences in perceptions of police visibility between neighbouring residents.
Moreover, it may not be appropriate to measure police visibility ‘objectively’; even if
data regarding the volume of time police officers were patrolling the streets were
available, if individuals do not see them, it cannot play a part in shaping their
confidence. While questions of robustness remain, the findings provide a tentative
indication that it is not the raw number of police officers per se, but the extent to
which they are visible to local residents that instils greater confidence in their service
among the residents’ they protect.

In line with other multilevel studies of neighbourhoods and confidence in the police
(Sampson and Jeglum-Bartusch 1998; Reisig and Parks 2000; Schuck et al. 2008; Dai
and Johnson 2009), confidence was found to be lower among those living in areas of
disadvantage; both the condition of housing and the socio-economic status of
residents in a neighbourhood impacts upon the confidence of those living within
them. This finding is independent of the levels of crime and disorder that might be
experienced in these areas. Sampson and Jeglum-Bartusch (1998) suggest that the negative relationship between neighbourhood disadvantage and confidence is a result of a lack of cohesion and shared norms of order among residents. Indeed, it is argued that disadvantaged areas are likely to have fewer resources and opportunities to invoke social cohesion and to develop and maintain systems of informal social control (Shaw and McKay 1942) and much research (including the results from Chapter 5) has provided evidence to suggest that confidence in the police is lower in neighbourhoods where social networks are weak and informal social control mechanisms not engaged (Cao et al. 1996; Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009).

While Sampson and Jeglum-Bartusch (1998) found that population mobility had no effect upon confidence in policing, the results presented in this chapter showed that transitory neighbourhoods tended to house residents with more positive evaluations of the police. Confidence was also higher among those living in more urban neighbourhoods. These results seem counter-intuitive given that these sorts of neighbourhoods are often associated with factors such as crime and disorder (Shaw and McKay 1942), but the positive effects of urbanisation and population mobility are net of the effects of crime and physical disorder. Since variables concerning police effectiveness and strategy can explain variation in confidence across BCUs, it may be the case that variations in police strategy across neighbourhoods, strategies which I had no direct measurements of, could explain these findings. For example, Chapter 5 revealed the positive effects that neighbourhood policing can have upon residents’ confidence in the police and it is possible that these urban, transitory neighbourhoods, which are most likely to experience low-level crime and disorder that neighbourhood policing is trying to eradicate, are those that are benefiting from neighbourhood policing the most, increasing residents’ confidence in the police.

On the basis of suggestions that areas of ethnic heterogeneity are less cohesive and lack informal social controls (Goodhart 2004; Putnam 2007), research has looked at its effects upon a number of outcome variables. In line with Pennant (2005), this research found no evidence of a relationship between ethnically diverse neighbourhoods and evaluations of the police, people living in ethnically homogenous neighbourhoods being no more confident than those in diverse neighbourhoods.
However, it is interesting that ethnic minority individuals lacked confidence in the police, even after controlling for neighbourhood and BCU conditions, which is counter to the American evidence (Sampson and Jeglum-Bartus 1998; Reisig and Parks 2000; Schuck et al. 2008; Dai and Johnson 2009). Consequently, in the UK context, it would seem that dissatisfaction among the ethnic minority population is more likely to be a result of factors this analysis was unable to examine, such as police misconduct (Weitzer and Tuch 1999; Sharp and Atherton 2007) or harassment (Bowling and Foster 2002), rather than neighbourhood ecological conditions. Further contradicting evidence from the US was the finding that the age profile of neighbourhoods had no impact upon the confidence of residents. However, the measures and method employed here were more robust than those used by Reisig and Giacomazzi (1998) and contrasting findings are likely to reflect such differences.

Interviewer ratings of physical disorder around respondents’ households are negatively associated with confidence at the individual level. Importantly, this effect holds even after controlling for a range of other factors including rates of crime, disadvantage and police effectiveness, which highlights the need for the police to continue their recent focus on helping local communities to tackle low-level disorder in order to raise confidence in policing (Quinton and Morris 2008). The majority of other studies that have emphasised the importance of disorder and crime to residents’ evaluations of the police have relied upon survey perception data, meaning that any relationships uncovered could be endogenous. This analysis provides evidence of a relationship with crime and disorder, which is measured independently of survey responses to the outcome variable, lending support to police and policy initiatives that emphasise the need to reduce neighbourhood crime and low-level disorder in order to increase public confidence in the police (HMIC 2008; Quinton and Morris 2008).

In addition to visible physical disorder, having been a victim of crime also reduced confidence in the police at the individual level. However, the negative effects of victimisation are not felt uniformly across neighbourhoods, but are moderated by the extent of neighbourhood socio-economic disadvantage. The analysis did not control for repeat victimisation, but it may be that victims are more likely to be subject to a number of crimes in disadvantaged areas than those in more prosperous neighbourhoods, resulting in higher dissatisfaction with the police, or that this
vulnerable section of the population are more attuned to their local environment with the attendant lack of shared social norms and informal social controls that are likely to be present in disadvantaged neighbourhoods (Sampson and Jeglum-Bartusch 1998). Similarly, the negative effect of disorder is compounded in disadvantaged areas. As discussed by Sampson and Raudenbush (2004), perceptions of disorder seem to be shaped just as much by the presence of disadvantaged minority groups as they are with actual signs of neighbourhood crime and disorder. Assuming that observed disorder increases perceptions of disorder and that both have a negative effect upon confidence, it is not surprising that these negative effects are stronger in areas with a higher concentration of disadvantaged residents.

Despite the inclusion of these cross-level interactions, variation in the effects of disorder and victimisation across neighbourhoods remained, meaning that while on average victims and those suffering disorder are less confident in the police, in some neighbourhoods such individual level conditions will have different effects on evaluations of the police. This may indicate that the model needs additional measures of neighbourhood characteristics. For example, it is likely that indices measuring elements of neighbourhood collective efficacy would further moderate relationships between both disorder and confidence, and victimisation and confidence. Moreover, it may be that the individual level variables are measured inadequately; an index that incorporates data regarding the frequency of victimisation and another that covers a broader range of physical and social disorders might reveal whether variation in confidence in these groups is a consequence of the particular nature of disorder and the severity of victimisation.

This chapter has demonstrated the importance of neighbourhood contexts and police organisation to citizens’ perceptions of the police. However, the analysis would be strengthened if other contextual data were available, not only to capture additional neighbourhood characteristics, particularly cohesion and the strength of informal social controls, but also data concerning police practice and effectiveness. For example, data has been captured at the Police Force Area level to measure the proportion of officers’ time that is spent carrying out frontline duties (Home Office 2008c). It would have been beneficial to this analysis if it were available at a smaller-spatial scale. Other indicators of use might be the number of complaints made against
the police across BCUs, or the degree to which they engage with their local communities, all of which might help to explain the variation in confidence across BCUs that the variables included in this analysis have not been able to account for.

It should also be noted that the measure and definition of ‘neighbourhood’ used here is only one of many that could have been employed. The use of postcode sectors, for example, would have produced ‘neighbourhoods’ based upon different boundaries in comparison to those of MSOAs. Consequently, in line with what is called the modifiable areal unit problem (MAUP), if a different definition of neighbourhood had been used, or if police jurisdictions were reorganised to cover different geographical areas, the analysis may have produced contrasting evidence regarding the extent to which confidence varies across neighbourhoods and BCUs and the contextual influences that can account for such variations (Openshaw 1984).

The results have implications for the police and police strategy. Firstly, confidence seems to vary across small neighbourhood areas and as a result of neighbourhood conditions, which lends support to the philosophy behind the neighbourhood policing initiative, which advocates providing neighbourhoods with their own dedicated policing team, tailoring police objectives towards the needs of individual communities to improve neighbourhood conditions and to raise confidence in policing (HMIC 2008; Bullock 2010). On the other hand, since there was no evidence that the effects of individual and neighbourhood characteristics varied across BCUs, it would seem that at this higher level, the police can do little to lessen any negative effects of individual characteristics and neighbourhood environments. Secondly, much of the research that has linked crime and disorder to confidence in the police has relied upon survey perception data, but it may be the case that such perceptions are reciprocally associated with respondents’ assessments of the police, or that both perceptions and confidence are linked with other information, beliefs or contextual cues (Sampson and Raudenbush 2004). This study has provided evidence to support a relationship between confidence and crime and disorder, but has done so using measures of disorder and crime that are independent of survey responses to the outcome variable. Thirdly, despite this support for tackling localised low-level problems, the results also suggest that the police must not lose sight of their key role in preventing and solving crimes, as the public seem to adjust their evaluations of the police in line with police
success in fulfilling these core objectives. Fourthly, recent cuts to police budgets has led the Association of Chief Police Officers (2010) to concede that this will result in the reduction of police officers across England and Wales. While the evidence provided here would suggest that this will not directly affect confidence in policing, confidence will suffer if these reductions lead to increases in crime and disorder and the reduction of police officers patrolling the streets (as the, albeit weak, correlation between police numbers and perceptions of police visibility suggest that it will). Further research would be needed before any conclusions could be drawn as to the importance of police strength in shaping public confidence, such as exploring the effects of using alternative denominators of police strength.

Finally, while the current coalition government have put a stop to setting the police targets to improve public confidence in their service, any similar targets and performance measures that might be imposed in the future should be mindful of variations in confidence that are the result of uneven sample composition. The results showed that 9% of the variation in confidence across BCUs was a result of differential composition rather than variations in public confidence in the police. Performance measures that typically compare means or percentages across BCUs cannot account for such complexities and will produce biased assessments that are not a true reflection of differences in confidence across police jurisdictions.

It is commonly asserted in the literature that neighbourhood context plays a strong role in shaping residents’ confidence in the police. This chapter has used multilevel modelling to conduct a statistically rigorous examination of such arguments, producing results to suggest that confidence does vary across neighbourhoods and in accordance with the structural conditions of neighbourhoods. Moreover, the findings demonstrate that neighbourhood conditions moderate individual differences in confidence. Furthering such contextual arguments, this was the first study to take into account variations in confidence across police jurisdictions, variations that were shown to be a product of police effectiveness and visibility. This analysis represents a more thorough and methodologically sophisticated examination of area level differences in confidence in the police than has been achieved in the past and is the first of its kind in the UK context. The data employed encompass a wider geographical area and cover a wider range of neighbourhood structural characteristics.
than have been considered before, while the analysis also considers the impact of variations in police organisation and effectiveness, a previously neglected line of enquiry.
Chapter 7: Discussion

Understanding the drivers and inhibitors of public confidence in policing has become a key concern of academic criminologists and policy makers alike over the past two decades. In the wake of target-led, efficient, specialised policing, which accompanied a significant reduction in rates of recorded crime in the 1980s and early 1990s, came evidence of a disjuncture between this 'objective' evidence and public opinion about police performance. Survey evidence showed that the public believed crime to be rising, had less confidence in the police than they had in the recent past, and were becoming increasingly fearful of victimization (Innes and Fielding 2002; Herrington and Millie 2006). In response, a more citizen-focused policing strategy was developed which placed the public at the centre of policing, took their expressed concerns seriously and adopted practical measures to address these concerns. This reflected a broader recognition that, although public perceptions may sometimes appear 'irrationally' at odds with more objective indicators of police performance, they have consequences of their own; if citizens do not have confidence in the police they are less likely to defer to police authority, to report crimes, provide witness information, or to obey the law themselves (Hough and Roberts 2004; Tyler 2004).

The Labour government’s emphasis on public perceptions of the police developed over their time in power from ‘citizen-focused policing’ to the introduction of ‘neighbourhood policing’ and to assessing police performance with one, sole measure concerning the degree to which the public had confidence in the police (Home Office 2009a). While the coalition government have shifted the focus of their policing policy back toward crime and disorder prevention, they, like the previous government, still seem to place importance on public opinion, emphasising the need for visible, accessible and accountable policing in order to ensure that the public have “confidence” and “trust” in the abilities of the police to cut crime and disorder, to respond to the needs of the public and to act with integrity (Home Office 2010c). However, they have also cut police funding, so the police must now achieve these goals with less money and fewer police officers (ACPO 2010).
Previous investigations of confidence in policing have primarily focused on explaining variations in confidence across groups, attributing differences between individuals to their socio-demographic characteristics, perceptions of crime and neighbourhood conditions, the media and knowledge about crime and policing, as well as the manner in which the police behave, or are thought to behave, when they encounter members of the public. Considerably less empirical attention has been paid to the influence that the organisation, strategies and effectiveness of the police can have upon the public’s assessments of the institution. In part, it is likely that this is a result of the majority of scholars relying on secondary survey data, their analyses being limited by the questions that government and police administrators have deemed important for their surveys. Nevertheless, without examining the effects that the police themselves can have on influencing the public’s perceptions of the police service, it is difficult for policy makers and the police to set priorities, direct activities and engage in behaviours that will aid in increasing public confidence in policing.

Like previous research, the analyses presented in this thesis are also limited in scope by the availability of data regarding police activities and effectiveness and by the subject matter of secondary survey data, but, as far as possible, attention has been paid to the abilities of the police and to the ways in which they operate and organise themselves. Chapter 5 examined how the neighbourhood policing initiative that has been employed over the last five years might impact upon confidence in the police, as well as the influence that perceptions of police conduct and effectiveness might have on confidence. This built on evaluative studies that have examined whether levels of confidence changed as a result of the implementation of neighbourhood policing, by examining the complex causal mechanisms by which the methods and strategies of neighbourhood policing might work to shape public confidence in the police. Chapter 6 investigated how confidence varies across police jurisdictions according to their effectiveness at preventing and solving crime and according to the manner in which they are organised, regarding the distribution of police officers across police jurisdictions and the volume of police officers patrolling the streets. This is the first time in the UK that a multilevel framework has been applied to the study of confidence in policing and the first time that such a framework has been used to explore the effects of police organisation and effectiveness on confidence.
Researchers’ reliance on secondary survey data, and specifically on cross-sectional survey data, has also meant that there has been little empirical consideration of how public confidence in policing has changed over time, nor the factors that might account for rises and falls in public assessments of the police service. Plugging this gap in the literature, Chapters 3 and 4 explored changing attitudes towards the police over time and investigated whether changes in confidence were associated with changes in its key correlates.

The use of cross-sectional survey data has a second drawback concerning the subsequent difficulty of drawing robust conclusions of cause and effect. When analysing survey responses to questions asked of the same survey respondent, at the same point in time, it is difficult to establish whether a response to a particular question caused the response to another, or vice versa (Schuman and Presser 1981; Tourangeau and Rasinski 1988). In addressing this problem, where data is available I have incorporated measures of explanatory factors that are measured independently of survey responses used to measure confidence in policing, while the use of time series data can also aid in establishing more plausible evidence regarding causal order.

Throughout the thesis I have used a variety of advanced quantitative methods. Substantively, this has meant that I have been able to tackle new research questions that attempt to explain changes in confidence over time, variations in confidence over geographical areas, the complex direct and indirect effects of police strategy and the multidimensionality of people’s attitudes towards the police. Methodologically, using a number of different methods of measurement and analysis aids in assessing the robustness and validity of a putative causal mechanism (Campbell and Fiske 1959) and has meant that the substantive questions have been approached appropriately, lessening the probability of drawing erroneous conclusions. For example, I could not have explained changes in confidence in policing over time using standard ordinary least squares regression, for the temporal ordering of the data would have violated one of its underlying assumptions that residuals are independent of one another.
7.1 Summary of the Research

In this section I review the motivations behind each of the analysis chapters, as well as their findings and implications for policing, before drawing out the key findings and messages that come from the research as a whole in the following section.

7.1.1 Confidence in Policing over Time

In Chapter 3, I argued that the empirical focus of academic criminologists on identifying variations in confidence in policing between groups has been at the expense of exploring how public confidence in the police has changed over time. There have been strong arguments in the criminological literature concerning declines in confidence in policing since the 1950s. These theoretical arguments have envisaged the 1950s as a time at which public support for the police was strong and local ‘bobbies’ were revered and perceived as trustworthy protectors of their communities, but they contend that since this time the police have experienced a steady fall in public support (Reiner 1992a; Reiner 1992b; Bowling and Foster 2002). This has been attributed to many factors, including the introduction of patrol vehicles and the disappearance of local police officers patrolling the streets (Neyroud 2008), incidents of police misconduct (Newburn 2007; Newburn and Reiner 2007) and the growth of a diverse and modern society with a ‘declining deference to authority’ (Hough and Roberts 2004). Nevertheless, only very limited evidence is available to determine whether confidence in policing has in fact deteriorated over the years, the results of a few, sporadic surveys that were conducted between the 1950s and 1980s providing only mixed support for the theory.

To more adequately address the question of how public confidence in policing has changed over time, I used data gathered by the BCS between 1981 and 2008 to plot the trend in public confidence in policing. This showed that it did seem to decrease over the 1980s and 1990s, but that subsequently it has been increasing. While data has not been consistently collected to examine trends in confidence since the 1950s, I questioned the validity of the notion of a decline in public confidence from a ‘golden age’ in the 1950s, arguing that it seemed unlikely that confidence in policing would be as strong as it was in the early 1980s if confidence had in fact been declining over
the previous twenty years. Taking the analysis further, I plotted trajectories of confidence for different subgroups of the population, revealing that while levels of confidence differed across these groups, as would be expected from the findings of previous cross-sectional research, these differences did not vary over time, the trajectories of different subgroups all following similar patterns. The only exceptions to this general conclusion were trends in confidence over time across ethnic groups, whose trajectories appeared to have merged, and also across age groups, whose trajectories had converged. However, the finding was not corroborated when conducting the same descriptive analysis with survey data from a different source, so it was concluded that it was an artefact of survey design modifications to the BCS in 2001.

Chapter 3 also plotted the 28 year trend in confidence against that of some of its key correlates. This was to illustrate whether or not the relationships that cross-sectional studies have consistently identified between confidence and perceptions of disorder, crime and social cohesion, worry about crime and between confidence and victimisation, appeared to persist over the long-term. If these explanatory variables really are the driving forces behind public confidence in policing, as cross-sectional analyses tentatively imply, then it might be expected that rises and falls in these variables would be matched by the trend in confidence. However, while the analysis provided some evidence of long-run relationships between these variables, it was only perceptions of crime and perceptions of disorder that seemed to be associated with confidence in policing. The conclusions of this descriptive time series analysis indicated that there may be long-term interdependencies among variables, but the findings were limited, since such descriptive analyses cannot reveal whether any statistically significant long-term relationships exist between these factors.

Building on the findings of Chapter 3, Chapter 4 employed time series regression analysis to more rigorously test whether changes in confidence in policing could be associated with movements in other aggregate level indicators. The few existing studies that have given any consideration to changes in confidence over time have been descriptive in nature, or have focused upon the extent to which levels of confidence have changed in one sub-group relative to another. This means that the processes through which confidence changes over time and the temporal dynamics
that might be operating between predictor variables and confidence in policing at the aggregate level have not been explored. Moreover, by examining whether past changes in explanatory variables are related to contemporaneous levels of confidence, more plausible evidence concerning causal ordering can be obtained than with the use of static cross-sectional data. Consequently, I examined how monthly changes in public confidence in policing between 2001 and 2008 were related to concurrent and prior movements in aggregate indicators that have been identified in the existing literature as predictors of confidence.

In respect of causal ordering, the results showed that at the aggregate level confidence in policing had no effect on aggregate perceptions of disorder, crime, social cohesion and informal social control, nor worry about crime one month into the future, meaning that if confidence does in fact influence such perceptions, the causal mechanism must work contemporaneously. Having identified that feedback loops from the dependent variable to its predictors did not exist, the subsequent time series regression analysis showed that monthly fluctuations in perceptions of disorder and perceptions of crime between 2001 and 2008 were significant predictors of change in confidence in the police, while fluctuations in aggregate worry about crime, social cohesion and informal social control were not.

Skogan’s (2009) use of panel data also revealed that increases in worry about crime were not associated with changes in confidence in policing, and cross-sectional research has often shown that worry about crime is not a significant predictor of confidence once the effects of perceptions of disorder, social cohesion and informal social control have been accounted for (Cao et al. 1996; Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009). These same cross-sectional studies have emphasised the importance of perceptions of social cohesion and informal social control, arguing that the public judge the police not only on their abilities to solve and prevent crime, but also on the degree to which they are able to protect and maintain the stability, order and cohesiveness of communities. However, when explaining changes in confidence in policing at the population level, this does not seem to be the case, instead the public appear to be most concerned about the degree of crime and disorder that they perceive to be occurring.
Somewhat contrary to this conclusion, fluctuations in the rate of victimisation had no effect upon confidence in policing, with the exception that increases in rates of vehicle crime were shown to increase public confidence in policing the following month. It seems unlikely that an increase in the crime rate would improve confidence in the institution that is supposed to be preventing crime, although findings of this sort have been found before (Bradford et al. 2009a). I proposed that it might be that an increase in crime could increase media stories about crime and policing, which itself has been linked to more positive impressions of police effectiveness (Escholz et al. 2002; Dowler 2003). However, before accepting this counter-intuitive finding, further research using different methods of time series modelling, such as error-correction models, would need to be explored.

Finally, changes in police strength were not associated with changes in confidence. It was thought that the public may have more confidence in the police when there were more officers available to patrol the streets and solve crimes. The fact that they do not could mean that rises and falls in police numbers have no effects on confidence. On the other hand, it could be the case that the public are unaware of changes in the numbers of police officers that are employed, or that increases in police officers does not translate into decreases in crime and disorder, nor increases in solved cases, nor the numbers of officers that are assigned to patrol local areas. This uncertainty highlights the lack of data that is available about the police over time, particularly at the monthly level. For example, data concerning the proportion of officers carrying out frontline duties and the number of crimes that the police have been able to solve may have been able to explain changes in confidence in policing. The analysis was also limited by the availability of time series survey data, both in terms of the period of time over which data had been collected and in terms of the variables that had been consistently measured by the survey over that period. Analysing changes in confidence over a longer period of time and with a greater variety of predictor variables, such as perceptions of police visibility and effectiveness, may have altered the conclusions that I have drawn.

The findings have implications for the police, for it is at this aggregate level that administrative assessments of public confidence in policing are made. They suggest that if the police are to increase the average level of confidence across the population,
they must focus on their most primary task of reducing crime and disorder, but more than this, they must ensure that the public are aware of their successes in doing so, since it is changes in *perceptions* of crime and disorder that are associated with changes in public confidence in policing. The findings also have implications for criminological research. While it is well known that one should not expect causal mechanisms to operate in the same way at both the individual and aggregate levels (Robinson 1950), where putative causes are found to be strong and significant predictors at both the individual and aggregate levels and when using different analytical strategies, the robustness of the proposed causal mechanism is enhanced, as is the case for perceptions of disorder and crime. However, where this is not the case, as it was not for perceptions of social cohesion, informal social control and worry about crime, the robustness of the causal mechanism is more questionable.

7.1.2 Police Strategy and Confidence in Policing

The application of time series analysis to the study of confidence in policing in Chapters 3 and 4 was the first of its kind, considering public attitudes toward the police from a slightly different perspective. However, the analyses were restricted by the time series data available, meaning that only limited attention could be paid to the ways in which policing itself might influence confidence in the institution. This is not uncommon; very few research studies have considered the effects that the strategies and activities of the police might have on citizens’ evaluations of policing. Nevertheless, over the last five years, neighbourhood policing has been introduced across England and Wales with the express intention of increasing public confidence in policing by providing communities with accessible, known and visible police officers that take a problem-orientated approach to policing and make efforts to engage with the public in order to identify and tackle local concerns. Evaluations of similar policing methods have produced mixed evidence as to whether or not they are successful in raising confidence in policing, but because of their experimental nature, these studies do not explore the causal mechanisms underpinning such changes. Addressing this, Chapter 5 used cross-sectional survey data to explicitly test the assumptions behind neighbourhood policing, adding to the limited research that has examined the effects of police strategy on confidence in the police.
It was also able to take account of arguments that suggest confidence in policing is a ‘fuzzy’ concept (Worrall 1999), meaning that the police have many roles about which the public may feel differently (Worrall 1999; Fitzgerald et al. 2002; Bradford et al. 2009a; Stanko and Bradford 2009) and that respondents’ interpretations of whether the police are doing a ‘good job’ or a ‘satisfactory job’ (for example) in fulfilling those roles, might differ for different groups in the population (Jesilow et al. 1995; Frank et al. 2005). The detail of the survey data employed in Chapter 5 allowed four measures of confidence to be created, while the use of structural equation modelling meant that each of these concepts could be measured with a number of different survey indicators, attenuating the effects of measurement error.

The results of the analysis were complex, but suggested that, on the whole, the strategies employed by neighbourhood policing teams should increase confidence in the police. Those who frequently saw police officers patrolling their local neighbourhood, those who knew police officers by name or by sight, those who had engaged with local policing teams and those who felt informed about local crime and policing issues in their local area were more confident in the police. However, in line with arguments that suggest confidence in policing is multidimensional, explanatory factors had varying effects of size and direction upon the three measures of confidence in police conduct, effectiveness and community engagement, as well as on an overall measure of confidence in policing. For example, those who were familiar with police officers and those who had engaged with local police officers had less confidence in police effectiveness. It seems odd that these elements of neighbourhood policing would serve to increase confidence in the police as a whole and confidence that the police conduct themselves properly and engage with communities, but reduce confidence in police effectiveness. To account for this, I proposed that an unmodelled common cause, such as neighbourhood crime rates, was inducing the negative association, since a local problem might cause residents to both engage with the police in order to report the problem, and to lose faith that the police were effective at preventing crime.

In addition to the effects that police strategy can have upon confidence, the analysis also contributed to the limited evidence base concerning the effects of perceptions of police behaviour and effectiveness. Perceptions that the police conducted themselves
in a friendly, trustworthy way and were respectful and approachable served to increase confidence in policing, which corroborates the theoretical arguments and empirical evidence provided by Tyler (2001b; 2001a; Tyler and Huo 2002; 2004; 2005) concerning the importance that the police act with ‘procedural justice’ in their encounters with the public. Confidence in policing was also shown to be driven by assessments that the police are engaging with local communities, listening to their concerns and working to solve local problems that are of importance to local people, as well as by assessments that they are effective at performing their most central roles of tackling crime, responding to emergencies and dealing with victims and witnesses.

In addition to these variables concerning police strategy, behaviour and effectiveness, the model included explanatory variables that the existing criminological research has shown to be important in driving confidence in policing and that neighbourhood policing is also intended to improve. On the whole, confidence was lower among those who were concerned about crime and disorder and who were fearful of becoming victim of crime, but higher among those who felt that their neighbourhood was cohesive and had informal social control mechanisms in place. This corroborates the findings of much past research, but the significant effects of collective efficacy and worry about crime are contrary to the null findings of Chapters 3 and 4. As discussed above, this disjuncture in results may well be because the causal mechanisms working at the individual level are very different to those at the aggregate level, but given the limitations of cross-sectional data in drawing causal inferences, it does flag potential weaknesses in the finding.

Also of interest was the influence of victimisation on respondents’ confidence in the police. Past research has most frequently reported that victimisation either has no effect on confidence in policing, or a negative effect. While the findings of Chapter 5 showed that victimisation had a negative effect upon overall evaluations of the police, in contrast, it had a positive effect upon confidence in police conduct and confidence in police effectiveness. Using an earlier sweep of the survey data that I used, Bradford et al (2009a) also found evidence to suggest that victimisation increased confidence in police conduct, although it had no effects on perceptions of police effectiveness.
The analysis demonstrated the importance of considering the effects that police strategy can have upon confidence not just directly, but also indirectly, through its influence on other variables. Neighbourhood policing was primarily introduced to increase confidence in the police, but it was also hoped that it would reduce worry about crime and perceptions of disorder and crime, while also increasing perceptions of collective efficacy. With some exceptions, neighbourhood policing was shown to improve these factors, but the path analysis element of structural equation modelling also showed that, in turn, through its effects on perceptions of neighbourhood conditions and crime, it worked to further improve assessments of the police.

The findings have a number of implications for both the police and criminological research. The coalition government's continued focus on neighbourhood policing and increasing police visibility should have beneficial consequences for the police in terms of increasing public confidence, as well as in improving perceptions of crime and disorder, reducing worry about crime and increasing feelings of collective efficacy. However, beyond the strategies they employ, the findings also imply that the police should ensure that they act with procedural justice in encounters with the public. If the police are successful in carrying out their core functions of preventing crime and disorder, they should also see increases in confidence in policing, although as was also implied from the findings of Chapters 3 and 4, they must ensure that they publicise their successes in dealing with crime and disorder, for it is perceptions of crime, perceptions of disorder and perceptions of police effectiveness at tackling crime that has effects upon confidence. The need to advertise their successes and movements is also substantiated by the finding that those who felt informed about crime and policing also had more confidence in the police.

I have argued that criminological research has not paid enough attention to the ways in which the police themselves can influence confidence in the institution. The findings of Chapters 5 highlight the importance of considering police behaviour and strategy, implying that further studying the manner in which the police can influence confidence would aid in better understanding the causal mechanisms behind public confidence in policing. Furthermore, the findings add to the research that has suggested that it is important to consider confidence in policing as a multidimensional construct, for explanatory variables have once again been found to have varied effects.
of size and direction on confidence in a number of aspects of police roles and behaviour.

While the research has shed some light on the ways in which police strategy and perceptions of police behaviour and effectiveness can influence confidence, it cannot be considered as an evaluation of the effectiveness of neighbourhood policing. Firstly, a number of strategies employed by neighbourhood policing teams, such as problem-orientated policing and police accessibility, could not be measured with the survey data available. Secondly, the analysis did not employ panel data to compare perceptions of policing, crime and neighbourhood conditions before and after neighbourhood policing had been implemented, so the analysis cannot show whether or not levels of confidence in policing have changed as a result of the policing strategy. Instead, the analysis has employed cross-sectional survey data to test whether or not the principles behind neighbourhood policing might have an effect. As a result, it tests whether those who believe they see police officers patrolling frequently, or believe that they are well informed about crime and policing are more confident in the police, rather than examining the effects of actual increases in police foot patrols on confidence, or the effects of delivering a police newsletter. The use of cross-sectional survey data also raises questions concerning endogeneity, meaning that the relationships between variables that the analysis has uncovered can only be considered as evidence of an association, rather than cause and effect, for while it may be the case that a respondent’s answer to an explanatory variable caused their answer to questions concerning confidence in the police, it could also be the case that the relationship works in the opposite direction.

7.1.3 Police Organisation and Effectiveness and Confidence in Policing

Chapter 6 examined the ways in which confidence differed across police jurisdictions as a result of differences in police effectiveness and organisation. However, addressing some of the problems in Chapter 5 concerning the use of measures of policing gathered from the perceptions of survey respondents, police effectiveness and organisation were measured using data collected by official sources, which, as such, were independent of survey responses regarding the dependent variable. The analysis was conducted on the premise that while confidence in policing is known to
vary across police jurisdictions in the UK (Home Office 2009b), empirical research had failed to identify why this might be. Consequently, I explored whether these differences were a result of differences in the successes and failures of the police in preventing and solving crimes, as a result of the distribution of police officers, or as a result of the volume of police officers patrolling the streets across police jurisdictions.

The analysis also took account of the effect that neighbourhood environments can have upon confidence. Again, most studies have relied upon the perceptions of survey respondents as a measure of neighbourhood environments, while the few who have used independent measures of neighbourhood conditions incorporate methodological limitations in their studies by including these measures at the individual level, violating linear regression assumptions of independence among observations. Chapter 6 added to the small pool of research by American criminologists that have used a multilevel framework to examine the effects of neighbourhoods on residents' confidence in the police (which accounts for the interdependence among observations), by using data from a national survey of England and by incorporating a wider range of neighbourhood contextual measures derived from census data than have been employed in the past.

The multilevel analysis showed that confidence in policing varied across police jurisdictions and that it did so in accordance with police effectiveness and police visibility. The recorded crime rate and crime clear-up rate had significant effects on residents' confidence in the police over and above the effects of their socio-demographic characteristics, whether or not they had been a victim of crime, the extent of disorder in the area surrounding their homes and the characteristics of the neighbourhood they lived in. Although these measures are of recorded rates of crime and crime detections rather than perceptions, the findings lend some support to those of Chapters 3, 4 and 5, which highlighted the importance of perceptions of crime and disorder and perceptions of police effectiveness at tackling crime. On the other hand, they cast further doubt on the counter-intuitive positive effect that increases in vehicle crime (which was measured by BCS reports of victimisation, rather than official crime statistics) had on changes in public confidence in policing in Chapter 4.
In terms of police organisation, the results also lent further support to the findings of Chapter 5 and a number of other studies (Bennett 1991; Hawdon and Ryan 2003; Bradford et al. 2009a), that police visibility has a positive effect on confidence, confidence being much higher among residents living within jurisdictions where respondents report frequently seeing police officers patrolling the streets. Conversely, the distribution of police officers across police jurisdictions had no statistically significant effect on confidence, confidence in policing being no higher among residents living within jurisdictions with a high number of police officers than those in areas with far fewer. At the aggregate level over a period of time, Chapter 4 also showed that police strength did not have an effect on confidence. However, in both chapters police strength was calculated per 100,000 of the population, so before police strength is dismissed as ineffective in predicting confidence in policing, it would be worth exploring the use of a different denominator (such as the crime rate, or square miles), which may produce different results.

The findings of Chapter 6 also showed that confidence in policing varied across neighbourhoods. In line with other multilevel studies of neighbourhoods and confidence in the police (Sampson and Jeglum-Bartusch 1998; Reisig and Parks 2000; Schuck et al. 2008; Dai and Johnson 2009), confidence was found to be lower among those living in neighbourhoods characterised by poor housing and socio-economic disadvantage. Conversely, confidence was found to be higher among residents living in urban neighbourhoods and neighbourhoods with a high degree of in and out migration. This result seemed unlikely, but held despite my experimentation with a number of different model specifications, so I speculated that it could be a result of variations in police strategies across neighbourhoods, the police perhaps concentrating more of their efforts in these neighbourhoods that are often associated with high crime and disorder (Shaw and McKay 1942). In addition to the effects of crime at the police jurisdiction level, confidence in policing also varied across neighbourhoods according to the crime rate. However, neighbourhood ethnic heterogeneity had no effect, residents' of diverse areas being no more or less confident in the police than those living in ethnically homogenous neighbourhoods.

Finally, in support of the findings of Chapter 5, respondents who had been a victim of crime and those who lived in a disorderly street were less confident in the police.
Importantly, this was regardless of the conditions of their neighbourhood, police visibility and the effectiveness of the police at preventing and solving crime. Moreover, the effects of disorder and victimisation were found to be moderated by neighbourhood disadvantage, their negative consequences for confidence in policing being compounded in areas of disadvantage, but attenuated in more prosperous neighbourhoods. Conversely, the effects of individual level characteristics and neighbourhood environments were not found to vary across police jurisdictions. This implies that the police do not moderate the negative effects of individual and neighbourhood characteristics at the BCU level. However, since confidence varies across neighbourhoods, it might be the case that if the police were to tailor their strategies to the neighbourhood level, as neighbourhood policing tries to do, the police could help to improve some of the neighbourhood level effects that reduce residents’ confidence.

The results of this analysis have clear implications for the police, the public appearing to base assessments of the force on their success at preventing crime and disorder and solving those crimes that do occur. While this cannot, perhaps, be considered a ‘new’ or surprising finding, the analysis was the first to have considered variations in confidence across police jurisdictions and to account for these variations using measures of police effectiveness. Moreover, unlike previous studies that have used survey data to gauge police effectiveness (meaning that relationships that were uncovered between perceptions of police effectiveness and confidence in policing could be endogenous) I used measures that were independent of survey assessments of the outcome variable. The findings also imply that the more frequently citizens see the police patrolling the streets, the greater their confidence in the institution. Consequently, perhaps increasing the frequency at which police officers do patrol the streets would increase perceptions of police visibility, which in turn would serve to enhance confidence in the institution. However, unlike police effectiveness, I was not able to gain a measure of perceptions of police visibility that was collected independently of the data measuring confidence in policing, providing less robust evidence concerning cause and effect.

The availability of contextual data limited the study as a whole. Very little data is available about the police and of that, the majority is at the Police Force Area, rather
than BCU level. For example, data about police budgets and the proportion of officers’ time that is spent carrying out frontline duties is only available for each Police Force Area (Home Office 2008c). Given the importance that has been given to social cohesion and informal social control in predicting levels of confidence, it would also have strengthened the study if I were able to account for such neighbourhood conditions, which may also have aided in explaining the remaining variation in the effects of disorder and victimisation across neighbourhoods. Finally, any spatial analysis is dependent upon the definitions of area which are used, this analysis being no exception, meaning that different definitions of ‘neighbourhoods’, or a reorganisation of police jurisdictions to cross different geographical areas, could have produced different evidence concerning the extent to which confidence varied across neighbourhoods and police jurisdictions and the contextual influences that could account for such variations (Openshaw 1984).

7.2 Summary of Key Findings

Drawing the findings of the thesis together, it would seem that crime and disorder have persistently negative effects on confidence in policing. Whether it be survey respondents’ perceptions of crime and disorder, recorded crime rates, perceptions of police effectiveness at tackling crime, or survey interviewer assessments of disorder, and whether it be that crime and disorder is measured at the individual or aggregate level, or by cross-sectional or time-series data, the findings are clear; if the volume of crime and disorder is high, or is thought to be high, the public hold the police to account, losing confidence that they are doing a good job. In 1829 the police mission was established by Robert Peel, its central task to prevent crime and disorder and this has not fundamentally changed (Home Office 2010c), so it is perhaps not altogether surprising that the public lose faith in the police if they are failing in their primary task.

Nevertheless, the role that the police can play in increasing confidence in the institution seems to go further than purely fulfilling their most basic function. The strategies they employ and the manner in which they are perceived to behave plays an additional part. It has often been observed that the public consistently call for more
police to patrol their streets (Fitzgerald et al. 2002; Roberts and Hough 2005), ensuring that they are on hand to protect them from harm and maintain order and discipline (Bahn 1974; Girling et al. 2000) and it seems that a visible police presence is of utmost importance to increasing confidence in policing. In support of the work of Tyler (2001b; 2001a; Tyler and Huo 2002; 2004; 2005) and Jackson and colleagues (Jackson et al. 2009; Stanko and Bradford 2009; Jackson and Bradford 2010), police conduct was also found to play a role, the public having more confidence in the police if they are thought to be behaving with procedural justice and engaging with local communities to work towards the needs of local people. Moreover, if people perceive the police to be procedurally fair and to have the best interests of the public at heart, they are more likely to co-operate with the police and obey the law, reducing incidents of crime and disorder (Jackson and Bradford 2010), which itself does much to increase confidence in policing, as I have already highlighted. In contrast, police strength per 100,000 of the population had no effect on confidence, neither in explaining changes in confidence over time or variations in confidence across police jurisdictions.

Less clarity surrounds the role that victimisation, social cohesion, informal social control and worry about crime play in producing confidence in the police. Existing research has produced contrasting findings concerning the influence of the fear of crime on confidence, some research finding no evidence of an association between the two variables (Cao et al. 1996; Ren et al. 2005; Myhill and Beak 2008; Skogan 2009) and where a relationship has been found, some scholars have reported that worry has only a small effect on confidence when factors concerning neighbourhood cohesion are accounted for (Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009). The findings of this thesis are similar, worry having no effects at the aggregate level over a period of time and, where associations were found, only small effects at the cross-sectional, individual level.

Similarly, academic criminologists have emphasised the importance of social cohesion and informal social control (see, for example, Cao et al. 1996; Schafer et al. 2003; Jackson and Sunshine 2007), arguing that if people do not feel that their neighbourhoods are cohesive and that neighbours are working together to prevent crime and community breakdown, they will blame the police for failing to provide
order and stability and to uphold the moral consensus (Jackson and Sunshine 2007; Jackson and Bradford 2009; Jackson et al. 2009). However, like the findings corroborating this research generated in Chapter 5, they have used cross-sectional data to draw these conclusions. The use of time-series aggregate data in Chapter 4 produced no evidence of a relationship between confidence and social cohesion, informal social control, or worry about crime. These contrasting results may well indicate that relationships between confidence and its driving forces work very differently at the population level than at the individual level, but, on the other hand, since these relationships cannot be confirmed with a number of different analytic methods, it could be an indication, however small, that the relationships between these independent variables and confidence are spurious (Campbell and Fiske 1959).

The findings of this thesis also make it difficult to draw any firm conclusions about the effects of victimisation on confidence in policing. Chapter 6 showed that victims were less confident in the police, but, highlighting the importance of considering confidence as a multidimensional concept, Chapter 5 suggested that while victimisation reduced overall confidence that the police were doing a ‘good job’, it actually increased confidence in police effectiveness and police conduct, while having no effect on confidence in police-community engagement. Furthermore, the findings of the time series regression analysis suggested that at the aggregate level, an increase in the rates of victims of vehicle crime increased confidence one month into the future, while increases in the rate of other forms of victimisation were not associated with changes in aggregate confidence in policing. These results, coupled with the diverse findings of previous criminological research (reviewed in Chapter 2), suggest that a more detailed analysis is necessary, considering how the effects of victimisation on confidence might vary according to the type of crime that has been committed, the number of times an individual has been subject to crime and according to the element of police work or behaviour that is being assessed.

Where it was possible to do so, I drew measures of explanatory variables from data sources that were independent of the survey data used to measure public confidence in policing, producing interesting results concerning the effects of neighbourhood environments, police effectiveness and police strength on confidence in policing. It is often the case that data regarding the independent and dependent variables are drawn
from survey data, making it difficult to establish the causal direction of a relationship that is uncovered between two variables. In studies of confidence in the police, crime and disorder are often measured using perceptions of survey respondents, such as I did in Chapters 3, 4 and 5. However, by using recorded crime rates and BCS interviewer assessments of disorder to measure these concepts in Chapter 6, I found a direct link between levels of crime and confidence and levels of disorder and confidence, confirming the existence of a relationship between these variables that is not blighted by the problems associated with using perception data.

7.3 Implications

The implications of this research for the police have been discussed throughout the thesis, but, as a whole, a number of key implications for both policing and academic research can be identified. Firstly, despite the coalition government’s rejection of Labour’s police policies that focused on increasing public confidence in policing, their own policies still seem to have the public and public opinion at their heart. They emphasise, first and foremost, reducing crime and disorder, but they also want to make the police more accountable to the public by allowing the public to elect police and crime commissioners, by ensuring that these commissioners are representing and tackling the crime and disorder priorities of local communities and by increasing police accessibility and visibility (Home Office 2010c). The findings of this thesis would suggest that while it may not be their aim, the coalition’s policing policies, if carried through, should actually induce public confidence in the institution of policing. If the police can embark on strategies to reduce crime and disorder, increase the numbers of police officers patrolling the streets, ensure that they are listening to local communities and working towards tackling the issues that concern them, then public confidence that the police are doing a good job should increase. However, the results also suggest that beyond these government policies, individual police officers should be behaving properly, treating members of the public with respect and fairness and acting in a friendly and approachable manner.

In addition to these policies, the government is pushing forward its idea of a ‘big society’, encouraging individuals and voluntary organisations to take greater
responsibility for their neighbourhoods and restoring power to local communities. In terms of policing, this means encouraging local people to prevent crime and disorder and to informally police their local area (Home Office 2010c). Whatever the challenges to achieving this goal, where communities do take a greater role in policing their local areas, the results presented in this thesis provide some evidence to suggest that confidence might increase, for residents living in areas where informal social control mechanisms were engaged (or were perceived to be engaged) were shown to have greater confidence in the police.

The new government is also continuing its support of neighbourhood policing, which the results of Chapter 5 suggest should increase confidence in the police, as well as reducing worry about crime and perceptions of crime and disorder and increasing perceptions of social cohesion and informal social control. As part of this analysis, the chapter demonstrated the potential importance of ensuring that the public are kept informed about crime and policing, those who felt informed being more confident in the police. This is not something that the police should overlook, especially as the results also identified the driving force of perceptions of crime and perceptions of disorder in predicting confidence in the police. Consequently, it is essential that the public are educated about the true extent of crime and disorder, not least because, as Moon et al (2009) showed, despite reductions in the recorded crime rate over the last 15 years, the public have consistently reported that they believe crime is rising.

The coalition government has laid out plans to cut police budgets, which has led police chiefs to announce a reduction in police officers across England and Wales (ACPO 2010). The evidence presented here suggests that this may not directly reduce public confidence in policing. I have argued that further exploration of this finding is necessary before accepting such a null conclusion, but even if it were true, Chapter 5 highlighted the importance of indirect effects, the effects that explanatory variables can have through other factors on confidence in the police. Consequently, should a reduction in police strength lead to increases in crime and disorder, a reduction in solved cases, or less police officers visibly patrolling the streets, the evidence presented in this thesis would suggest that confidence will suffer.
For criminological research, the findings underline the significance of considering the influence of policing and police activities on public attitudes towards the institution more fully. To date, scholars have tended to focus upon the importance of socio-demographic characteristics and perceptions of crime and neighbourhood conditions in explaining variations in confidence in policing, while any consideration of the role the police might play has been confined to examining the manner in which the police behave when in contact with the public. Research has focused far less on the ways in which police strategy, organisation and effectiveness might impact upon public confidence in the police. The conclusions of this research would suggest that more attention should be paid to considering the ways in which the police themselves can organise and present themselves to ensure public support and confidence in the institution.

Where possible, in my analyses I have tried to take account of arguments that suggest 'confidence in policing' should not be considered a unitary concept as the police have a multiplicity of roles, some of which the public might think they are performing well and others not so well (Bayley and Mendelsohn 1969; Worrall 1999; Fitzgerald et al. 2002; Bradford et al. 2009a; Stanko and Bradford 2009). While, like other researchers, the extent to which I could do so has been limited by the survey data available, the findings of Chapter 5 resonated with these arguments, highlighting the importance of considering how attitudes might vary across a variety of police roles, since explanatory variables were shown to have different effects on different measures of confidence, both in terms of the size and direction of their effect.

Finally, this research has been consistently limited by lack of available data, be it by the content of surveys, the data that is collected by administrative sources about the police, or the time scale over which such data is collected. I have speculated that this is likely to be to blame for the lack of existing evidence concerning the influence of police strategy and effectiveness on confidence in policing. The only dataset that exists in the UK that can measure attitudes towards a variety of different police roles and strategies is the PAS, analysed in Chapter 5, but this only covers the area of London. The BCS, spanning England and Wales, is the largest survey of attitudes towards crime and policing in the UK, but it is still limited in its content, such that it covers little ground concerning perceptions of police strategies and effectiveness.
Chapter 6 demonstrated the benefit of incorporating contextual data into studies of confidence in policing, both regarding data about policing and neighbourhoods, but it was a difficult and lengthy process to access, sort and attach this data to the BCS. The inclusion of more contextual data in the BCS dataset that is made available to the public might encourage further exploration of the hierarchical structure of the survey data. The collection of more data by official sources concerning the organisation, effectiveness and strategies of the police, such as the time police spend meeting with communities, would aid in more accurately accounting for how police movements can influence confidence, without the need to rely on the perceptions of survey respondents. However, while on the one hand the coalition government have made much of 'accountability' and emphasise making the police more accountable to the public (for example, with the use of crime maps), on the other hand, they also aim to reduce bureaucracy and the volume of paper work police officers must complete (Home Office 2010c). Consequently, it seems unlikely that such data will become available in the near future. Finally, to enable more complete analyses of changes in trends over time, not just in confidence in policing, but in all manner of survey measures, survey researchers and administrators should consider how modifications to survey instruments from one sweep to the next hinder time series research and the findings that can be drawn.

7.4 Future Research

The problems and limitations of the research conducted in this thesis have been explored in each of the analysis chapters and summarised in this chapter. They inspire ideas for further investigation, which are discussed in this section.

The thesis has built on the limited research that has attempted to address the ways in which police organisation, strategy and effectiveness can influence the public’s assessments of the institution. However, the data limitations already discussed have meant that a complete and clear picture of exactly how the police can organise themselves and deliver the kind of service that the public requires is not realised. For example, Chapter 5 examined the effects that police strategy might have on
confidence, but it was not possible to take such factors into account to the same degree when examining how confidence differs across police jurisdictions in Chapter 6. Similarly, very little data has been persistently collected over time, particularly in relation to policing, meaning that any consideration of how changes to police strategy and organisation affect changes in confidence in policing were confined to an analysis of the effects of changing police numbers. If more data are collected, or become available in the future, research in this area could produce more detailed accounts of the way in which the police can influence public confidence, aiding police administrators and policy makers in designing police strategies and policies that can increase public confidence. The thesis has also focused on ‘the police’, but this has been at the expense of considering how different agents of the institution, such as Police Community Support Officers and voluntary police officers, might have differing impacts upon confidence. Further research might consider their role in informing public opinion of the police.

This research was the first to consider changes in pubic confidence in policing over time and the factors that may or may not contribute to such changes. However, the analysis was limited by the time series data that were available and would be enhanced if other useful time series data become available. Future research should also consider repeating the analysis with slightly different methods of time series regression analysis, such as error-correction models, which would help to establish the validity of the findings, particularly the positive lagged effect of victimisation on confidence. The analysis of confidence in policing over time could have also been enhanced if longitudinal panel surveys, such as the British Cohort Survey, had consistently asked participants about their attitudes towards the police over the years. If such panel data were collected in the future, the analysis of confidence in policing over time could be explored further and from a new perspective, examining changes in confidence at the individual, rather than aggregate level.

The thesis has not considered the effects of the media on confidence in policing. It is argued that much of the public’s information about crime and policing comes from the media (Roberts and Hough 2005; Allen et al. 2006) and Chapter 2 reviewed the studies that have taken account of the media in their analyses. While these have tended to conclude that the media has limited, if any, effects on confidence, it would
have been particularly interesting to have examined whether monthly fluctuations in confidence were related to rises and falls in the volume of police and crime stories in the media, or whether sharp increases or decreases in confidence were a result of a high profile crime, or police misconduct case.

The use of different advanced quantitative methods has enabled an exploration of the drivers of confidence in policing from a number of different perspectives. Nevertheless, the use of quantitative methods has meant that the analyses are limited by the assumption that confidence in policing can be measured adequately by survey questions. While Chapter 5 measured attitudes towards a variety of police roles and both Chapters 5 and 6 were able to use multiple indicators of confidence to ward off the potential effects of measurement error, ‘confidence’ is only a label that I and other researchers assume is being captured by survey questions. Qualitative work exploring the meaning of ‘confidence in policing’, what participants draw to mind when thinking about their confidence in the police and what services they want to see from the police to increase their confidence would build on the limited and predominantly quantitative research that has been conducted in this area (Jesilow et al. 1995; Frank et al. 2005; Smith 2007). Such research could also go further than survey research is able, asking not just what people want from the police, but why. For example, if participants want more visible policing, is it because they think it will reduce crime rates, or that the police will be able to respond to emergencies more quickly, or is it because they want to feel that they are being watched over and protected? Work currently being conducted by academics across Europe to develop and cognitively test new survey questions to measure confidence in policing (as well as a range of other indicators regarding attitudes towards criminal justice) might aid in answering some of these questions (Hough et al. 2010b).

Finally, in the wake of the police budget cuts imposed by the coalition government, it might well be the case that police chiefs are forced to reduce some services, or abolish some police strategies in the interests of saving money. In order to minimise the impact of such reductions in services on public confidence in policing, complex survey designs using conjoint analysis (Green and Srinivasan 1978; Bryan et al. 2002) could be conducted to determine public preferences. This would enable the police to retain the services on which the public place most importance and abolish other
services with which the public are less concerned. These studies present respondents with a number of different scenarios and ask them to rate, rank or choose between alternatives. For example, respondents might be presented with a scenario describing that the police have $x$ amount of money that can be spent in one of two ways and ask them which way they would prefer the money to be spent, a) by placing an extra police officer in each neighbourhood policing team across the country to patrol the streets of local communities, reducing low-level crime such as graffiti and vandalism by 20%, or b) by setting up a ‘serious’ crime agency to tackle terrorism and organised crime, resulting in a 10% reduction in incidents of serious crimes.
References


### Table A.1. BCS question wording and answer scales used in Chapter 3

<table>
<thead>
<tr>
<th>Concept</th>
<th>Question</th>
<th>Answer Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence in Local Policing</td>
<td>RatPol2. Taking everything into account, how good a job do you think the police in this area are doing?</td>
<td>Excellent, good, fair, poor, very poor</td>
</tr>
<tr>
<td>(2003/04–2007/08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in Local Policing</td>
<td>RatPolic. Taking everything into account, would you say the police in this area do a good job or a poor job?</td>
<td>Very good, fairly good, fairly poor, very poor</td>
</tr>
<tr>
<td>(1982-2002/03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in National Policing</td>
<td>JobPol. How good a job do you think the police are doing?</td>
<td>Excellent, good, fair, poor, very poor</td>
</tr>
<tr>
<td>(1996-2007/08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of Crime</td>
<td>CrimeRat. How much would you say the crime rate here has changed since two years ago? In this area, would you say there is more crime or less crime?</td>
<td>A lot more crime, a little more crime, about the same, a little less crime, a lot less crime</td>
</tr>
<tr>
<td>(1994-2007/08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disorder</td>
<td>TeenHang. How much of a problem are teenagers hanging around on the streets?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td></td>
<td>Vandal. How much of a problem is vandalism, graffiti and other deliberate damage to property or vehicles?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td></td>
<td>DrugUse. How much of a problem are people using or dealing drugs?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td>Informal Social Control</td>
<td>LocArea8. If any of the children or young people around here are causing trouble, local people will tell them off?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree</td>
</tr>
<tr>
<td>(2001/02-2005/06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Informal Social Control</td>
<td>SGraff. If some children were spray-painting graffiti on a local building, how likely is it that people in your neighbourhood would do something about it?</td>
<td>Very likely, likely, unlikely, very unlikely</td>
</tr>
<tr>
<td></td>
<td>SRude. If a child was being rude to an adult, how likely is it that people in your neighbourhood would tell that child off?</td>
<td>Very likely, likely, unlikely, very unlikely</td>
</tr>
<tr>
<td></td>
<td>STruant. If a group of children were playing truant from school and hanging around on a street corner, how likely is it that people in your neighbourhood would do something about it?</td>
<td>Very likely, likely, unlikely, very unlikely</td>
</tr>
<tr>
<td>Social Cohesion</td>
<td>NeighTyp. In general, what kind of area would you say you live in? Would you say it is an area in which people do things together and try to help each other, or one in which people mostly go their own way?</td>
<td>Help each other, go own way, mixture.</td>
</tr>
<tr>
<td>(1984-2005/06)</td>
<td>LocArea. This area is a close, tight knit community?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree</td>
</tr>
<tr>
<td>Social Cohesion</td>
<td>SClose. This area is a close-knit neighbourhood?</td>
<td>Strongly agree, tend to agree, tend to disagree, strongly disagree</td>
</tr>
<tr>
<td>(2006/07-2007/08)</td>
<td>WBurgl. How worried are you about having your home broken into and something stolen?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td>Worry about Crime</td>
<td>WMugged. How worried are you about being mugged and robbed?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td>(2001/02-2007/08)</td>
<td>WAttack. How worried are you about being physically attacked by strangers?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td></td>
<td>Winsult. How worried are you about being insulted or pestered by anybody while in the street or any other public place?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td>Worry about Crime</td>
<td>WBurgl. How worried are you about having your home broken into and something stolen?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td>(1982-2000)</td>
<td>WMugged. How worried are you about being mugged and robbed?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Confidence in Policing</td>
<td>e074/V136. How much confidence do you</td>
<td>A great deal, quite a lot, not very much, none at all</td>
</tr>
<tr>
<td>(1981-2005)</td>
<td>have in the police?</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix B: Derivation of Time Series Regression

#### Variables

<table>
<thead>
<tr>
<th>Concept</th>
<th>Question</th>
<th>Answer Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence in Local Policing</td>
<td>RatPol2. Taking everything into account, how good a job do you think the police in this area are doing?</td>
<td>Excellent, good, fair, poor, very poor</td>
</tr>
<tr>
<td>(April 2003 – March 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in Local Policing</td>
<td>RatPolic. Taking everything into account, would you say the police in this area do a good job or a poor job?</td>
<td>Very good, fairly good, fairly poor, very poor</td>
</tr>
<tr>
<td>(April 2001–March 2003)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of Crime</td>
<td>CrimeRat. How much would you say the crime rate here has changed since two years ago? In this area, would you say there is more crime or less crime?</td>
<td>A lot more crime, a little more crime, about the same, a little less crime, a lot less crime</td>
</tr>
<tr>
<td>Disorder</td>
<td>TeenHang. How much of a problem are teenagers hanging around on the streets?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td></td>
<td>Rubbish. How much of a problem is rubbish or litter lying around?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td></td>
<td>Vandalism. How much of a problem is vandalism, graffiti and other deliberate damage to property or vehicles?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td></td>
<td>DrugUse. How much of a problem are people using or dealing drugs?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all</td>
</tr>
<tr>
<td>Informal Social Control</td>
<td>LocArea8. If any of the children or young people around here are causing trouble, local people will tell them off?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree</td>
</tr>
<tr>
<td>Social Cohesion</td>
<td>LocArea. This area is a close, tight knit community?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree</td>
</tr>
<tr>
<td>(April 2001–March 2006)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Cohesion</td>
<td>SClose. This area is a close-knit neighbourhood?</td>
<td>Strongly agree, tend to agree, tend to disagree, strongly disagree</td>
</tr>
<tr>
<td>(April 2006–March 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Victim of Violent Crime</td>
<td>DelibVio. In the last 12 months, has anyone, including people you know well, deliberately hit you with their fists or with a weapon of any sort or kicked you or used force or violence in any other way?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>ThreViol. In the last 12 months, has anyone threatened to damage things of yours or threatened to use force or violence on you in any way that actually frightened you?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>SexAttack. During the last 12 months, have you been sexually interfered with, assaulted or attacked, either by someone you knew or by a stranger?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>HhldViol. During the last 12 months, has any member of your household (aged 16 or over) deliberately hit you with their fists or with a weapon of any sort, or kicked you, or used force or violence on you in any other way?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Victim of Property Crime</td>
<td>PrevThef and HomeThef and YrHoThef. In the last 12 months, did anyone get in without permission and steal or try to steal anything?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>PrevDam and YrHoDam. In the last 12 months, did anyone get into your household without permission and cause damage?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>PrevTry and YrHoTry. In the last 12 months, have you had any evidence that someone had tried to get in without permission to steal or to cause damage?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>PrevStol and YrHoStol. In the last 12 months, was anything stolen out of your house/flat?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>ProSide and YrOSide. And in the last 12 months, was anything (else) that belonged to someone in your household stolen from outside the house/flat — from the doorstep, the garden, or the garage for example?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>PrDeface and YrDeface. And in the last 12 months, did anyone deliberately deface or do damage to your house/flat or to anything outside it that belonged to someone else in your household?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Victim of Vehicle Crime</td>
<td>MotTheft. During the last 12 months, have you or anyone else now in your household had your/their car, van, motorcycle or other motor vehicle stolen or driven away without permission?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>MotStole2. And in the last 12 months have you or anyone else now in your household had anything stolen off your/their vehicle or out of it?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>CarDamag3. And in the last 12 months have you had your/has anyone had their vehicle tampered with or damaged by vandals or people out to steal?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>BikTheft4. During the last 12 months have you/has anyone in this household had a bicycle stolen?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Victim of Theft from the Person</td>
<td>PersThef. In the last 12 months, was anything you were carrying stolen out of your hands or from your pockets or from a bag or case?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>TryPers. In the last 12 months, has anyone tried to steal something you were carrying out of your hands or from your pockets or from a bag or case?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>OthThef. In the last 12 months, has anything (else) of yours been stolen from a cloakroom, an office, a car or anywhere else you left it?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>DelibDam. In the last 12 months, has anything of yours been deliberately damaged or tampered with by vandals or people out to steal?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Worry about Crime</td>
<td>WBurgl. How worried are you about having your home broken into and something stolen?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td></td>
<td>WMugged. How worried are you about being mugged and robbed?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td></td>
<td>WAttack. How worried are you about being physically attacked by strangers?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
<tr>
<td></td>
<td>WInsult. How worried are you about being insulted or pestered by anybody while in the street or any other public place?</td>
<td>Very worried, fairly worried, not very worried, not at all worried</td>
</tr>
</tbody>
</table>
## Appendix C: Derivation of Structural Equation Modelling Factors

### Table C.1. PAS question wording and answer scales used in Chapter 5

<table>
<thead>
<tr>
<th>Concept</th>
<th>Question</th>
<th>Answer Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Confidence in Local Policing</td>
<td>Q60. Taking everything into account, how good a job do you think the police in this area are doing?</td>
<td>Excellent, good, fair, poor, very poor (reverse coded)</td>
</tr>
<tr>
<td>Confidence in Police Conduct</td>
<td>Q62B. To what extent do you agree that the police in this area would treat you with respect if you had contact with them for any reason?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q62C. To what extent do you agree that the police in this area treat everyone fairly regardless of who they are?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q62HI. To what extent do you agree that the police in this area are helpful?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q62TI. To what extent do you agree that the police in this area are friendly and approachable?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>Confidence in Police-Community Engagement</td>
<td>Q62E. To what extent do you agree that the police in this area understand the issues that affect his community?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q62F. To what extent do you agree that the police in this area dealing with the things that matter to people in this community?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q62TG. To what extent do you agree that the police in this area listen to the concerns of local people?</td>
<td>Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>Confidence in Police Effectiveness</td>
<td>Q79B. How well do you think the Metropolitan Police responds to emergencies promptly?</td>
<td>Scale of 1-7, where 1 = not at all well and 7 = very well</td>
</tr>
<tr>
<td></td>
<td>Q79D. How well do you think the Metropolitan Police tackles gun crime?</td>
<td>Scale of 1-7, where 1 = not at all well and 7 = very well</td>
</tr>
<tr>
<td></td>
<td>Q79E. How well do you think the Metropolitan Police support victims and witnesses?</td>
<td>Scale of 1-7, where 1 = not at all well and 7 = very well</td>
</tr>
<tr>
<td></td>
<td>Q79G. How well do you think the Metropolitan Police tackle drug dealing and drug use?</td>
<td>Scale of 1-7, where 1 = not at all well and 7 = very well</td>
</tr>
<tr>
<td></td>
<td>Q79H. How well do you think the Metropolitan Police tackle dangerous driving?</td>
<td>Scale of 1-7, where 1 = not at all well and 7 = very well</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Perceptions of Crime</strong></td>
<td>Q11. How much would you say the crime rate here has changed since two years ago? In this area, would you say there is more crime or less crime?</td>
<td>A lot more crime, a little more crime, about the same, a little less crime, a lot less crime (reverse coded)</td>
</tr>
<tr>
<td><strong>Police Familiarity</strong></td>
<td>RQ65. Do you know a local police officer?</td>
<td>Yes, by name; Yes, by sight; No (Recoded to Yes/No)</td>
</tr>
<tr>
<td><strong>Police Visibility</strong></td>
<td>Q65. On average, how often do you see the police patrolling on foot or bicycle in this area?</td>
<td>Never, Less often, At least monthly, At least fortnightly, At least weekly, At least daily (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q67. On average, how often do you see the police patrolling in vehicles in this area?</td>
<td>Never, Less often, At least monthly, At least fortnightly, At least weekly, At least daily (reverse coded)</td>
</tr>
<tr>
<td><strong>Knowledge of Crime and Policing</strong></td>
<td>Q131. How well informed do you feel about what the police in this area have been doing over the last 12 months?</td>
<td>Very well informed, fairly well informed, not at all well (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q126. How well informed do you feel about the levels of crime in your local area?</td>
<td>Very well, fairly well, not very well, not at all well (reverse coded)</td>
</tr>
<tr>
<td><strong>Worry about Crime</strong></td>
<td>Q17b. How worried are you about being mugged and robbed?</td>
<td>Very worried, fairly worried, very worried, not at all worried (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q17f. How worried are you about being physically attacked by strangers?</td>
<td>Very worried, fairly worried, not very worried, not at all worried (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q17g. How worried are you about being insulted or pestered by anybody while in the street or any other public place?</td>
<td>Very worried, fairly worried, not very worried, not at all worried (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q10b. How much of a problem are teenagers hanging around on the streets?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q10c. How much of a problem is rubbish or litter lying around?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all (reverse coded)</td>
</tr>
<tr>
<td><strong>Disorder</strong></td>
<td>Q10d. How much of a problem is vandalism, graffiti and other deliberate damage to property or vehicles?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q10e. How much of a problem are people using or dealing drugs?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q10f. How much of a problem are people being drunk or rowdy in public places?</td>
<td>Very big problem, fairly big problem, not a very big problem, not a problem at all (reverse coded)</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Engaged with Police</td>
<td>SQ133A. Over the last 12 months have you attended a Safer Neighbourhood resident meeting?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>SQ133B. Over the last 12 months have you taken part in a Safer Neighbourhood resident survey?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>SQ133F. Over the last 12 months have you visited a Safer Neighbourhood Market stall?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>SQ133H. Over the last 12 months have you contacted your local Safer Neighbourhood Team?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>SQ133I. Over the last 12 months have you attended a local meeting with police presence?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>SQ133EK. Over the last 12 months have you chatted to your local officers?</td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td>Q3C. To what extent do you agree or disagree that people in this neighbourhood can be trusted?</td>
<td>Strongly agree, agree, neither agree nor disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q3F. To what extent do you agree or disagree that people act with courtesy to each other in public space in this area?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q3G. To what extent do you agree or disagree that you can see from the public space here in the area that people take pride in their environment?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>Collective Efficacy</td>
<td>Q3H. To what extent do you agree or disagree that local people and authorities have control over the public space in this area?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q3I. To what extent do you agree or disagree that if I sensed trouble in this area, I could get help from people who live here?</td>
<td>Strongly agree, tend to agree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q3J. To what extent do you agree or disagree that people who live here can be relied upon to call the police if someone is acting suspiciously?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td></td>
<td>Q3K. To what extent do you agree or disagree that if any of the children or young people around here are causing trouble, local people will tell them off?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>Gender</td>
<td>Q135. Would you classify yourself as male, female, transgender, or intersex?</td>
<td>Male, female, transgender, or intersex (transgender and intersex coded as missing)</td>
</tr>
<tr>
<td>Victim</td>
<td>Victim.mps</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Age</td>
<td>Age</td>
<td>15-17, 18-21, 22-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85+ (recoded into 15-34, 35-64 and 65+)</td>
</tr>
<tr>
<td>Employment status</td>
<td>Work Status</td>
<td>Full time, part time, part time (less than 8 hours per week), not working, house person, retired, registered unemployed, unemployed by not registered, student, other (recoded into full time, part time, unemployed, student, other)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>How would you describe your race or ethnic origin?</td>
<td>White British, White Irish, Any other white background, White and Black Caribbean, White and Black African, White and Asian, Any other missed background, Indian, Pakistan, Bangladeshi, any other Asian background, Caribbean, African, Any other black background, Chinese, any other ethnic group (recoded into White, Asian, Black, Mixed/Other)</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Marital Status</td>
<td>Married/living as married, single, widowed/divorced/separated (recoded into married and not married).</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Contact with the police</td>
<td>NQ80. How satisfied were you with the way you were treated? (during personal contact with the police at an event)</td>
<td>Very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied (recoded into satisfactory and dissatisfactory contact)</td>
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<tr>
<td>(Satisfactory and Dissatisfactory)</td>
<td>Q98. Taking the whole experience into account, are you satisfied, dissatisfied or neither with the service provided by the police? (as a victim of crime)</td>
<td>Completely satisfied, very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied, completely dissatisfied (recoded into satisfactory and dissatisfactory contact)</td>
</tr>
<tr>
<td></td>
<td>Q105. Taking the whole experience into account, are you satisfied, dissatisfied or neither with the service provided by the police? (as a witness to crime)</td>
<td>Completely satisfied, very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied, completely dissatisfied (recoded into satisfactory and dissatisfactory contact)</td>
</tr>
<tr>
<td></td>
<td>Q109. Taking the whole experience into account, are you satisfied, dissatisfied or neither with the service provided by the police? (having contacted the police to ask for information)</td>
<td>Completely satisfied, very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied, completely dissatisfied (recoded into satisfactory and dissatisfactory contact)</td>
</tr>
<tr>
<td></td>
<td>Q119. Taking the whole experience into account, are you satisfied, dissatisfied or neither with the service provided by the police? (after having been arrested)</td>
<td>Completely satisfied, very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied, completely dissatisfied (recoded into satisfactory and dissatisfactory contact)</td>
</tr>
<tr>
<td></td>
<td>Q121. Taking the whole experience into account, are you satisfied, dissatisfied or neither with the service provided by the police? (for an 'other' reason)</td>
<td>Completely satisfied, very satisfied, fairly satisfied, neither satisfied nor dissatisfied, fairly dissatisfied, very dissatisfied, completely dissatisfied (recoded into satisfactory and dissatisfactory contact)</td>
</tr>
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</table>
## Appendix D: Derivation of Multilevel Modelling

### Variables

<table>
<thead>
<tr>
<th>Concept</th>
<th>Question</th>
<th>Answer Scale</th>
</tr>
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<tbody>
<tr>
<td><strong>Confidence in Policing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RatPol2.</td>
<td>Taking everything into account, how good a job do you think the police in this area are doing?</td>
<td>Excellent, good, fair, poor, very poor (reverse coded)</td>
</tr>
<tr>
<td>PolAtt1.</td>
<td>How much would you agree or disagree that the police in this area can be relied on to be there when you need them?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>PolAtt2.</td>
<td>How much would you agree or disagree that the police in this area would treat you with respect if you had contact with them for any reason?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>PolAtt3.</td>
<td>How much would you agree or disagree that the police in this area treat everyone fairly regardless of who they are?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>PolAtt4.</td>
<td>How much would you agree or disagree that the police in this area can be relied on to deal with minor crimes?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>PolAtt5.</td>
<td>How much would you agree or disagree that the police in this area understand the issues that affect this community?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>PolAtt6.</td>
<td>How much would you agree or disagree that the police in this area are dealing with the things that matter to people in this community?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td>PolAtt7.</td>
<td>How much would you agree or disagree that taking everything into account, I have confidence in the police in this area?</td>
<td>Strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree (reverse coded)</td>
</tr>
<tr>
<td><strong>Interviewer Rated Disorder</strong></td>
<td></td>
<td></td>
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<tr>
<td>D2.</td>
<td>In the immediate area, how common is litter or rubbish lying around?</td>
<td>Very common, fairly common, not very common, not at all common (reverse coded)</td>
</tr>
<tr>
<td>D3.</td>
<td>How common is vandalism, graffiti or deliberate damage to property?</td>
<td>Very common, fairly common, not very common, not at all common (reverse coded)</td>
</tr>
<tr>
<td>D4.</td>
<td>How common are homes in poor condition/run down?</td>
<td>Very common, fairly common, not very common, not at all common (reverse coded)</td>
</tr>
<tr>
<td><strong>Police Visibility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFoot.</td>
<td>On average, how often do you see police officers or Police Community Support Officers on foot patrol in your local area?</td>
<td>More than once a day, once a day, about once a week, about once a month, less than once a month, or never? (reverse coded)</td>
</tr>
<tr>
<td>Concept</td>
<td>Question</td>
<td>Answer Scale</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Age</td>
<td>Age. What was your age last birthday?</td>
<td>Open response between 16 and 99 (recoded into 15-34, 35-64 and 65+)</td>
</tr>
<tr>
<td>Gender</td>
<td>Sex</td>
<td>Male, Female</td>
</tr>
</tbody>
</table>
| Ethnicity    | To which of these ethnic groups do you consider you belong?               | White British, White Irish, Any other white background, White and Black Caribbean,  
|              |                                                                            | White and Black African, White and Asian, Any other mixed background, Indian,   
|              |                                                                            | Pakistan, Bangladeshi, any other Asian background, Caribbean, African, Any other  
|              |                                                                            | black background, Chinese, any other ethnic group (recoded into White, Asian, Black,  
|              |                                                                            | Mixed/Other)                                                                  |
| Marital Status | Marst. Are you...?                                                     | Married and living with husband/wife, single, married and separated from       
|              |                                                                            | husband/wife, divorced, widowed (recoded into married and not married).       |
| Length of Residence | YrsArea. How long have you lived in this area?                     | Less than 12 months, 12 months but less than 2 years, 2 years but less than 3  
|              |                                                                            | years, 3 years but less than 5 years, 5 years but less than 10 years, 10 years  
|              |                                                                            | but less than 20 years, 20 years or longer                                     |
Appendix E: Distribution of Responses to Confidence in Policing by Ethnic Group and Age Group

Table E.1. Percentage of respondents from ethnic minority, white and age groups responding to the confidence in the local police BCS survey question in each survey year

<table>
<thead>
<tr>
<th>Survey Year</th>
<th>Ethnic Minority Group</th>
<th>White</th>
<th>Age 16-29</th>
<th>Age 30-59</th>
<th>Age 60+</th>
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<tbody>
<tr>
<td>1982</td>
<td>3</td>
<td>97</td>
<td>28</td>
<td>50.2</td>
<td>21.7</td>
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<td>1984</td>
<td>3.4</td>
<td>96.6</td>
<td>26.8</td>
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<td>1988</td>
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<td>27.1</td>
<td>50.9</td>
<td>22</td>
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<tr>
<td>1992</td>
<td>5.5</td>
<td>94.5</td>
<td>24.9</td>
<td>57</td>
<td>24.1</td>
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<td>1994</td>
<td>27.6</td>
<td>72.4</td>
<td>26.2</td>
<td>51.8</td>
<td>22</td>
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<td>1996</td>
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<td>80.5</td>
<td>24.4</td>
<td>51.7</td>
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<td>1998</td>
<td>5.9</td>
<td>94.1</td>
<td>19.9</td>
<td>54.7</td>
<td>25.4</td>
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<tr>
<td>2000</td>
<td>29.2</td>
<td>70.8</td>
<td>23.6</td>
<td>24.3</td>
<td>22.1</td>
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<tr>
<td>2001/02</td>
<td>8.5</td>
<td>91.5</td>
<td>19.7</td>
<td>54.1</td>
<td>26.2</td>
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<tr>
<td>2002/03</td>
<td>6.8</td>
<td>93.2</td>
<td>18.4</td>
<td>54.2</td>
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<tr>
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<td>92.4</td>
<td>18.1</td>
<td>54.3</td>
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<td>18.8</td>
<td>53.4</td>
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Source: BCS
Appendix F: Structural Equation Modelling Control Variable Regression Estimates

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<tr>
<th>Predictor Variable</th>
<th>Acorn Score</th>
<th>Victim</th>
<th>Mixed/Other Ethnicity</th>
<th>Asian</th>
<th>Black</th>
<th>Part Time Employment</th>
<th>Unemployed</th>
<th>Student</th>
<th>Other Employment</th>
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<td>.03*</td>
<td>-0.01</td>
<td>-0.03*</td>
<td>-0.02*</td>
<td>.02*</td>
<td>.004</td>
<td>.01</td>
</tr>
<tr>
<td>Police Visibility</td>
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<td>.06*</td>
<td>.04*</td>
<td>.04*</td>
<td>-0.05*</td>
<td>-0.05*</td>
<td>-0.02*</td>
<td>.01</td>
</tr>
<tr>
<td>Engaged with Police</td>
<td>.02*</td>
<td>.11*</td>
<td>-0.02*</td>
<td>-0.004</td>
<td>-0.002</td>
<td>.001</td>
<td>-0.07*</td>
<td>-0.03*</td>
<td>-0.03*</td>
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<tr>
<td>Knowledge of Crime/Police</td>
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<td>-0.04*</td>
<td>.04*</td>
<td>-0.07*</td>
<td>-0.04*</td>
<td>-0.06*</td>
<td>-0.14*</td>
<td>-0.09*</td>
<td>-0.01</td>
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<tr>
<td>Perceptions of Crime</td>
<td>-0.02*</td>
<td>.07*</td>
<td>.02*</td>
<td>.06*</td>
<td>.02*</td>
<td>-0.04*</td>
<td>.02*</td>
<td>.003</td>
<td>.02*</td>
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<tr>
<td>Perceptions of Disorder</td>
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<td>.10*</td>
<td>.06*</td>
<td>.06*</td>
<td>.01</td>
<td>.03*</td>
<td>-0.04*</td>
<td>-0.04*</td>
<td>.004</td>
</tr>
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<td>Collective Efficacy</td>
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<td>-0.03*</td>
<td>.05*</td>
<td>.02*</td>
<td>-0.02*</td>
<td>-0.05*</td>
<td>-0.01*</td>
<td>-0.03*</td>
</tr>
<tr>
<td>Worry about Crime</td>
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<td>.02*</td>
<td>.12*</td>
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<td>.01</td>
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<tr>
<td>Confidence in Police Conduct</td>
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<td>-0.05*</td>
<td>.03*</td>
<td>-0.04*</td>
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<td>.03*</td>
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<td>Confidence in Police-Community Engagement</td>
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<td>.01</td>
<td>-0.03*</td>
<td>.03*</td>
<td>-0.01*</td>
<td>-0.003</td>
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<tr>
<td>Confidence in Police Effectiveness</td>
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<td>.02*</td>
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<td>-0.04*</td>
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<td>.02*</td>
<td>.008</td>
<td>.02*</td>
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<tr>
<td>Overall Confidence in the Local Police</td>
<td>-0.01*</td>
<td>-0.04*</td>
<td>-0.02*</td>
<td>.01</td>
<td>-0.01</td>
<td>-0.004</td>
<td>-0.03*</td>
<td>-0.02*</td>
<td>-0.02*</td>
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*p=<.05

Source: MPS PAS (Quarter 1 2008 – Quarter 3 2009)
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<th>Predictor Variable</th>
<th>Marital Status</th>
<th>Female</th>
<th>Aged 15-34</th>
<th>Aged 35-64</th>
<th>Dissatisfactory Contact</th>
<th>Satisfactory Contact</th>
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<td>.01*</td>
<td>-.02</td>
<td>.01</td>
<td>-.01</td>
<td>.003</td>
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<td>-.10*</td>
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<td>.09*</td>
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<tr>
<td>Knowledge of Crime/Police</td>
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<td>.01</td>
<td>-.13*</td>
<td>-.06*</td>
<td>-.04*</td>
<td>.11*</td>
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<td>.04*</td>
<td>-.03*</td>
<td>-.01</td>
<td>.09*</td>
<td>.06*</td>
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<tr>
<td>Perceptions of Disorder</td>
<td>-.08*</td>
<td>.01*</td>
<td>-.01</td>
<td>.06*</td>
<td>-.13*</td>
<td>-.08*</td>
</tr>
<tr>
<td>Collective Efficacy</td>
<td>.09*</td>
<td>.01</td>
<td>-.09*</td>
<td>-.09*</td>
<td>.07*</td>
<td>.02*</td>
</tr>
<tr>
<td>Worry about Crime</td>
<td>.01</td>
<td>.11*</td>
<td>.02*</td>
<td>.04*</td>
<td>.10*</td>
<td>.03*</td>
</tr>
<tr>
<td>Confidence in Police Conduct</td>
<td>-.002</td>
<td>.03*</td>
<td>-.10*</td>
<td>-.10*</td>
<td>-.16*</td>
<td>.06*</td>
</tr>
<tr>
<td>Confidence in Police-Community Engagement</td>
<td>-.004</td>
<td>.02*</td>
<td>-.04*</td>
<td>-.06*</td>
<td>-.16*</td>
<td>.02*</td>
</tr>
<tr>
<td>Confidence in Police Effectiveness</td>
<td>-.03*</td>
<td>.04*</td>
<td>-.02</td>
<td>-.05*</td>
<td>-.11*</td>
<td>.03*</td>
</tr>
<tr>
<td>Overall Confidence in the Local Police</td>
<td>-.01</td>
<td>-.004</td>
<td>-.03*</td>
<td>-.04</td>
<td>-.07*</td>
<td>.004</td>
</tr>
</tbody>
</table>

* p<=.05

Source: MPS PAS (Quarter 1 2008 – Quarter 3 2009)
Appendix G: Distribution of Police Officers per 100,000 of the Population across Basic Command Units

Please note that Central Birmingham BCU and Birstepgate BCJ employed large numbers of police officers (2456 and 10,968 respectively) so were excluded from the graph.