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*Neighbourhood contexts and policing strategies in Sheffield.*

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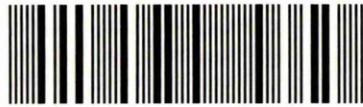
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Neighbourhood Contexts and Policing Strategies in Sheffield

Gary Birchall

A thesis submitted in partial fulfilment of the requirements of  
Sheffield Hallam University  
for the degree of Master of Philosophy

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## **Abstract**

This thesis investigates the nature, extent and concentrations of collective efficacy, crime and anti-social behaviour within the geographic areas known as the 100 neighbourhoods of the city of Sheffield. The investigation is conducted through a neighbourhood policing lens with the cornerstone of the work considering the broken windows theory. The term 'collective efficacy' is more commonly referred to in American based discourses and this thesis argues that collective efficacy, in this research site, manifests itself differently when considering similar circumstances such as levels of crime, disorder and deprivation. The thesis utilises geographic information systems (GIS) and the analytical capabilities of this software to intuitively examine qualitative and quantitative data developed during the research and reveals that for some neighbourhoods, theories and previous empirical evidence about the links between demographic and environmental factors, collective efficacy and crime and anti-social behaviour rates is challenged. The thesis demonstrates that certain Sheffield neighbourhoods indicate significant levels of collective efficacy despite high levels of crime, disorder or indeed both although collective efficacy in certain locales can be a predictive tool for levels of crime and disorder. In examining quantitative and qualitative data, the latter via proxy survey methods, the argument is posited that future small local area analysis and research would facilitate a greater understanding within the United Kingdom context of the mechanics of collective efficacy in cities. The thesis considers how neighbourhood policing in Sheffield has been historically conducted and how policing has potentially disconnected itself from entrenched neighbourhood practices. With the advent of Police and Crime Commissioners and the future of policing having greater focus on public accountability and transparency, the thesis also considers the use of new technology and how such advances may strengthen the participation between the public and the police in the future policing of neighbourhoods.

## **Acknowledgements**

After graduating from the University of Manchester in 2003 with a Master's degree it became apparent that I still had the academic itch. An idle conversation over a cup of tea at Ecclesfield police station with Dr. Andrew Costello from the University of Sheffield, made me think about giving the itch a bit of a scratch and in 2006 I commenced this programme of research. The people mentioned hereafter, not in any order of importance or stature, were simply there when I needed them and they all gladly shared their time willingly and unconditionally.

Andrew Costello, in the field of criminology, is a voracious reader of and thinker about his subject matter. Andrew and I have considered criminological theory since 1999 when South Yorkshire Police first employed me as a criminal intelligence analyst and his university office fell within the policing boundaries of the station I was working at. His command of theoretical knowledge brought me to consider the broken windows theory as a starting point for my research. Andrew helped me with the first faltering steps on my PhD journey and also when reviewing my data work, was the first to suggest that I might have unearthed something worth reporting to the wider academic community. He continues to this day to inspire me with his incisive comment on just about any subject matter that we discuss. For his participation and continued guidance, I will be forever grateful.

Mark Hamilton was the GIS manager for South Yorkshire Police during this research programme and in my opinion a leading expert in his particular discipline. We worked together in giving South Yorkshire Police what is considered by other law enforcement agencies as one of the best suite of GIS products available including a world first with an intranet mapping system. Mark was very keen to see how data used for a research project might work within a GIS environment and gave much time and effort in ensuring that the data used within the analysis remained stable and constant once it had been migrated into the software. When the GIS sometimes said 'no', Mark was there to help me work through the problems the fledgling software was encountering and together we discovered many programming foibles that were used to great advantage in later versions of the software. I couldn't have asked for a finer GIS wing man and his advice combined with practical abilities of the highest echelon made the geographical side of the research thoroughly enjoyable.

As will be seen within the body of this work, geographical analysis was only one side of the research coin and as with Mark's involvement with the GIS, I was fortunate to have

a very able statistical wing man in the shape of another South Yorkshire Police employee James Uttley. James worked with me as a tactical crime analyst within Sheffield and enjoyed working with police data. Occasionally, when time allowed, we would examine small amounts of police data in a geographical context and test the same data to see what was revealed from a statistical point of view. We also considered how South Yorkshire Police might start to think about joining its survey results to its other data services such as crime and disorder and through these reflective periods the methodology employed within this research came to fruition. James' statistical reasoning and opinions of how statistics should be presented are described in one word, 'simple'. Researchers cannot be competent at all disciplines all of the time and this student does not proclaim to be the world's best statistician, but James Uttley showed me how to elicit relevant results from the vast sets of data that were analysed and he is someone who I would always return to for statistical advice.

This research project has endured the high and low points of its author. The lowest point was undoubtedly the onset of a long-term serious illness combined with the decision to leave the original university where the research had commenced. During this period of reflection of how my life might probably pan out in the future, the PhD had to take a back seat for a while. There was a realisation that it might never be completed despite the findings that were beginning to emerge. But most clouds have a silver lining and James Uttley suggested that I spoke to Professor John Flint of Sheffield Hallam University's Centre for Regional, Economic and Social Research (CRESR) about my labours. After John had read my initial work, there was the inevitable discussion that took place about the research and whether it was worth pursuing further. The conversation changed my life. He told me that he had never read anything like it and there was the potential for the work to become of national if not international significance to policing and therefore should be continued. Praise indeed, but it became apparent that much work still had to be done and so with John's guidance the entire work was disassembled and rebuilt and what follows, now stands as a testament to John's supervisory capabilities and also his academic knowledge on which I leant intensely. We discussed long and hard the way the writing should be formed to get the best from the research and as my health suffered further, he always gave me the opportunity to step away from the work and call it a day. But I continued under his skilled guidance and present a body of work that reflects not only John's passion for social science, but as a caring man who helped a student ride out some exceptionally difficult times in his life. A simple thank you is all I can say to John for his time and patience.

My final thank you goes to my wife Rita who watched on many occasions as I wrestled and agonised with this research. It bled into both our lives. Wherever we were, whatever we were doing, a book, a laptop or a discussion about the 'PhD' was never far away. She gave me the love and encouragement to keep going despite some exceptionally difficult periods in both our lives. Rita often gave an interesting commentary about my work when I couldn't see the woods for the trees and provided clarity when I least expected it. She never asked me to stop the research when health needs should have come first but sometimes didn't, she knew that I would work that timing out myself. She also knew that the work often bordered on being a monastic undertaking with countless hours spent in solitude either reading, writing or attempting to grasp what the work was revealing. How she ever tolerated my utter selfishness in this process is testament to the strength and love that exists within our relationship.

Without Rita, what follows would never have been completed.

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## Chapter One: Introduction

'He has achieved success who has lived well, laughed often, and loved much;  
Who has enjoyed the trust of pure women, the respect of intelligent men and the  
love of little children;  
Who has filled his niche and accomplished his task;  
Who has never lacked appreciation of Earth's beauty or failed to express it;  
Who has left the world better than he found it,  
Whether an improved poppy, a perfect poem, or a rescued soul;  
Who has always looked for the best in others and given them the best he had;  
Whose life was an inspiration;  
Whose memory a benediction.'

Elisabeth-Anne Anderson Stanley (1904)

The opening passage of this Doctoral thesis sat with me in an office drawer for approximately five years after being torn from a daily calendar in the first year of my work which commenced in 2006. These eloquent words above are widely and wrongly attributed to the philosopher, essayist and poet Ralph Waldo Emerson.

In an obtuse way, it unwittingly set the tone for this work as the research twisted and turned its way through two universities, different supervisory groups and unearthed new findings which hopefully add a little more to the general empirical and theoretical debate about crime and anti-social behaviour and address the way that policing should be conducted in neighbourhoods.

If this work helps to leave the world a slightly better place or redeems a social condition then the measure of success will be gauged not by the elevation of one persons' status to a Doctoral level, but by the application of some of the findings that follow in this work that allow people's lives to be enriched with the support of local agencies.

## **The structure of the thesis**

This study represents an attempt to examine, in detail, neighbourhood policing in the city of Sheffield. The original context for the study was to utilise Wilson and Kelling's (1982) broken windows theory which was an anecdotal, observational piece of work undertaken in Newark<sup>1</sup> reporting on how public space within the city was controlled by the police and members of the public. As will be seen this context is only part of the research and has been complemented by the detailed analysis of crime and anti-social behaviour data, the 2007 Sheffield Neighbourhood Survey<sup>2</sup> and the 2007 and 2010 Indices of Multiple Deprivation (IMD).

The research attempts to span both qualitative and quantitative methods and in doing so reveals some interesting factors within the city's neighbourhoods that challenge certain empirical findings from other research and which has clear implications for policing and policy. The data has been analysed using traditional statistical methods and geographic information system (GIS) techniques. This dual approach allows the robust mathematical testing of the data allied to the spatial and temporal presentation of the same work across Sheffield's 100 neighbourhoods that form the city landscape.

The research has examined within Sheffield whether there are some neighbourhoods that react differently when faced with high incidences of crime and anti-social behaviour. (ASB) The data results were used to examine the ramifications for policing within the city. Sheffield has been compared to other cities both in the UK and the United States to examine empirical findings and look for similar connections across the research. An important element of this study has been the use of GIS to examine the spatial and temporal patterns of crime and ASB and the demographic and deprivation characteristics that exist within the 100 neighbourhoods of the city. GIS has had a developing history both in the United States and more recently in the UK and this study adds to the debate about how GIS can be used effectively within a law enforcement environment. This research is an attempt to analyse granular crime and ASB data, survey response information and demographic and deprivation data for a particular city within a broad and developing theoretical approach which then considers the policing policy ramifications for the city and beyond.

The main aims, research questions and the overall analytical framework of this study are set out in the following sections.

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<sup>1</sup> United States of America.

<sup>2</sup> Commissioned by the Sheffield City Council and reported upon in April 2007.

## **Aims**

- To map the proxy measures of social cohesion, collective efficacy, ASB rates and perceptions of anti-social behaviour at the residential neighbourhood level in Sheffield and to analyse the patterns and potential causal factors.
- To link these findings to theory (broken windows)
- To identify the interface between these findings and the rationales of policing and governing ASB in Sheffield.
- To identify and explore the implications for policing anti-social behaviour in a 21<sup>st</sup> century Western post-industrial city.
- To identify and explore the implications for national policy and international academic understandings of policing.

## **Research questions**

- What are the patterns of, and relationships between, social cohesion, collective efficacy and ASB, both recorded and perceived at the residential neighbourhood level within Sheffield?
- To what extent do these findings confirm or confound the broken windows theory and the rationalities of zero tolerance and/or neighbourhood policing and/or collective efficacy and community participation in policing ASB?
- To what extent are the rationalities and practices of South Yorkshire police aligned with the spatial and temporal patterns identified by the research?
- What are the implications of these findings for current policing practices in Sheffield, within the wider context of policing reforms (i.e. new government) and public sector retrenchment?
- What are the implications of the findings for theory, policy and future academic study?

**Figure 1.1 presents the framework of the thesis:**

Theories of broken windows, collective efficacy, zero tolerance and neighbourhood policing



Spatial and temporal patterns of ASB and neighbourhood characteristics



Policy and practice at national and local levels



Policing and governance theory/policy implications

**Thesis structure**

The thesis is divided into three parts. Part one, of which this introduction forms the first chapter includes a review of the salient literature (chapter two). Chapter two discusses the development of the broken windows theory (Wilson and Kelling, 1982) which at the outset of this work was the corner stone of the research. Its relevance as a ‘scene setter’ and the provider of one of the research questions for this research displays how Wilson and Kelling developed an observational piece of writing after working with a group of local neighbourhood police officers patrolling in a specific American locale. This work proved to have a catalytic effect for other research that was subsequently carried out which expanded from the relationship between the police, the public and the controlling of public space into a wider arena of physical and social disorder, political intervention, housing and homelessness issues to mention but three developmental research threads.

Sampson and Raudenbush (1999, 2001, 2004) advance the empirical debate from Wilson and Kelling with their collective efficacy and social cohesion concepts which provided another research question for this work. They utilised highly sophisticated statistical and ethnographical techniques in a research programme which is still on-going that realistically could not be repeated within this work. Their work did influence the type of data to be analysed at a proxy level within Sheffield that might display differing levels of collective efficacy across the 100 constructed neighbourhoods in the city.

The structure of the chapter is a continuous narrative much of which is grounded within contemporary American research. It becomes apparent as the chapter develops that there is an imbalance, within a criminological discourse, in completed American and United Kingdom (UK) based research. The UK lags behind our American counterparts in embracing ASB within a criminological context and chapter two clearly defines this. This is also reflected throughout the thesis when showing how policing in Sheffield is geared almost exclusively towards defeating crime, with ASB being a poor relation.

Chapter two also analyses the comments of Frank Field (2003), who as a Member of Parliament within the United Kingdom regularly hears stories from his constituents about the problems they face not usually from crime but ASB. Reference is made to the fact that law enforcement needs to change its attitude towards ASB. Comment is also made in chapter two about 'Bowling Alone, The Collapse and Revival of American Community' (Putnam, 2000). This work has relevance in showing the lengths that UK criminological research should aspire to with regard to attempting to work out some of the key facets of UK based ASB. This research could not emulate the range covered by Putnam's work, but its inclusion was important to show the diverse data available for analysis and how to use it in a longitudinal fashion. Chapter two latterly reflects on the need to share service arrangements between law enforcement and other public authorities such as housing. Nearly all the commentators recognise the need and desire to join up the thinking and service provision in relation to the ASB policy and practice. In this current financial climate, with the reduction of the UK public sector as a whole, this is another important research question considered by this body of work.

The data research, as is described within the third chapter, attempts to use diverse data and applies both statistical and geographical techniques to try to further the understanding of ASB and crime, something which within the current UK literature appears lacking. Comment is also made about how academic theory migrated into operational police work with the lens focused on the New York Police Department. Also discussed within the operational policing discourse is the politics of strategic policing. This is another research question that this body of work attempts to address. Despite the claims made by Bratton (police chief) and Giuliani (mayor) the rapid crime rate decrease in New York City was not wholly attributable to their efforts, there were significant players at a neighbourhood level who arguably had more influence in the way that social space was being controlled.

Chapter three examines the methods of analysis and the data utilised within the analysis. The crime and ASB data was obtained from South Yorkshire polices archive systems after, it should be said, a great deal of negotiation. The crime data spans a period of 68 months and the ASB data a period of 19 months. Both data sets relate purely to the city of Sheffield.

The disparity in time spans of the two data sets is due to the fact that South Yorkshire police does not archive its anti-social behaviour data due to technical issues but its crime data stretches back to 1995<sup>3</sup>. The 2007 Sheffield neighbourhood survey was also analysed in concert with the crime and anti-social behaviour data. This survey examines qualitatively the opinions and feelings of Sheffield residents about their local neighbourhood. This was important data to use as existing empirical evidence suggested that it was always important to examine rates of crime and ASB and link them to local resident's perspectives.

As will be seen this analysis went further in showing how scoring rates could be applied to each of the 100 neighbourhoods within Sheffield to measure potential social cohesion. To enhance these findings, Office of National Statistics demographic data was used to look for causal factors within social cohesion levels and to determine if demography played a part in weak or strong community ties.

Data from the 2007 and latterly the 2010 indices of multiple deprivation has also been subjected to analysis together with the other suites of data. It was felt that the analysis of such data would enrich the thesis as a whole by considering whether any of the categories held within the data affected social cohesion at a local level.

Chapter three describes how the data sets were analysed both statistically and geographically with the latter technique perhaps bringing better explanations of what the data was actually showing within the research site of Sheffield itself. Much emphasis is placed on examining correlations between the data sets and in the initial stages determining certain parts of the data as being not relevant for further analysis<sup>4</sup>. Correlations within the data were related to qualitative survey responses and although correlation does not always lead to explanations of causation the comparisons between quantitative data and qualitative data, although difficult to develop, did generate some interesting results.

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<sup>3</sup> Fully computerised records. Prior to this date a further computerised archive is available on request.

<sup>4</sup> The City Centre neighbourhood of Sheffield was excluded due to the high volume of data generated by the night time economy and its very low population density. This exclusion prevented the data becoming skewed and in turn leading to the results being misinterpreted.

Chapter three concludes that ASB is a better predictor of neighbourhood satisfaction than crime data which gives further evidence to the argument that more needs to be done by law enforcement agencies and other local authorities to harvest ASB data in concert with crime data. The discussion considers neighbourhoods whose localised data stood out in an opposing manner when viewing adjacent neighbourhoods. Further research needs to be developed in this area as the demography of a neighbourhood community in Sheffield appears to play an important part in affecting social cohesion and ultimately the rates of crime and ASB.

Chapter four is divided into three main parts. Part one describes policing in the city of Sheffield in the 1950's and 1960's by drawing on the experiences of my father, Rex Birchall, who was a police cadet and then a police constable at this time. My father's life and mine to a greater degree has been clearly shaped by our individual experiences whilst working for the city of Sheffield police and South Yorkshire police.

Policing in the 1950's and 1960's had a more 'hands on' approach with the police being greatly embedded within neighbourhoods in the truest sense of the term and the first part of the chapter draws on some of my father's recollections of the arrest process, the rank structure, the physical buildings utilised within the city and also how policing techniques at this time were similar in style in many ways to those witnessed by Wilson and Kelling in Newark (USA) in 1982.

My father's anecdotal recollections lead into my personal experiences of policing within the city which commenced in 1982 with a clear legacy and style still in place from my father's time. The second part of the chapter will show how the demise of true neighbourhood policing started to occur. I develop this argument by describing how front line duty groups were swallowed up by the need for specialist groups to meet performance targets, the loss of the 'Sheffield ways' of policing and also the physical change of a city environment which still continues to this day.

The third and final part of this chapter considers a broad view of neighbourhood policing within Sheffield and posits the use of a paradigm to connect the police and the neighbourhoods in a similar manner to that used in the 1950's and 1960's. This approach was taken to suggest new ideas for policing Sheffield by utilising the people in the neighbourhoods and the data that they provide through available survey methods and with crime and anti-social behaviour reported to the police<sup>5</sup>. I posit the use of greater urban governance which warns of claims made by egotistical politicians and police

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<sup>5</sup> This data forms the main body of the statistical and geographical analysis within this research.

leaders about what is really happening at ground level. Examples are given which relate to the claims made by Giuliani and Bratton with regard to the reduction in crime in New York and the subsequent lessons that should be reflected upon.

Chapter five presents the data analysis conducted for this thesis and, as with most research projects, underpins the new findings of the thesis. Conducted over a period of approximately two years, it utilised a vast amount of data across the 100 neighbourhoods of Sheffield and revealed some of the idiosyncrasies which influenced new findings about collective efficacy. The chapter also demonstrates how, after much analysis, application of techniques used in other empirical research did not benefit the Sheffield research site or add anything to the collective efficacy debate. This failure in itself became important for the research in that it encouraged the use of a wider range of data that was pertinent to the neighbourhoods. Whereas the use of drugs, violence and robbery data was the empirical norm in other studies, the analysis of Sheffield neighbourhoods benefited in part from the consideration of burglary, damage and ASB data.

Extensive proxy use is also made of the 2007 Sheffield City Council Neighbourhood Survey, which utilised specific question responses that gauged views about people's attitudes around crime, disorder and their general neighbourhood environment. This proxy survey, as an examination of joining quantitative and qualitative together in a meaningful manner, has prompted other debate around the use of more content specific surveys such as the Your Voice Counts questionnaire which is conducted by the local police. The analysis examines how crime, disorder and collective efficacy are manifested within different neighbourhoods and considers how this differs from US based research but supports other small scale European findings. It shows the value of being able to consider data variables such as ethnicity within a neighbourhood context and shows how, when comparing data on differing levels i.e. city wide and neighbourhood, that new collective efficacy findings are produced when examining the data at a more localised level.

The sixth and final chapter is divided into three parts and reflects upon the conducted research and its findings. As the city of Sheffield and its neighbourhoods have been used as the research site, the first part considers the connotations for policing and governance within the city itself using the research findings as a lens. It displays the dynamic nature of the police service and shows the development of technology and the part that it may play within localised policing strategies. This first part also shows how respective Chief Constables of South Yorkshire Police viewed their role, as far as disorder was concerned and the influence people at the head of policing can exercise. The second part of the

chapter presents the national implications for this work and considers how nationally displayed data in a crime and disorder context might presently be misleading the public. The value is shown of the use of modern survey techniques and also that of smaller scale census programmes to argue the need for better knowledge about the communities that exist across the United Kingdom. This research showed how such knowledge might benefit local policing and the need to think about topics that concern local people who in many instances have a desire to make their immediate locale a better place to live.

The final part of this chapter discusses collective efficacy as a theoretical concept and some of its limitations when considering this United Kingdom based research. It directs the empirical debate towards the dynamic between collective efficacy, disorder and the contribution of demography at a neighbourhood level. It demonstrates the predictive capacity of certain data within certain neighbourhoods and argues against the use of large, generalised research in favour of smaller scale work that can be interlaced on a neighbourhood by neighbourhood level if required. The chapter further considers how this research has contributed to the theoretical and methodological implications for research in this field and finally discusses the implications for policing policy in the United Kingdom, taking account of the new landscape of Police and Crime Commissioners and the recently appointed civilian Chief Inspector of Her Majesty's Inspectorate of Constabulary.

## Chapter Two: Literature review

### Wilson and Kelling

Since its publication in 1982, Wilson and Kelling's paper 'Broken Windows'<sup>6</sup> has become both extremely influential and highly controversial. This is perhaps unsurprising, given that the theory has been incorporated into policing practice and also become part of the wider debate on the 'causes of crime' and 'fear of crime'. As a consequence a considerable literature has grown up around the thesis of 'Broken Windows' and its explicatory powers<sup>7</sup>. However to fully understand the thesis it is important to look back further than the publication of the original article and consider the importance of some influential factors.

In 1960's America widespread urban civil disorder had raised concerns about citizen safety in many major cities. These concerns were clearly reflected in the Kerner Commission report.<sup>8</sup> It should be noted that much of the report focused on the 1967 race riots which polarized issues about the lack of opportunities afforded to the black people of America. Results were being analysed from the first series of national victimisation surveys. These interviews also asked respondents about the fear of crime. These early surveys showed that the number of people fearful of crime was far greater than the number of actual victims of crime. (DuBow, McCabe and Kaplan 1979).

People that reported higher fear levels of crime lived in the city. When the data was broken down into specific demographic categories such as gender and age it was discovered that those most fearful, elderly women, had the least likelihood of being a victim of crime. Those shown as being least fearful, young males, conversely were most likely to become a victim of crime.

James Q. Wilson (1975) had suggested that people were afraid of disorder not just crime. He argued at this time that it was disorder, much more ubiquitous than crime, which caused higher fear levels. The suggestion being that disorder had a much more widespread effect across a neighbourhood whereas crimes were considered to be a personal phenomena.

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<sup>6</sup> See also, Wilson and Kelling (1989) and Kelling and Coles (1996)

<sup>7</sup> Much of this literature will be addressed in this research; important examples include Kelling and Coles, Innes, Harcourt, Bowling, Bottoms and Sampson and Raudenbush. This is not intended to imply that research and theorising into anti-social behaviour began with 'Broken Windows', as Taylor (2001) has shown it is part of a tradition of research into incivilities.

<sup>8</sup> Published on the 29<sup>th</sup> of February 1968.

The fear of crime idea was elaborated upon by other researchers for the next five years. 'Fear of crime' was more than 'fear of crime.' (Garofalo and Laub, 1978). It wasn't just that urban residents in some areas were surrounded by disorder; conditions such as these potentially implied that public officials or agencies could not or would not bother to fix things. (Hunter 1978).

Early discussions of disorder and what it constituted included both the physical features of the neighbourhood and features of street life. Relevant physical features typically included abandoned houses, vacant lots especially if they had become overgrown and strewn with rubbish, abandoned or burned out or stripped cars, shuttered up stores, properties or yards inadequately maintained, housing in poor structural condition, litter and streets, pavements or street lights in need of repair. Later following the crack invasion of the mid to late 1980's discarded crack vials or syringes were added to this extensive list.

Relevant behaviours included groups of unsupervised teens, with some researchers stipulating that the teens be rowdy or loud as well as unsupervised. Public drinking or drunkenness, public drug sales or drug use added following the crack invasion. Neighbours fighting or arguing on the streets, problems with homeless people such as public urination, panhandling or just their presence added in the 1980's following increased homelessness.

Wilson and Kelling discuss issues of urban decline in terms of untreated physical and social disorder (the 'broken windows metaphor'). A basic causal sequence is suggested whereby untreated minor disorders in an area, such as a broken window or graffiti, will lead, almost inevitably, to more disorder. This, in turn, will generate increasing fear of crime and individuals will tend to modify their behaviour with many residents adopting a more defensive posture and retreating from the use of public spaces which results in a reduction in levels of 'natural surveillance' and informal social control. These factors lead to neighbourhood change making the area rife for criminal invasion which in turn leads to more serious crime being committed in an area.

As Wilson and Kelling suggest:

[t]he citizen who fears the ill-smelling drunk, the rowdy teenager, or the importuning beggar is not merely expressing his distaste for unseemly behaviour; he is also giving voice to a bit of folk wisdom that happens to be a correct generalization – namely that street crime flourishes in area in which disorderly behaviour goes unchecked. (1982: p33)

The policy prescription which has tended to dominate from this analysis, to prevent the onset of such a cycle of community decline, emphasizes what is termed order maintenance policing (OMP). This, it is argued, can tackle disorder and therefore prevent crime and the onslaught of urban decline.

Wilson and Kelling (1982: p34) make the following comment with which the police have to contend;

'The essence of the police role in maintaining order is to reinforce the informal control mechanisms of the community itself. The police cannot, without committing extraordinary resources, provide a substitute for that informal control. On the other hand, to reinforce those natural forces the police must accommodate them. And therein lies the problem.'

Given the significant claims made for the 'Broken Windows' approach it might be assumed it was based upon extensive research, however initially, at least, this was not the case. The original 'Broken Windows' article owed a considerable amount to Kelling observing and accompanying Newark police officers policing 'a busy but dilapidated area in the heart of Newark, with many abandoned buildings, marginal shops (several of which prominently displayed knives and straight edged razors in their windows), one large department store, and, most important, a train station and several major bus stops'. (1982 p.30). The study was by no means systematic, more anecdotal and observational.

Wilson and Kelling suggested within the broken windows theory that neighbourhood policing could prevent or reverse a spiral of community decline; the form of policing they suggested (1982 p.30) has been termed 'order maintenance' or 'zero tolerance' policing;

It should be noted that the term 'theory' can mean different things to different people. It has been explained as 'a set of interrelated abstract propositions about human affairs and the social world that explain their regularities and relationships.' (Brewer 2000:192). Denscombe (1998:240) comments that a theory can be described as 'a proposition about the relationship between things.'

Wilson and Kelling's (1982) work was not intended to be a theory at the outset. It was largely observational in style but the comments of Brewer and Denscombe show that their work did embrace relationships, regularities, human affairs and the social world in a crime and disorder context which had potential implications for neighbourhood policing.

Gathering data from observations in urban areas Wilson and Kelling asked whether or not the deployment of foot officers as opposed to officers conducting motorised patrols had an effect in two areas, firstly on levels of crime and second whether communities felt

safer.<sup>9</sup> They argued that 'although a community could have increasing crime rates' it was possible for the people within that community to feel safe due to the reassurance offered by foot patrol officers.

Motorised patrols they argued were possibly detrimental both to reducing crime and helping to develop good relationships between the police and the community. This was because officers in cars often drove by situations that could have been handled better with a face to face approach by officers on foot. Kelling became familiar with a localised area of police operation and was allowed to observe how officers worked in the community and dealt with the community at large. This type of observation was not done at the same magnitude as a Systematic Social Observation (SSO), a method adopted by other longitudinal research projects, but allowed Kelling to attempt to get to the heart of what was happening at street level.

They describe how police officers kept order in this transient area. They (the police) were well known within the community and they also knew the individuals or groups with a potential to upset the acceptable levels of order in the neighbourhood. Police officers used their skills to retain what residents found an acceptable level of social order, one aspect of which was giving attention to, in Wilson and Kelling's terms 'broken windows'. The skills used by the officers were techniques that included local knowledge about the area that they were policing. This included information about the shops and stores and the people who worked there. The officers knew about the local ne'er do wells who could create problems for the local community with their anti-social or illegal behaviour which affected the community quality of life. Much of this knowledge would have been shared between local officers by word of mouth or on paper based reports as computer systems were not available to handle and disseminate large volumes of information across organisations.

Reiss (1986) notes the importance of criminal information within communities;

'Patterns of criminal activity likewise have considerable consequence for the quality of life in a community. Crimes often regarded as less serious, such as vandalism, littering, loitering, pandering and prostitution, have consequences for both the actual and the perceived quality of life in the area.' (p 8)

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<sup>9</sup>This study was conducted in the city of Newark in the United States of America.

The broken windows theory supplied the rationale for the quality of life initiative. Like fixing a broken window, arresting persons for committing minor infractions, according to this perspective sends a message to community residents and outsiders that the police are paying attention and will enforce community standards. (Messner, Rosenfeld, 2007)

Gauging how the community reacts and empowers itself to combat the decline is not a feature that Wilson and Kelling were initially concerned with. Later studies however (Messner, Rosenfeld, 2007, Harcourt 2001) showed that particularly in New York, evaluation and further research was essential when examining, in the New York example, the political claims that the broken windows theory was wholly responsible for the decline in homicide and robbery rates within the city. The response by a community is an important fact in learning whether ASB leads to crime. If a community looks after itself and has the support of agencies such as the police, then a stable environment will lead to the prevention of criminal acts being committed in the locality. This links the police with local public notions of desired social order.

If however the windows continue to be broken, graffiti escalates, populations become more transient or more badly behaved, properties become unkempt and abandoned Wilson and Kelling suggest that this type of anti-social behaviour becomes relevant to policing. Crime could potentially develop in areas that are in decline and as a result local residents modify their behaviour to the changes that they see happening around them. Another key notion explored by Wilson and Kelling within the theory is that of neighbourhood withdrawal. Two key routes can be taken. Firstly, people who can afford to leave a neighbourhood in decline will quickly move out to a better area so as not to become a victim of crime or ASB.

Secondly, those who do not have the financial ability to move to a better area will not venture out onto the streets as much as they used to for fear of becoming a victim. By staying indoors, the communication with other neighbours, visiting local amenities as two examples, weakens the collective efficacy of a neighbourhood. There are in effect fewer eyes on the street to monitor and report when necessary to the police or other agencies of relevance incidences of crime and bad behaviour. This withdrawal sends signals to people wanting to commit crime or anti-social behaviour, that there will possibly be little resistance to their activities. Sampson and Raudenbush (2001, 2004) frequently comment that in order to prevent such activities there has to be a good level of collective efficacy, regardless of demographic composition.

Schuerman and Kobrin (1986) comment how physical neighbourhood deterioration can affect rates of crime;

'Early in the process, neighbourhood structural deterioration precedes rising crime. As the neighbourhood moves into the later enduring stage, rising crime rates precede accelerated rates of neighbourhood deterioration. Thus neighbourhood structural components become not causes but consequences, and crime emerges as the dominant force in neighbourhood change.' (p 68)

Conversely St.Jean's offender based Chicago research (2007) does infer that 'ecological disadvantage' isn't at the forefront of many criminal minds when offending on the street.<sup>10</sup> The opportunity to offend rather than the environment in which it takes place appears to have primacy.

Wilson and Kelling consider the aspects of police work that not only are governed by legislation and that can be enforced by due process but also the grey area of policing when an officer uses their discretionary power(s) to ensure that the peace within a community is kept at an acceptable level. This dual approach to neighbourhood policing is important, because the time comes when an arrest has to be made or a fixed penalty notice issued to show the community and the offender where the boundaries of acceptable behaviour exist. But within such a boundary an officer should have discretion, the unwritten power to determine whether or not an incident or crime is sufficiently serious to warrant formal action. This discretionary facility also has the ability to display to a community that non-legislative action can be just as effective in the control of a neighbourhood.

Wilson and Kelling argued for a police and citizen alliance<sup>11</sup> where one body knows exactly what to expect of the other. For example, a person commits a crime, the police will investigate it, the public will help the police by pointing them in the right direction to bring the person(s) to justice, the public feel secure in the knowledge that due to the combination of these tacit actions that the community will not tolerate criminal and uncivil behaviour of other locals or outsiders. Although this example is perhaps an over simplification, it demonstrates in a small way the community and the police exerting a degree of social control over the neighbourhood and certain sections of the people that live within it. But where neighbourhoods have many broken windows and it is clear that

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<sup>10</sup> Crime categories considered in the offence group are drugs, robbery and violence.

<sup>11</sup> See Flint (2013), Millie (2009).

a community is suffering badly, Wilson and Kelling raise the question of how are these neighbourhoods identified by the police?

The usual answer is to look at the areas which have the highest crime rates or the greatest number of assistance calls. Wilson and Kelling recognised this and they realised that the technique misses so much in identifying the core reasons why crime and incidences occur which directs order maintenance policing (OMP) strategies in cities like New York. Wilson and Kelling describe a key role of the police in controlling neighbourhood space much of which is demonstrated within OMP.

'Like fixing a broken window, arresting persons for committing minor infractions, according to this perspective, sends a message to community residents and outsiders that the police are paying attention and will enforce community standards. Failure to move aggressively against public disorder sends the opposite signal that the police are inattentive or indifferent, discourages residents from using public spaces and "leads to the breakdown of community controls.... Such an area is vulnerable to criminal invasion" (Wilson and Kelling, 1982:31-2).

This potential 'criminal invasion' as Wilson and Kelling described it had not gone unnoticed in other parts of the United States. Skogan in Hope et al., (1988) and in his own research (1989) expands the work of amongst others, Wilson and Kelling in showing the importance of individual and neighbourhood stability when examining disorder, crime and the decline of communities.<sup>12</sup> The 1988 research showed how the demography of a neighbourhood including the type of people that lived there and what sort of housing stock they could afford affected levels of disorder and crime within the locale.

This subtle observation is important as Wilson and Kelling had already commented how the police identified neighbourhoods which they thought had the greatest policing need by examining locational crime and disorder statistics. The important connection was made to show what he thought constituted the term disorder. Skogan commented;

'Disorders include both visual signs of physical deterioration and behavioural evidence of social disorganisation. Deterioration is apparent in the widespread appearance of junk and trash in vacant lots, poor maintenance of homes, boarded-up buildings, vandalism of public and private property, graffiti, and the presence of stripped and abandoned cars in the streets and alleys.' (1988 p.48)

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<sup>12</sup> Review of North American research up to and including 1989.

Skogan simply defines the environmental factors within a physical neighbourhood which Innes and Fielding (2002) later termed as 'signal disorders' and which gave an indication to offenders that such an area was a good one in which to commit crime. These indicators were later termed as 'ecological advantages.' St.Jean (2007)

Skogan identified that disorder ' undermines the private residential housing market through its impact upon neighbourhood commitment and satisfaction, the desire of residents to move away from troubled areas, and the market value of the housing stock.' (1988 p.58)

It was further argued that the instability of neighbourhoods due to disorder removes the ability of ' communities to exercise informal social control.' (1988 p.58) This lack of social control can lead to a downward spiral of decline, allowing crime and disorder to flourish even further which can promote a withdrawal from the community by the residents that are left who do not have the financial ability or opportunity to leave what can quickly become a crime and disorder ghetto. Skogan (1989) comments how neighbourhood residents can play an important part in helping communities to remain stable and maintaining order provided that opportunities for such action are accessible. He explains how different people view situations within their own communities;

'Thus past research supports hypotheses that there are either positive or inverse relationships between area crime and collective action. A somewhat more complex hypothesis is that excessive levels of concern are debilitating, but moderate levels of concern are constructive. Those who think their area has virtually "no problems" might find few reasons to engage in problem-solving activities, whereas at the high end of the scale, demoralization and distrust may prevail.' (p. 440-441)

Another key comment in the text is that of class bias within communities that wish to try and regain the lost ground in communities suffering from crime and anti-social behaviour;

'Surveys indicate that those who are better off, more educated, home-owning, and long-term area residents more frequently know of opportunities to participate in anticrime organizations and are more likely to participate in them when they have the opportunity. Studies of the geographical distribution of community organizations focusing on crime problems indicate that they are less common in poorer, renting, high-turnover, high-crime areas.' (p.441)

Skogans research consistently highlighted the participation of individuals within their community environment. He was able to unpick some of the intricacies of neighbourhood fabric not covered by Wilson and Kelling's broken windows theory. He advanced the

argument that in order to understand why crimes and incivilities occurred in neighbourhoods, more had to be done to work out how the physical structure of a neighbourhood and the people living within these structures influenced such phenomena. Emerging from the empirical research was the matter of social cohesion and neighbourhood efficacy in other words the glue of social structure that bonded individuals and groups together towards a common aim. This research baton was ably taken up by the likes of Robert Sampson and Steve Raudenbush who developed collective efficacy theories.

Kelling and Coles (1997) revisit the theory in the 1997 book called 'Fixing Broken Windows'. It is written almost as a handbook for law enforcement and others in public authority to examine crime and ASB within localised contexts. The thread throughout the work is that of the social control of individuals or groups that adversely affect neighbourhoods by acting in an uncivil fashion or who commit crimes that hurt or injure a neighbourhood and its residents. Fifteen years on from Wilson and Kelling's original 1982 work, Kelling and Coles take snapshot examinations of case studies that have utilised some of the initial theory work. What is clear in all of the case studies, that much of the application of the theory into an operational environment i.e. police based operations, relies heavily, sometimes, on the personalities of senior officers engaged in the work.

A great deal within the book explains about the development of certain pockets of American legislature that have gone towards shaping the physical neighbourhoods of American society and their residents, featuring heavily the actions of the American Civil Liberties Union (ACLU) and the differences between local and national legislation which once again can have a marked effect. What appears to be missing however is an overarching guide or direction within law enforcement and public authority that empowers these bodies to routinely engage in work ethics or principles that could perhaps make a difference to levels of crime or ASB. These circumstances are not unique, the development of legislation to meet a need is laudable, what needs to be there also is the will and resource to enforce the new laws.

Hence the return back to the issues of personality within the enforcement scenario. Kelling and Coles' focuses upon police officers and other public figures who became converts to the broken windows theory and that were totally engaged with the desire to bring down crime and ASB through effective methods of social control. There may have been the belief by public figures that the total adoption of the broken windows theory within neighbourhoods maybe a panacea to the problems endured by local residents.

Kelling and Coles used this study to highlight the pros and cons of the initial theory and its individual application in pockets of America. In some cases, communities were defined in a relatively normal fashion i.e. houses in streets, streets in blocks and so on. Other examples cited very specific areas as communities, notably the New York City subway.

Viewing areas such as a subway for example as the basis for a community, is not necessarily a new idea within academia. A community structure can be as diverse as an ethnic group that comes together to pray regularly, or it could be as Putnam (2000) describes any one of a myriad of organisations based across the United States and beyond that has either a common aim or focus.

The difficulty with this idea of community that some audiences may have, is the ability to fashion within their own mind that communities do not necessarily have to be rooted within closely confined geographic areas. As the world-wide web and easier access to the internet has been granted, communities can be far more disparate but still work to undermine social structures as has been recently seen with globally orchestrated terrorism campaigns by organisations claiming to be part of the Al Qaeda network.

Kelling and Coles acknowledge the work of people in the 'engine room' who were really responsible, as far as the City of New York was concerned, for helping the public claim back their rightfully owned public space. These were not the nationally recognised leaders of public departments, but the people who embraced the available research in the correct fashion and had the skills to apply Wilson and Kelling's original theories in a manner that was utilitarian in approach and style.

Frank Field<sup>13</sup> (2003) examines a personal British ASB discourse in which he details his constituent's experiences of ASB as reported to him at local surgeries. Field is quite forthright in suggesting radical solutions to combat crime and ASB. Written more as an anecdotal narrative there are clear links from his experiences that have connections with the research work carried out by the likes of Sampson (1997, 1999, 2001, 2004, 2009, 2012), Raudenbush (1997, 1999, 2001, 2004), Taylor (2001) and Putnam (2000).

Field explains how difficult a machine government can be to get into gear to tackle large scale problems such as anti-social behaviour. But he highlights the fact that through the MPs surgery system which occurs at local constituency level, change can be effected, policy formulated and laws structured to assist communities. These laws can also be used to ensure that there is the will for able enforcement at local level by the police and

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<sup>13</sup> Labour MP for Birkenhead.

judiciary alike and failure to act on behalf of the public in extreme circumstances can lead to sanctions of certain public authorities and their senior agents. Field suggests that the backdrop to the erosion of social cohesion within the United Kingdom is partly attributable to the reduction of Church influence (regardless of faith) during the latter part of the 20<sup>th</sup> century. This is interesting as Putnam (2000) presents evidence within chapter four to suggest that although church membership has remained relatively stable during the latter part of the 20<sup>th</sup> century, regular attendances at places of worship have seen a steady decline<sup>14</sup>.

There is no high-end statistical replication of Putnam's work but Field goes along similar lines to Putnam to show that citizens within the UK do not integrate with each other in the way that they did in the early post war years. The entire thread of Putnam's work is to show from a much more detailed perspective how American society has trod a potentially similar path. Both authors have similar point to prove but each do it in a different fashion. Field anecdotally explains how his constituents relate stories to him at his surgeries of crime and anti-social behaviour and how their lives and those of their neighbours are made a living hell by the actions of a very small minority of young people.

Sampson and Raudenbush's (2001) ethnographic based interviewing makes parallel comment to that of Field and identifies the fact that a small minority of individuals can create large scale difficulties for targeted individuals who may not appear to fit into a community/neighbourhood setting because of their race or gender, or for the community at large. These disturbing stories reveal a ground level microcosm of anti-social and usually illegal activity which the reporting people seem to feel that the police and local authorities are powerless to deal with. Fields proposition to tackle the whole anti-social agenda are wide and varied and will not sit well with many. It appears on first reading that Field is on a personal crusade to meet the desires of his immediate electorate.

Before addressing these issues, he makes an incisive point which gives total clarity as to what has to realistically happen in the United Kingdom and perhaps in the United States to achieve anything that may be successful and have longevity.

'A new public philosophy has to be crafted, agreed and enforced. The task is monumental but achievable. Much of the old beliefs on decent behaviour remain with the majority of the population.' (p.124)

This public philosophy has to be carried onto future generations to ensure that individuals and groups that create difficulties and commit unlawful acts within neighbourhoods and

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<sup>14</sup> Putnam's research is wholly American based.

communities, should be under no illusion that they will see the whites of society's eyes. What Field is saying is that if society is to curtail the activities of people who commit ASB and crime then communities have to work together in a structured and cohesive fashion with the local authorities who offer, to one degree or another, the protective service element within a neighbourhood. Examples of these services could include housing authorities who have the power of eviction to residents who commit ASB and crime, education authorities who can examine why children are not attending school and become involved in ASB instead and naturally the police who provide the enforcement element within society.

Field proposes that the police should have parental surrogacy powers that can only be overturned by local courts. These are dangerous waters and with the battery of legislation that exists to protect the public for all manner of offences there is no need for quick fix solutions. What is needed is a greater desire from the police service to continually recognise that one of its key elements of function is that of protection of the public. Field recognises this by commenting on the fact that the police have to be more involved in fighting ASB and less concerned with the recording of statistical information for performance based measures. This similar fact has been commented upon by Innes and Fielding (2002). Another key thread within the book is that of parenting. Field sees that many parents cannot act as role models for their children as they have little in the way of basic parenting skills themselves. This element was a major piece of the governments respect agenda<sup>15</sup>.

The governments respect agenda introduced legislation and powers to the police and other local authorities. Penalty notices for disorder under the Criminal Justice and Police Act 2001 can be issued on the spot to offenders, dispersal orders under Part 4 (sections 30-36) of the Anti-Social Behaviour Act 2003 allow certain areas to be designated as no go areas to groups of people acting in an anti-social manner. Fields comments gave a common touch to the discussion of very complex social issues and have relevance in this discussion paper and the subsequent data analysis.

Putnam's book 'Bowling Alone, The Collapse and Revival of American Community' (2000) had a wide ranging approach to the inductive research and relied upon the use of statistical information throughout the 19<sup>th</sup> and 20<sup>th</sup> century.

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<sup>15</sup> The respect agenda was disbanded after the change of Prime Ministers from Blair to Brown. A similar coalition government initiative exists in 2013 called The Troubled Families Programme.

Listed below are a selection of the 105 data sources used within his research.

- Trends in political voting (1820-1996), by region
- The Roper Social and Political Trends survey archive 1973-94
- Membership rate in the 32 national chapter based associations, 1900-1997
- U.S. Crime rates, 1960-1997
- Generational trends in civic engagement. (Utilised several studies including National Election Study 1952-1996 and the DDB Needham Life Style surveys between 1975 and 1998)

Putnam had access to this wide range of information which helped in reasoning how American society throughout the 20<sup>th</sup> century had disengaged from community involvement and what had influenced this disengagement. Due to the vast array of analysis within Putnam's study, his findings covered a wide range of topics including educational standards in deprived areas, housing stock and their financial value influencing neighbourhood development, how some communities functioned due to shared religious beliefs<sup>16</sup> and how fewer US citizens vote in presidential elections but more dollars are spent each time in campaigning for the precious cross in the box. Chapter eighteen discusses safe and productive neighbourhoods. It reviews the major studies including the work of Sampson, Raudenbush and Skogan and reflects how crime and incivility can be influenced in certain localities by lack of collective efficacy.

*Breaking Away from Broken Windows* (Taylor, 2001) is a longitudinal study (1970 onwards to date of publication) of the City of Baltimore's neighbourhoods and the 'Fight against Crime, Grime, Fear and Decline'. The central theme to the book is to determine whether or not Wilson and Kelling's broken windows theory (1982), is applicable despite the obvious changes in society that have taken place. Taylor naturally selects a city that he has an extensive knowledge of which is advantageous for the research as he is able to make influential contacts through the varying strata of society including public officials, police officers, neighbourhood leaders and key members of the general public. This local approach adopted by Taylor was to a degree emulated in this research work.

Localised research can be advantageous especially when attempting to understand issues raised by the data analysis. This work benefitted from a group of contacts who gave a perspective and sometimes an explanation as to what the data was potentially

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<sup>16</sup> The Amish Community are used as an example showing how the lack of influence of television ensures that families regularly visit each other and develop cohesive bonds.

revealing.<sup>17</sup> Taylor does comment on the fact that for a real test of the elements of the broken window theory, then research experiments utilising identical techniques across a series of cities simultaneously would reveal solid empirically based results. But such a programme would require a large amount of research finance and perhaps a political desire to complete.

Taylor's research disproved certain attitudes in relation to levels of crime, population shifts etc. on which certain political figures had been locally elected and which were thought to be generally accurate. He argued that detrimental keystone factors had occurred in the 1970's and not a decade later as had been originally thought. It is an interesting point to consider how localised political agendas can give a false impression of what may really be happening in relation to crime (in this example).

By examining the data in a rigorous manner, Taylor was able to take stock of what was really occurring within Baltimore without his vision being anecdotally clouded by his knowledge of the areas his research was focused upon. This approach was found to be robust as he was able to refer some of these findings to another study, similar in style and reason, to neighbourhoods in the City of Chicago which was also discovering the same patterns of general housing degradation occurring in the 1970's and not the 1980's. This fact is important when looking at issues of ASB and crime as housing stock and its condition within a neighbourhood would appear to have certain marked effects on individual residents and is an important consideration within this research.

Do the elements of the broken window theory, as Taylor has investigated, apply in Baltimore? In short elements of the theory do, but what appears to be an interesting discovery is that of how individuals more than neighbourhoods play an influential role in relation to issues of crime and ASB. Taylor within the study was able to subtly measure the psychological perspectives of individuals who were resident within areas suffering badly from crime and ASB. He discovered that people with different demographic profiles within these neighbourhoods had varying reactions and perceptions of ASB.

The psychological issues were not examined in isolation, they were still allied to the ecological principles of the central theory which acted as a back cloth to the more detailed research. The issues of the theory such as graffiti, poor housing conditions and prohibitive access to medical care all still played a part but Taylor suggests that to address large neighbourhood problems i.e. attempt to problem solve and 'fix the broken windows' in today's societal context may now be difficult to achieve.

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<sup>17</sup> See Costello, Uttley and Hamilton in acknowledgements section, page two.

Martin Innes has been another commentator (2004) on, as he describes the 'iconic status' that the broken windows theory has achieved since its original publication. He shares similar concerns with Harcourt (2001) that this status has been achieved with a lack of empirical work to support the backbone of the work. Innes connects with the key commentators of the theory including Taylor (2000) and Sampson and Raudenbush (1999). Innes considers Taylor's work to be an important piece of research in moving Wilson and Kelling's (1982) paper from a 'cross-sectional to a causal, longitudinal position.' (p.340)

This becomes important to the broken windows discussion as Taylor reveals that there is cross sectional evidence to support the connection between the levels of disorder, crime and fear but weak evidence for the long-term argument that public disorder creates public fear and then crime. Innes' view on the broken windows theory is that '...a basic causal sequence of community decline whereby untreated disorder in an area generates fear of crime amongst the populace, which in turn leads to more serious crimes being committed in the area concerned.' (p.335)

He identifies in his critique of the broken windows theory (p.339) as do Taylor (2001) and Bowling (1999) that the spectacular reductions in the crime rates experienced in New York City are not wholly attributable to the application of the theory in a practical sense. He comments that;

'Crucially during the 1990's recorded crime fell not just in New York, but also across a number of American and European cities where law enforcement agencies were not practising broken windows policing, thus implicating wider structural changes in these processes.'

As other commentators have noticed, the reduction in New York City crime rates involved a restructuring of the police department and a general reduction in the use of crack cocaine which in turn led to a reduction in drug related homicide reports. Innes identifies that whether an audience advocates broken windows theory in the cross sectional sense or Taylor's longitudinal perspective of his 'incivilities thesis' the most important common denominator for both relates to the concerns of the members of the public. He correctly identifies (p.340) when members of the public identify a significant issue (to them) of disorder or crime that the criminal justice agencies frequently attach a low order of priority to the event within their neighbourhood. Ferraro (1995:51) also comments;

'Whether one considers crime in general or personal and property crimes, the single most important predictor of perceived risk is neighbourhood incivility. Signs of social and physical incivility such as disruptive neighbors, unsupervised youth, vacant houses and

unkept lots are generally associated with higher perceived crime risk. These phenomena are signals to residents that more vigilance is needed to avoid crime in their daily activities, regardless of how long they have lived in their neighborhood'.

Innes has researched extensively the field of signal crimes which he describes as the way that people observe and interpret crime and disorder which happens around them and how space around them is constructed. (p.352) Innes also indicates (p.352) that the public will not always be aware of certain signals and as individuals will interpret them differently and therefore develop differing perspectives. His approach to community in this research context differs from that of Wilson and Kelling whose broken windows theory was observational whereas Innes in this 2004 research conducted qualitative interviews and was able to obtain in depth answers from selected members of the public. This was a method relied upon by St. Jean (2007) who extended it further by canvassing the views of elements of the criminal fraternity.

Considering differing research styles and the subsequent findings it could be argued that the public at large have little interest in the immediate space around them except when they are canvassed for their views or when crime and disorder encroaches into their local area. Wilson and Kelling (1982) observed policing techniques within a particular space and examined the physical attributes of that space. A causal link was subsequently made that assumed that if a community was in decline then an increase in crime and disorder would occur. By examining how perceptions are developed within a particular space, Innes is able to argue robustly the importance of fully understanding how people view their immediate space in a crime and disorder context, something that Wilson and Kelling's broken window theory did not contemplate.

The 2001 research based on a longitudinal study, titled 'Disorder in Urban Neighbourhoods – Does It Lead to Crime?' (Sampson and Raudenbush) examined whether or not there was a defined link between incidences of disorder and crime, examining drunkenness, graffiti and broken windows and how these incidences lead to more serious offences in certain areas of Chicago. The idea within this research, considered through 196 selected Chicago neighbourhoods, was that crime and disorder stemmed from similar sources i.e. neighbourhoods that shared similar characteristics such as poverty. It was also thought that if neighbourhoods had within them collective efficacy or strong cohesion between residents and a level of expectation of how their neighbourhood should be controlled then this would have a large effect on the control of crime and disorder within the neighbourhood spaces.

The levels of disorder were measured using direct observational techniques as disorder is usually overt in its style as opposed to crime which is normally conducted in a covert manner. The main method of measurement to gauge disorder levels is called systematic social observation (SSO) which included video-taping in excess of 23,000 streets within the 196 neighbourhoods and noting the physical characteristics of each of the areas. Residents were also interviewed, over 3800 of them who informed the research team about social control, cohesion of the neighbourhood and behaviour of the community in general. They were also asked about crime and their responses were then compared to local police records to look for correlation in the responses to see which sides answers best reflected the status quo of the neighbourhood. Population and housing density was also considered together with the usage of land within a neighbourhood (commercial/domestic).

The study found that ASB didn't directly promote crime. What was determined was a relationship between crime and ASB and the collective efficacy or social cohesion of a localised neighbourhood can go some way in the explanation of the respective levels of each of the phenomena.

In this 2001 study it was found that poverty was a key variable across all of the neighbourhoods especially those with high concentrated levels of population. Poverty was also found to have a link to the ethnic type of people living within a neighbourhood. Much focus was given to the black and Hispanic communities within Chicago who suffered from poverty over much of the research site. Another interesting factor was that of collective efficacy. Areas that displayed high levels of collective efficacy i.e. strong neighbourhood cohesion, good community links and beliefs, were unlikely to suffer from high levels of ASB or violence regardless of the demographic content of its residents. Collective efficacy also seemed to deter offenders committing ASB in public spaces which in turn affected the resident's perception of incivilities within their locale. To conclude, the study's findings determined that if disorder in public spaces is reduced then there could be a positive bi-product in the reduction of crime but only if the neighbourhoods have a degree of stabilisation due to a decent level of collective efficacy.

Sampson in 2004 empirically builds on this initial study in *Neighbourhood and Community – Collective efficacy and Community Safety* which examines the intricacies of neighbourhood cohesion in more detail with an evaluation styled approach of what appears to work, what doesn't work and what might work with the correct guidance. He is appreciative of the fact that his research is exclusively American but certain facets of the research could be applied within the United Kingdom. Sampson examines how

cohesive communities effect social control within their own locality by relying on the actions of other individuals and the interaction of public bodies such as the police or local housing authority and attempts in a limited way to untangle some of the processes involved that make a neighbourhood a good place in which to reside and work.

In his expansion of how public authorities can be a part of the cohesive gel within a community he makes an interesting suggestion in relation to the sharing and dissemination of information and its relevance for further research.

'To date, information technologies have been used as tools mainly and perhaps only by 'experts' – namely the police. True to the notion that collective efficacy is fundamentally a levelling process that entails civic participation, such information should not be available only to the police or researchers alone. With the rapid spread of technology, dissemination of crime data and the mapping of hotspots could, in principle, be made available to local residents and community – based organizations. If residents knew when and where incidents were occurring – in more or less real time – innovative and effective mobilization might occur in ways that go well beyond police power.' (p 109)

His suggestion is not radical in the least from an American view point as a great deal of police crime and incident data is published on departmental web pages. Police forces in the UK are now also starting to publish crime and disorder data on externally facing websites. Sampson therefore makes a lucid point that in order to develop collective efficacy and especially when public authorities are part of the engagement strategy then a degree of openness and a willingness to share information and data should be a given. The theme of this particular piece of research is that good communities are borne out of thinking about how social problems can be worked out in a social context. All too often public authorities are guilty of trying to short term problem solve to meet a performance management target which in essence has no real relevance or long term benefit for the community in question. Sampson proposes that better interaction between citizens and public authority might give a higher level of cohesion within a neighbourhood. The natural progression of Sampson's work within this proposal has clearly started to emerge with the surveys being carried out by the police across South Yorkshire. Sampson suggests public authorities should work with individuals to find out what they know about the neighbourhoods in which they reside.

Sampson and Raudenbush (2004) return to examine how individuals within neighbourhoods form perceptions of ASB with a focused lens on the racial composition of the neighbourhood. The key question therefore becomes, within the extent of this paper, what makes disorder a problem? In this study no effort is made to link crime to

ASB or to link other variables to issues of disorder. Issues of disorder and incivility are applied to people's perceptions of what is happening within their neighbourhood as described within the broken windows theory. They continue their usage of the highly complex ethnographic techniques (SSO) applied in their 2001 research and compliment it with a data based quantitative study of the racial, ethnic and socio-economic structures of neighbourhoods which they describe as being 'beyond observable conditions of disorder'.

Although the research does not have a crime focus, comment is made on the issues of the broken window theory in relation to ASB. Sampson and Raudenbush develop the argument that the broken window theory might not play as big a part as initially thought. The efforts made to clean up or renovate an area that have large concentrated neighbourhoods of poor people or a large ethnic minority may have no or limited success in the controlling of ASB within open public spaces. This was a consideration of St. Jean's research (2007). The thought therefore for further research is that the perceptions that individuals and communities formulate in relation to ASB may well extend into arenas outside of Wilson and Kelling's broken windows theory.

A European discourse suggested by Goudriaan, Wittebrood and Nieuwbeerta is a Dutch study of how neighbourhood characteristics affect the public will to report crime with a focus on three key variables, the existing level of social cohesion within a neighbourhood, the confidence in police effectiveness and the socio-economic disadvantage in the neighbourhood. Data from the Dutch equivalent<sup>18</sup> of the British Crime Survey was used as the main source of victim and incident reporting but appears to exclude any locally extracted crime/incident data. This is possibly of no consequence as the sample size used includes 110,950 victims who have been part of the survey on a bi-annual basis between 1995 and 2001. The advantage of such a nationally based sample which is zip coded across 3990 regions of the Netherlands is that neighbourhood differences in results can be measured and mapped for comparison. Taylor, Sampson, Raudenbush (ibid) all commented on the need for wide spread longitudinal research in this field so that result comparisons could be made.

The zip coding feature has been successfully used in other Dutch studies and appears to work as the areas covered by these codes have attached to them reasonably accurate population and residency figures which is a key factor when looking at collective efficacy and the neighbourhood structures. Although the Dutch study is mainly focused on the reporting issues around crime, the thread of social cohesion, as one of the three key

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<sup>18</sup> Politie monitor Bevolking.

variables, is tackled through the use of another national survey called the Residential Needs Survey (RNS) which is linked by the common zip code within the Politieonitor Bevolking.

They developed, through the nationally based sampling of data, the ability to gauge contextual factors that would influence whether or not an individual would report a crime. Strong collective efficacy within a neighbourhood found positively that victims would report crimes to the police. Neighbourhoods that were socio-economically disadvantaged displayed figures that showed low levels of reporting crimes to the police which reflected similar findings made by the Baumer (2002) research. They conclude in identifying so many other areas within the context of their study that could be expanded to learn more about the social effects and structures that influence the reporting of certain crime types. They acknowledge the fact that there is a clear gap, between the social and neighbourhood composition of the results of the Politieonitor Bevolking and what is locally perceived by the police to be occurring in relation to reported crime.

By utilising data sets not considered by the police in their analysis of crime and disorder, the opportunity exists to consider how people perceive the neighbourhoods in which they reside and how they think that crime and disorder directly affects their quality of life. This forms a major part of the data analysis across the city of Sheffield which is discussed within this thesis.

St. Jean (2007) examined how the broken windows and collective efficacy theories were influenced by the ecological advantages and disadvantages afforded to criminals operating in a small area of Chicago<sup>19</sup>. In interviews with street offenders, police and local residents he attempted to prove whether components of the broken windows theory such as poor upkeep of buildings and street corners affected how offenders committed three types of common crime namely offences involving narcotics, violence and robbery. He also considered how collective efficacy affected offending patterns and levels of disorder within the same research site. His research was interesting in that the study had obvious influence from Sampson<sup>20</sup> in that it was ethnographic in style with limited Chicago Police data being used only to confirm what St.Jean had already found out from in-depth interviews.

The police data was a cross sectional checking mechanism against the longitudinal ethnographic research completed by St.Jean. His findings revealed that physical disorder such as the state of a building or a street corner was not significantly associated

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<sup>19</sup> Wentworth area.

<sup>20</sup> Sampson had been St.Jean's PhD supervisor and the book is the publication of his research.

with high levels of the three crimes considered but social disorder such as the activities of individuals on the street and collective efficacy were significantly associated with all three types of crime.

He attempted to show through rudimentary geographical techniques how neighbourhood disorder and collective efficacy influenced the formation of crime hotspots. In examining the geographic hotspots he then posited the importance of understanding how the spatial locations were influential in making a particular area a good or bad place to offend from the perspective of the offender. St.Jean developed an understanding of the benefits in linking the academic disciplines of criminology and geography and examining the statistical data within these environments. In adopting such an approach he commented as follows;

'Researchers, therefore, must situate explanations in the influence of broader spaces within which a crime hotspot is located. Spatial positioning has profound impacts on the interpretations of neighbourhood disorder, as well as on the demands, and returns, for collective action against crime (collective efficacy).' (p.5)

A replication of the crime and ASB types used by St.Jean and previous research is discussed within this thesis, but as will be demonstrated, what appeared to work for St.Jean and other researchers did not come to fruition within the Sheffield research site and the data analysis had to be widened to extrapolate some real meaning that advanced empirical thinking about collective efficacy.

The quality of life paradigm, especially in many of the major cities of the United States, reached its zenith between 1991 and 2000 in the city of New York. The crime rate in 1991 topped out and included over 2000 murders in its statistics. The topography of its city also witnessed many homeless encampments springing up and it was widely thought that something had to be done to bring a degree of normality back to the city. In a nine year span this had been largely achieved, with crime dropping to unprecedented low levels and homeless encampments being eradicated from the city vista. This was no social fluke and there was perhaps a darker side to how this social change was engineered by the city authorities and a distinctly politically driven agenda. (Vitale 2008) The change in the five boroughs<sup>21</sup> of New York rippled across other major American cities and altered attitudes towards social outcasts forever.

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<sup>21</sup> The Bronx, Queens, Brooklyn, Manhattan and Staten Island

Ten years after Wilson and Kelling had written about broken windows the mayor of New York City, Rudolph Giuliani mandated the New York Police Department (NYPD) to eradicate minor street offences ranging from public disorder, beggars, drunks and the whole range of low level street offences that could affect the overall quality of life for New York residents. Crime rates, it was argued, as a result of this 'zero tolerance' approach started to decrease in a dramatic fashion and this decrease continued throughout a succession of New York mayoral campaigns. The New York crime rate decline is possibly due to the fact that there were a higher number of arrests, a greater number of 'frisking's' or stop searches carried out which was fuelled ably by the higher number of street based police officers employed by the NYPD. Harcourt (2002 p.8) comments about this increase in uniformed officers;

'There have also been important changes at the NYPD, including a significant increase in the sheer number of police officers. Mayor Dinkins hired over two thousand new police officers under the Safe Streets, Safe City program in 1992 and Giuliani hired another four thousand officers and merged about six thousand Transit and Housing Authority officers into the ranks of the NYPD. As a result, from 1991 to 2000, the NYPD force increased almost by half, up by 12,923 police officers (including those transferred from Transit) from a force of 26,856 police officers in 1991 to 39,779 in 2000. Excluding the Transit merger, the police force grew by almost a quarter. As a result, the NYPD now has the largest police force in the country and the highest ratio of police officers to civilians of any major metropolitan area.'

In effect, the broken windows theory spawned two new policing terms, order maintenance policing (OMP) and zero tolerance policing (ZTP) which were used extensively across New York City. The NYPD was expanded by successive New York Mayors whose election campaigns had a focus on making citizens feel safe within the city. Political claims for this revolution in policing and how it drove crime rates down across New York were quick to appear on the horizon. From 1990 to the present day, crime rates across a whole range of crime categories have been in decline across the City of New York. (Langan and Durose 2004). The City of New York is on course to record its lowest murder<sup>22</sup> rate since official US crime figures were nationally collated in 1960 by the United States department of justice (Clark 2007).

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<sup>22</sup> As of 24<sup>th</sup> of November 2007.

Clark clarifies the currently available NYPD figures;

'Since the beginning of the new year the New York police department has recorded 428 murders compared with 579 for the whole of 2006. Only 35 of these deaths were at the hands of complete strangers while the rest arose from personal disputes such as romantic tiffs, gang warfare or confrontations with acquaintances'.

The OMP/ZTP approach with an unprecedented amount of patrolling officers on the streets was hailed as the main reason for reduced rates of crime. It is worth mentioning at this point how the NYPD officers were being directed. The NYPD through its Chief of Police William Bratton, relied heavily upon crime statistics to indicate where large volumes of crime were being committed and to direct resources accordingly. In order to deploy officers effectively and to bring police middle management to account about their local precinct crime performance, Bratton introduced a computer based reporting process called 'COMPSTAT'<sup>23</sup>.

On a weekly basis, personnel from each of the NYPD Districts compile a statistical summary of the week's crime complaint, arrest and summons activity, as well as a written recapitulation of significant cases, crime patterns and police activities. This accountability process similarly occurs within UK policing and manifests itself in the form of the national intelligence model (NIM) with its tasking and coordinating group meetings. (T & CG)

The data, which include the specific times and locations at which the crimes and enforcement activities took place, are forwarded to the Chief of Department's CompStat Unit where they are collated and loaded into a city-wide database. The data are analysed by computer and a weekly CompStat Report is generated. The CompStat Report captures crime complaint and arrest activity at the precinct, patrol borough, and city-wide levels, and presents a concise summary of these and other important performance indicators. This aggressive chasing down of police statistics within the NYPD was the driving factor behind zero tolerance policing. Precinct Captains were able to deploy resources at the areas of greatest statistical need. Precinct performance many felt was now starting to take precedence over genuine community need in relation to crime and incivility. The broken windows theory never considered the statistical drivers of a locality only the rudimentary, street level problems that faced citizens in a particular neighbourhood and how policing could realistically address them. Notwithstanding the apparent successes of the NYPD, a number of dissenting voices emerged.

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<sup>23</sup> COMPSTAT is an abbreviation for 'Computer Statistics' and was largely introduced by Jack Maple, the NYPD's Deputy Commissioner.

Robert Zink of the NY Patrolmen's Benevolent Association (2004) commented about COMPSTAT after ten years of NYPD directional usage;

'In the early days, it was easy for a precinct commander to benefit from CompStat. He or she had crime-ridden neighbourhoods where rudimentary policing techniques could bring crime down. Add the increased resources from the Safe Streets/Safe City program, and just paying attention to patterns and putting cops where crime was happening caused stats to fall dramatically. Then add to that the benefit of the gun control effort by the street-crime teams and we've made some real and honest impact on crime in New York City'.

But Zink exposes the reality of what COMPSTAT started to mask.

'The truth is, there are over 5,000 fewer police officers on our streets than there were in 1999. And there is a lot more work to do because of the threat of terrorism. And all along, the bosses have been peddling phony numbers to make everybody feel safe. Our mayor likes to say that the NYPD has been doing more with less. Perception becomes reality. But when people are being put at risk and victimized due to ambitious managers, that's unacceptable.'

Does Zink's claim that the NYPD were 'peddling phony numbers' stand up to scrutiny or is it just special pleading on behalf of the New York City Police Benevolent Association?

Langan and Durose pose a similar question;

'Given the pressure that CompStat places on precinct commanders to reduce crime, then, it is reasonable to ask whether crime really did fall in New York City. Bluntly put, did crime fall, or did precinct police officials falsify the numbers?' (2004 p.8)

Their 2004 research independently determined the quality of the NYPD statistics by conducting a correlative study using National Crime Victimization Survey (NCVS) data which is similar in style to the British Crime Survey (BCS). The study also used independent homicide statistics obtained from the Office of the New York City Medical Examiner.

Langan and Durose (2004) comment further on their research findings;

'This study put NYPD statistics to the test. Would non-NYPD crime data show crime falling in the city? Homicide statistics of the NYPD and the New York City Medical Examiner were compared over the period that NYPD statistics showed record-setting declines. The two were nearly a perfect match. For other crimes – robbery, aggravated assault, burglary, larceny, motor vehicle theft – NYPD statistics were compared to those derived from annual interviews with scientifically sampled residents of New York City, in

which residents were asked whether they had recently been victimized by certain crimes, The interviews were all conducted as part of the on-going National Crime Victimization Survey, or NCVS. When these never-before-seen crime statistics from interviews with New York City residents were compared to NYPD statistics over the history-making period of falling police-recorded crime, results generally corroborated the NYPD.'

The Langan and Durose research therefore appears to provide some independent corroboration to confirm that the NYPD collated crime statistics have a degree of accuracy.

Sampson and Raudenbush (2001) comment about policing policies;

'More important, the findings strongly suggest that policies intended to reduce crime by eradicating disorder solely through tough law enforcement tactics are misdirected. Eradicating disorder *may* reduce crime indirectly by stabilizing neighbourhoods'. (p.5)

Something of this claim has been evidenced in this research by showing neighbourhoods in the city of Sheffield that display strong levels of collective efficacy can have low levels of crime and ASB but there are some neighbourhoods that do 'buck the trend'.

Harcourt (2002) makes an interesting observation about the NYPD ZTP approach in relation to racial matters;

'The trouble is, policing strategies that deliberately emphasize arresting misdemeanor and public order offenders – rather than issuing warnings or implementing alternative problem solving techniques- have significant racial consequences. The fact is that in New York City, and the United States more generally, adults arrested for misdemeanors are disproportionately African-American in relation to their representation in the community. In 2000 for example, slightly over 50 percent of all adults arrested for misdemeanour were African-American.'

Does the NYPD have anything to hide? The research by Langan and Durose (2004) showed a close correlation with the NYPD general crime statistics and their findings so why the reticence to be open with stop and search data? Are the comments of Zink nearer to what is and has been happening inside the NYPD for some years? If the NYCLU suspect serious racial overtones to the NYPD OMP/ZTP policing practices and insiders such as Zink confirm the fact, then these practices and the high ranking police officers and politicians who have promoted them should have some serious questions to answer.

Benjamin Bowling (1999) suggests that declining murder rates were linked to the fall in usage of crack cocaine and not the aggressive zero tolerance approach of NYPD

policing. The argument has some validity when comparing crime rates in other United States cities over a similar period of time. Harcourt (2002 p.7) also comments about the reduction of crime rates in other United States Cities;

'If we look at the criminological evidence, the results are no more helpful to broken windows proponents. The basic fact is that a number of large U.S. cities - Boston, Houston, Los Angeles, San Diego and San Francisco, among others - have experienced significant drops in crime since the early 1990's, in some cases proportionally larger than the drop in New York City's crime. But many of these cities have not implemented the type of aggressive order-maintenance policing that New York City did.'

Harcourt comments further;

'The San Diego police department, for example, implemented a radically different model of policing focused on community-police relations. The police began experimenting with problem-oriented policing in the late 1980's and retrained the police force to better respond to community concerns. They implemented a strategy of sharing responsibility with citizens for identifying and solving crimes.' Harcourt, 2002 (p.8)

Other contributory factors such as the development of stronger community links, higher employment of police officers, shifts in demographic patterns to mention but three causal mechanisms might have exerted greater influence than the broken windows theory itself acting in isolation. As has been mentioned earlier, successive NY mayoral campaigns (Dinkins, Giuliani) focused heavily upon crime and incivility. As Giuliani attempted to obtain the republican party's presidential nomination it became apparent that the policing successes in reducing statistical crime figures in New York would be an important weapon.

Santora (2007) comments about the recent revival of the relationship between Giuliani and Bratton<sup>24</sup>.

'Mr. Giuliani's decision to renew his ties to Mr. Bratton comes at an opportune time politically, as he highlights his record in New York and says he would apply tactics from those days to the federal government. It could also help paper over a potentially embarrassing rift from his days as mayor of New York. And the relationship could help Mr. Bratton, who now has access to Mr. Giuliani, the candidate currently at the top of the republican presidential pack.'

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<sup>24</sup> William Bratton, having also been Chief of Police at The Los Angeles Police Department, is now in 2013 shortlisted to become the NYPD Police Commissioner.

We see here then the potential for the New York model of OMP/ZTP to become entrenched in American social culture, subject to Giuliani becoming president, despite the clear and abundant criticisms that exist about each of the approaches.

As is evident in this review of some of the key broken windows literature, much of it, but not all is entrenched within American social structure. Further investigation is warranted to determine how housing and policing policies within Sheffield determine the distribution of collective efficacy and how in turn this influences levels of crime and ASB. The quantitative and qualitative data analysis has given an insight as to how collective efficacy can be measured albeit in a rudimentary fashion. But it is a start to try and ally different data sets and empirical knowledge to add value to the collective efficacy theory. The recent work produced by Sheffield City Council about housing market renewal areas<sup>25</sup> gives an advanced indication of the vein in which strategic housing planning is headed. Localised policing policies should be an integral part of this thinking as both bodies share in some cases the same client base and subsequently knowledge and information should be transferrable.

This work has been advanced further (Flint et al 2009) to consider the perceptions of the current Sheffield housing market from the viewpoint of a resident. Independent engagement in this manner is an important factor in understanding what the residents of Sheffield think about the areas in which they live. It should be remembered that the analytical work carried out within this research utilised a neighbourhood survey commissioned by the Sheffield City Council and to advance the research further, a combining of the knowledge would be very useful. It appears that with the work already completed and with further reading, there is the opportunity to assist in policy development for the council and the police for Sheffield in their respective areas. Flint is an important commentator on ASB within a British context and gives salient direction within this thesis which considers how people within Sheffield neighbourhoods live with ASB. Flint et. al (2006) examines how housing, urban governance and ASB connect to each other and how housing plays a key role in the governance of ASB away from the usual considerations of police based law enforcement. He brings together the work of individuals researching in pertinent fields of housing, policing, governance and ASB from different parts of the world and identifies themes that are worthy of future research. This thesis considers how the elements of Flint's 2006 work is evident across the 100 neighbourhoods of Sheffield and the value of research within the ASB field. It is worth

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<sup>25</sup> Housing Market Renewal 'Outsider' Survey final report 2008/2009.

briefly commenting here on the value of British based research work around ASB which also demonstrates Flint's current commentary.<sup>26</sup>

Flint (2013) discusses the current practices employed over the governance of ASB and troubled families who are frequently responsible for its committal. The Troubled Families Programme is a new coalition initiative to address the issues of ASB within the UK and is to be headed by the leader of the previous Labour governments Respect programme Louise Casey<sup>27</sup>. To assist the work of the programme and law enforcement practitioners, there is to be a streamlining of the existing legislative powers with the replacing of nineteen existing powers with six new ones. The new Anti-social Behaviour, Crime and Policing Bill brings in new elements that intends to make the use of the streamlined powers more efficient. These elements include a widening of the definition of ASB, standards of proof are set at the civil rather than criminal level, the geographical reach of powers are extended, a wider range of authorities can utilise the new legislation and there will be wider range of involvement from the community via the Police and Crime Commissioners office in deciding what sort of sanctions should be applied to offenders. Recent governments have identified the need to approach ASB head on i.e. making law enforcement the lead agency to combat the fallout from disorder. But it is becoming clear within the UK that the factors that drive ASB have more depth to them and Flint's comments attempt to get to the root of the problems by showing that troubled families and the individuals within them need direct intervention to help them with a range of difficulties which in turn manifest themselves as ASB in a wider social context. Such interventions are not the sole remit of law enforcement, but policing does have a part to play, albeit from the new perspective of the Police and Crime Commissioners office in thinking about practical, innovative justice strategies.

Flint eloquently presents all of the current relevant legislation, practical solutions that have been employed and current research in a similar fashion to that of his 2006 work. Flint (2013) shows the importance within an ASB context, of the transference of academic knowledge and theoretical considerations into practical options for policy and ultimately deployment to the front line professionals engaging with troubled families. This migration from 'thought to application' within a policy lens is displayed within the final chapter of this thesis and has been influenced by Flint albeit much of his ASB research is housing rather than police focussed. The adoption of the new UK legislation to deal

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<sup>26</sup> An embargoed paper which advises the current coalition government about proposed legislation focusing on ASB and troubled families.

<sup>27</sup> Casey has been shown in the past not to favour in-depth research (Millie, 2009, p.1) and published her own Troubled Families report (Department for Communities and Local Government, 2012b) which received robust criticism (Ramesh, 2012).

with ASB and the peculiarly British stance of how to deal with it, will advance research into the phenomena further and spawn a critical body of literature which can only benefit the broader church of ASB research.

Millie (2009) reflects on the topics of ASB in a fashion more closely allied to this thesis simply due to the chronology of the work. He sets out the landscape of ASB in Britain and considers many of the influencing factors around it. To new practitioners of the subject the research is a solid grounding in understanding the key issues. Similarly to Flint, but posited within a policing context, Millie asks, 'What did we do before all this anti-social behaviour?' (p.137) He makes reference to the breach of the peace legislation (p.138) from the Justices of the Peace Act of 1361 which is a simplistic worded piece of legislation that if contravened brings an offender before a court and they agree to be bound over to keep the peace for an agreed period of time. If during this binding over period the person breaches the peace again then further punitive action can be taken and Millie identifies the benefits of the use of this 362 year old legislation but generally identifies (p.183) that criminal policy might not always be the most effective solution to ASB. In expanding this argument further and having discussed the streamlining of future UK ASB legislation, perhaps a singular, catch all, breach of the peace style worded charge for law enforcement with a series of restorative justice options, developed by other agencies, might be another way forward in providing a holistic approach to deal with the social complexities of ASB. Millie, like Flint, sees the value of central government intervention schemes such as 'Troubled Families' teaching people values and respect (p.187) but warns of the use of a singular, narrow approach as many families will fall through the net. He also suggests that to avoid 'intervention fatigue' (p.188) there has to be a local buy-in from neighbourhoods that are blighted by ASB. In Flint's working paper (2013) the suggestion is developed that the Police and Crime Commissioners office, not the police directly, play an integral part in the process of engaging with the public in deciding how ASB should be effectively dealt with. This idea is not to position law enforcement further away from the neighbourhoods they police, but there is a recognition, as law enforcement is entrenched in authority, that in some neighbourhoods antagonisms do exist between communities and law enforcement. The Police and Crime Commissioners office have an opportunity to act as a 'buffer' between certain neighbourhoods and the local police to broker effective and appropriate ASB solutions which could in turn strengthen collective efficacy.

This refreshing approach produces solutions to ASB from the people who suffer from it and as Millie recognises solutions are often negotiated and require little in the way of policing. Millie displays the plethora of legislation surrounding ASB, current interventions

that are being utilised, causation of ASB, enforcement and prevention options and in covering these topics, gives some direction to this research. Although this work focusses on policing and policy suggestions for neighbourhoods, Millie's work has a clear relevance to the UK and global ASB debate and therefore is rightly considered within this review.

This literature review has shown that, empirically speaking, a great deal of knowledge exists within an American context and this thesis has been influenced accordingly. It becomes apparent that general ASB/collective efficacy research within the UK does not lag behind its American counterpart, but has a peculiarly 'British' focus. The work that follows attempts to advance empirical knowledge through the lens of a post-modern city in the north of England with heavy recognition to research conducted in America.

## **Conclusion**

Wilson and Kelling's broken windows theory spawned a debate that continues today and is forever entrenched in sociological research. This literature review has critically considered some of the empirical research that has influenced the thesis as a whole. The considered literature has not been a list of what would make this research easy to reference to existing empirical work simply because it agreed with Wilson and Kelling's observational paper. As has been indicated there are distinct differences between the UK and America when considering, crime, ASB and collective efficacy within a theoretical framework. The critically acclaimed literature discussing the decline of American and French ghettos by Wacquant (2008)<sup>28</sup> was a considered work within the literature review due to the focus on the Chicago neighbourhoods. There was the seed of an idea, in the early stages of this research, that ethnicity may play an important role within the 100 neighbourhoods of Sheffield in determining levels of collective efficacy due to the formulation of ghettos, hence the consideration of Wacquant's literature. It became apparent that urban ghettos neither exist in the UK or Sheffield at the levels witnessed in America or France and after conversations<sup>29</sup> about this issue no further reading was conducted around this particular topic. But as is shown within this thesis, there is evidence to suggest within certain Sheffield neighbourhoods, where concentrations of people from similar ethnic backgrounds live, there is the potential for enhanced levels of collective efficacy to exist. The work of Wacquant, as a singular example, demonstrates the value of considering a wide body of literature within the process of developing a

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<sup>28</sup> See also 1989 and 1991 work by the same author.

<sup>29</sup> Peer led discussions with Dr. Andrew Costello, The University of Sheffield and Mr. Ryan Powell, Sheffield Hallam University.

programme of research at this level. The knowledge gained from such wide reading is not always fully utilised but gives direction to research such as this and assists in the understanding of competing empirical texts that encircle the thesis subject matter.

## **Chapter Three: Methodology**

### **Introduction**

Data analysis in this research has been an important technique for showing how quantitative and qualitative information may be joined together to reveal new findings for further empirical debate. This chapter describes in detail the different sorts of data sets that have been used within the main body of the data analysis itself.

The data, in a body of work such as this, is the fulcrum around which all the empirical reading, subsequent writing and connected knowledge, anecdotal or otherwise, revolves. The reading is required across a broad range of subject matter, some of which is discarded but much which is used and is then considered within the writing process. This process then feeds the ability to make an informed decision about which data to select to play a further part in the writing process, after analysis and the finding of results pertinent to the research site in question and then contribute to the wider debate about the subject matter.

Many researchers have difficulty in obtaining data or a suite of data that has relevance to their field of interest. This work had no such problems, quite the reverse in fact. There was too much data available and this slowed down the pace of the research in attempting to anticipate what would feasibly work in an analytical environment and whether the resulting outcomes would be of use. As Bell (2005, p.35) comments; 'There is never enough time to do all the work that seems to be essential in order to do a thorough job'.

Decisions were made to utilise the data described within this chapter. The selection and checking of the data took well in excess of twelve months and continued throughout the lifetime of the research work. Data transparency is important within research to show what variables have been considered and their strengths and weaknesses to the work as a whole. This chapter attempts to highlight the minutiae of the considerations made in constructing the data for analysis.

### **Analytical Considerations**

The initial idea underpinning the analysis of the data was an attempt to establish if collective efficacy could be measured in some way across Sheffield's neighbourhoods. If this could be achieved then subsequently it could inform an examination of patterns and perceptions of crime and anti-social behaviour and further investigate any relationship between collective efficacy, deprivation and the spatial and temporal distribution of crime and anti-social behaviour. This would be followed by an assessment

of how the police in Sheffield took cognisance of such factors in their front line personnel deployment and longer term strategic view.

If this analysis could be shown to be successful within the research site of Sheffield then it could potentially have implications for policing in Sheffield, steer national policy within current contexts and drive further academic study and research.

In hindsight, the route taken for data analysis was overly complicated and as the data was being subjected to analysis it did become difficult to handle effectively within the constraints of a philosophy degree. However it generated findings which potentially raise questions about how policing deals with crime and anti-social behaviour within Sheffield and across a wider arena. This chapter now examines the data sets that were used within the main body of the data analysis.

### **Sheffield's 100 neighbourhoods**

It is useful to describe the research site which has been used within this body of work. Sheffield City Council, as a localised body of governance, has its own set of boundaries, through which it provides its service delivery obligations, called the 100 neighbourhoods which are described by the original project leader Derek West<sup>30</sup>.

*Sheffield's neighbourhood geography was designed in 2003. It was created to support the City Council's Successful Neighbourhoods Project, providing both a definition of a neighbourhood and a geography to analyse data and measure progress. The Neighbourhoods were created jointly by the Regeneration & Partnership Area Action Team and the Corporate Policy Unit of Sheffield City Council. Each unit took half of the city and the results were then merged together. Consultation with Area Coordinators and elected Members provided a reality check. There was no intention to create exactly 100 neighbourhoods; that was just how it emerged.*

*The Sheffield Neighbourhoods were the first division of the city in recent times to be created without constraint. Their sole purpose was to define what were seen as natural communities or neighbourhoods, with no reference to size or to other geographies. Practically they were built as aggregations of 2001 Census Output Areas (OAs), which had advantages in relation to the supply of contextual data from the Census. The fact that OAs had been created from postcodes, which in turn were given computer generated boundaries, does mean that some of the neighbourhood boundaries appear*

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<sup>30</sup> This was a personal letter received by the author and is reproduced verbatim.

*a little curious. It does also mean, however, that postcodes at the time did nest perfectly into the neighbourhoods.*

*The 100 neighbourhoods were first seen in the Sheffield Neighbourhoods Information System (SNIS), but were subsequently used by other public organisations such as Sheffield PCT and SY Police as a small-area geography for data analysis. They have stood the test of time and are still used as Sheffield's small area geography, despite the ONS creation of the Super Output Area.*

West's comments about the geography of the city of Sheffield have a great deal of relevance within a research context as the boundaries defined by his team have indeed endured over time. It is known that central government has developed varying levels of super output areas (SOA's) (upper, middle and lower). The Boundary Commission has changed many boundaries that has had a knock on effect in parliamentary constituencies, the emergency services, especially the police are almost continually altering and 'tweaking' their operational arenas, but the 100 neighbourhoods categories within the city have remained unaltered. Other public bodies would do well to consider the benefits of geographical stability within a neighbourhood oriented service delivery regime.

### **The crime data**

Working with South Yorkshire Police crime data as part of the author's employment since 1999 within the organisation would appear to have advantages. But the intimate knowledge of this data proved to be a double edged sword, as will be discussed.

South Yorkshire Polices crime data is judged across a national standard by the Home Office as are all the other United Kingdom police forces. This allows parity for wider national strategic analysis projects which give a picture of crime across the nation as a whole. Much discussion took place<sup>31</sup> as to what variables within the crime data might be important when gauging collective efficacy within a neighbourhood. Twenty one variables were selected which are shown in table 3.1 below;

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<sup>31</sup> The original supervisors to this research, Professor Simon Holdaway and Dr. Andrew Costello of the University of Sheffield's Faculty of Law.

**Table 3.1 Crime data**

<b>Variable title.</b>	<b>Variable description.</b>
<b>Month number.</b>	The data had a time frame of 68 months. This number allowed certain geographical tests to be conducted accurately to examine if necessary any repeat victimisation across the data.
<b>Offence recorded.</b>	The details of the type of offence recorded under the nationally agreed Home Office guidelines.
<b>Serial number.</b>	Each record is assigned a unique reference number to avoid duplication and future skewing of the data.
<b>District.</b>	This is a letter assigned to the policing district of Sheffield which changed on several occasions throughout the life span of the data trawl. It is a useful check when mining the data from the core data repositories that the data is accurate.
<b>Crime number.</b>	A back up unique reference number to the serial number (ibid).
<b>Crime year.</b>	Displays the year in which the crime took place.
<b>First time committed.</b>	Indicates the first time (or only time) in which the offence occurred.
<b>First date committed.</b>	Indicates the first date that the offence occurred.
<b>Last time committed.</b>	Indicates the last part of the time period in which the offence occurred.
<b>Last date committed.</b>	Indicates the final date that the offence occurred.
<b>House name, house number, street, area, city, post code.</b>	All form the address where the offence occurred.
<b>Eastings and Northings.</b>	These variables provide, when conjoined, the twelve digit reference number which allows the geographical software to place the crime record into the mapping software (GIS).
<b>Car beat and Community beat.</b>	Qualifiers given to the respective police beat areas within the research site.
<b>Detected (U or D).</b>	This variable indicate whether a crime is detected (D) or undetected (U) at the time the data is mined.

The crime data was mined across a period of sixty eight months between Wednesday the 1<sup>st</sup> of January 2003 and Sunday the 31<sup>st</sup> of August 2008. The mining exercise was completed in twelve month batches to allow for some of the records to be correctly placed in their year grouping. Some crimes may be reported in one particular year but have actually happened in another.

This batch processing also allowed checks to be run against centrally held records to ensure that the correct amount of data for each year had been collected. Across the sixty eight months a total of 350,803 records were retrieved that fitted within the geographic boundaries of the city of Sheffield.

### **Strengths and weaknesses of the crime data.**

The variables utilised within the data analysis for crime are a fraction of what is actually available. There are thought to be nearly one thousand different sections available for input within a crime report at South Yorkshire Police, all of which were potentially available for analysis within this research work if required. It became difficult to distinguish what would be relevant for this research and so the empirical reading and tutor input influenced what actual crime categories would be considered for analysis out of nearly six hundred and fifty that were available. The three selected were drugs, robbery and violence.

The American, empirically based, reading intimated that these three categories of crime had been regularly used within research<sup>32</sup> and therefore it was prudent to attempt to duplicate to some degree these categories of crime. Table 3.2 is shown to display the considered categories of crime. (St. Jean, 2007, p.21)

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<sup>32</sup> References shown in chapter five.

**Table 3.2. Structures of Opportunity for Various Categories of Crime.**

<b><i>Crime Category</i></b>	<b><i>Examples of crime in category</i></b>	<b><i>Opportunity structure needed to flourish</i></b>
<b><i>Non violent entrepreneurial</i></b>	Narcotics, prostitution	Market opportunities.
<b><i>Predatory</i></b>	Strong-arm and aggravated robberies, sexual assault, theft, motor vehicle theft, burglary, criminal trespass to property and criminal damage to property.	Easy and spontaneous access to suitable targets.
<b><i>Grievance</i></b>	Homicide, simple and aggravated batteries, simple and aggravated assaults.	Unresolved and intensified conflicts with easy access to targets.

Within the three categories of drugs, robbery and violence which should be considered as 'header' descriptions, there are many other individual offence categories within these groups that were subjected to analysis. The full list of drug based offences is shown in table 3.3.

**Table 3.3. Drug based offences.**

DRUGS - POSSESS CANNABIS
DRUGS - POSSESS (EXCLUDES CANNABIS ON OR AFTER 1 APRIL 2004)
DRUGS - POSSESS WITH INTENT TO SUPPLY
DRUGS - CULTIVATE / PRODUCE CANNABIS
DRUGS - SUPPLY/OFFER TO SUPPLY
DRUGS - CULTIVATE CANNABIS
DRUGS - PRODUCE
DRUGS - PERMIT PREMISES TO BE USED FOR UNLAWFUL PURPOSE
DRUGS - KETAMINE - POSSESSION OF CONTROLLED DRUG
DRUGS - IMPORT CLASS A DRUG
DRUGS - GHB - POSSESSION OF CONTROLLED DRUG

Table 3.4 displays the violence based offence categories utilised within the research.

**Table 3.4. Violence based offences.**

ASSAULT OCCASIONING ACTUAL BODILY HARM (OAPA SECTION 47)
COMMON ASSAULT
PUBLIC ORDER - HARASSMENT ALARM OR DISTRESS (POA 1986 S. 5)
PUBLIC ORDER - FEAR OR PROVOCATION OF VIOLENCE (POA 1986 S. 4)
WOUNDING WITH INTENT TO DO GRIEVOUS BODILY HARM - OAPA 1861 SECTION 18
HARASSMENT - (PROTECTION FROM HARASSMENT ACT 1997 SECTION 2)
ASSAULT ON A POLICE CONSTABLE
AFFRAY
WOUNDING (OAPA SECTION 20)
RACIALLY AGGRAVATED HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY AGGRAVATED INTENTIONAL HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
PUBLIC ORDER - CAUSE INTENTIONAL HARASSMENT, ALARM OR DISTRESS (POA 1986 S. 4A)
HARASSMENT - (PFHA SECTION (4)) PUTTING PEOPLE IN FEAR OF VIOLENCE
RACIALLY AGGRAVATED ACTUAL BODILY HARM, C&D ACT 1998 S. 29(1)(B),(2)
VIOLENT DISORDER
RACIALLY AGGRAVATED COMMON ASSAULT (C&D ACT 1998 S. 29(1)(C),(3))
RACIALLY AGGRAVATED HARASSMENT (C&D ACT 1998 S. 32(1)(A),(3))
INFLECTING GRIEVOUS BODILY HARM WITHOUT INTENT (PART EXCLUDING LESS SERIOUS WOUNDING WITHIN CLASS 8G) (OAPA SECTION 20)
RACIALLY AGGRAVATED FEAR OR PROVOCATION OF VIOLENCE SECTION 31(1)(A)
ATTEMPTED MURDER
MURDER PERSONS AGED 1 YEAR AND OVER
MALICIOUS WOUNDING (OAPA SECTION 20) PART CODE - EXCLUDING GBH WITHIN 8F
RACIALLY AGGRAVATED PUT PEOPLE IN FEAR OF VIOLENCE S. 32(1)(B),(4))
MANSLAUGHTER
RACIALLY OR RELIGIOUSLY AGGRAVATED ACTUAL BODILY HARM (AOABH) S 29 (1)(B),(2)
RACIALLY OR RELIGIOUSLY AGGRAVATED INTENTIONAL HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY AGGRAVATED MALICIOUS WOUNDING (GBH), C&D ACT 1998 S. 29(1)(A),(2)

RACIALLY OR RELIGIOUSLY AGGRAVATED HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RELIGIOUSLY AGGRAVATED ACTUAL BODILY HARM (AOABH) S 29(1)(B),(2)
RELIGIOUSLY AGGRAVATED INTENTIONAL HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY OR RELIGIOUSLY AGGRAVATED COMMON ASSAULT (C&D ACT 1998 S 29(1)(C),(3)
RELIGIOUSLY AGGRAVATED HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY OR RELIGIOUSLY AGGRAVATED OFFENCE OF HARASSMENT S32 (1) (A), (3)
RELIGIOUSLY AGGRAVATED HARASSMENT (C&D ACT 1998 S. 32(1)(A),(3))
RACIALLY AGGRAVATED GRIEVOUS BODILY HARM, C&D ACT 1998 S. 29(1)(A),(2) (PART CODE - EXCLUDES LESS SERIOUS WOUNDING WITHIN 8J)
RACIALLY AND OR RELIGIOUSLY AGGRAVATED FEAR OR PROVOCATION OF VIOLENCE SECTION 31(1)(A)
RELIGIOUSLY AGGRAVATED FEAR OR PROVOCATION OF VIOLENCE SECTION 31(1)(A)
RIOT

And finally the offence categories contained within the robbery group are shown in table 3.5.

**Table 3.5. Robbery based offences.**

THEFT FROM THE PERSON OF ANOTHER
ROBBERY OF PERSONAL PROPERTY
ATTEMPT ROBBERY PERSONAL / ASSAULT WITH INTENT TO ROB - PERSONAL PROPERTY
ROBBERY OF BUSINESS PROPERTY
ATTEMPT ROBBERY BUSINESS / ASSAULT WITH INTENT TO ROB - BUSINESS PROPERTY

An explanation is warranted as to why crime categories are divided in such a manner. Home Office counting rules (HOCR) differ from crimes that are on the statute books. If a person is caught and charged for an offence of robbery then it maybe thought that this is what will be recorded for Home Office purposes. But as can be seen in table 3.5, from a 'counting' perspective there is room for manoeuvre, which allows certain crime categories to be depressed or manipulated if required. This in effect can give a false message to the public about the amount of recorded crime actually being committed.

Due to the performance culture which has existed in the police service for quite some time, crime reduction is not only a matter of genuinely employed strategies to reduce crime across a force, but often more of the manipulation of crime statistics. A strong point of this data, and this is purely due to the time involved in repeated checking that the data was accurate, is the geo-coding of each row of data. The geo-coding allows each piece of data to be mapped to give a geographical representation of the statistics across the research site.

The geographical and temporal diagrams presented in this research enable the findings to be understood in pictorial form. The application of this technique can now be seen in many websites that are government sponsored, displaying crime and anti-social behaviour data on interactive mapping platforms. Robust statistical data combined with consistent geographic techniques allows a wider and better understanding of what is happening in individual neighbourhoods. However, no data set is perfect and the crime data used within this research is something not usually available at such a granular level so there is some benefit to its application.

### **The ASB data**

This data is from a relatively new source, South Yorkshire Police’s command and control system, which is a stand-alone system that handles the contacts made by the public to the police. The data used within this research relates to calls specifically made to the police about ASB within the city of Sheffield with twenty two variables being selected for analysis. The variables within the data are explained below;

**Table 3.6. ASB variables.**

<b>Variable title.</b>	<b>Variable description.</b>
<b>Incident ref. no.</b>	Each incident is given by the command and control system a unique reference number which consists of a sequential number and a date stamp.
<b>Time date.</b>	An important field that gives a full time and date stamp to the data. Useful in developing temporal analysis and similar to the crime data's time and date variables but held in a single field.
<b>Incident title.</b>	The opening title given to an incident, in this case, ASB related, by the command and control operator.

<b>Type Id.</b>	An NSIR code assigned by the Home Office that can be used as a checking mechanism to ensure that the correct data within the ASB category has been retrieved.
<b>Type.</b>	Links to the Type Id category which assigns a Home Office textual category title to the data.
<b>Type.</b>	An oversight within the construction of the data. This variable displays the type of response assigned to the call by the operator.
<b>Building number, Thoroughfare, Dependant Locality, Post Town and Post Code.</b>	These fields all form part of the address from which the call is being made about the ASB problem.
<b>Time Date.</b>	A secondary field that confirms the data mentioned in the previous time date field.
<b>X and Y co-ordinates.</b>	The geo-codes within each data row that assign the data to a fixed point on the earth's surface within the mapping software.
<b>Description.</b>	The Home Office designated category for, in this case, ASB.
<b>Tag value.</b>	Not used within this research but allows incidents of specific interest to be tagged or marked for the attention of specific officers.
<b>Car beat, community beat and foot beat.</b>	Qualifiers assigned to police patrol areas at each respective level.
<b>CMS ref.</b>	Allows crime report reference numbers to be assigned to an incident of ASB. Subject to much criticism by HMIC in that it was identified that many instances of ASB resulted in criminal acts but the technology wasn't readily available that allowed the automatic cross referencing of data systems to show this information.
<b>Type.</b>	Method of communication used to contact the police. This field has recently become quite important to assess how the public prefer to contact the police about ASB.
<b>Address Text.</b>	Concatenated address data that confirms the previously mentioned address fields.

This ASB data covers a time span between the 16<sup>th</sup> of February 2007 and the 5<sup>th</sup> of September 2008 amounting to 89805 rows of data each including the variable fields described above. As with the crime data, the ASB data for Sheffield was separated into nine tranches so that it could be checked for accuracy and consistency. These dates have little in way of particular research relevance. The latter date was when the actual data started to be brought together for analytical use and it stretched back to the former date when the data harvesting had commenced.

### **Strengths and weaknesses of the ASB data.**

The time parameters of the crime and ASB data sets differ. An explanation of how the ASB data is generated within South Yorkshire Police is warranted as it reveals some potential weaknesses for longer term analysis.

This data is captured when a member of the public contacts the police to report a matter which they determine is disturbing their life or that of a neighbour or the wider community. South Yorkshire Polices call handling centre is based at Attercliffe in the outskirts of Sheffield and is responsible for handling all methods of contact between the public and the organisation. This is a relatively new way for handling public contact for South Yorkshire Police who departed from the more traditional district control room approach approximately ten years ago. All records are now computerised and are arguably more complex and detailed than the crime management system records as they are more reliant on free text fields to contain the body of the information.

The largest recognised fault with this data is its ability to be archived. South Yorkshire Police can presently only store this data on its servers for between twelve to fourteen months. Crime records can be accessed as far back as 1995 and then an archive system exists that stretches back even further. The argument given by the organisation is that due to the large amount of text based information stored within most incidents, it would be too costly to develop an archive system that could be accessed for analysis purposes. This argument is discussed later in the thesis.

Despite the issue of archiving, a slightly longer period of data was harvested for analytical use by mining the latest data on a month to month basis and attaching it to the existing data base. This data is not readily available within a research context at such a level and its use for this research was considered to be of great value. One of its strongest points was its geo-coding which allowed, like the crime data, for each row to be mapped effectively in tandem with the crime data.

Another question worth considering is how accurate the location of the data actually is. Unlike crime data, the location of this ASB data can be a distance away from the location of the person making contact with the police. For example a person might make a complaint about nuisance motorcycles in a field or wood close to their house. They might not even be able to see the motorcyclists but the noise from the machine's engine will be enough to cause the ASB complaint. It has to be accepted therefore that there will be, in some cases, a degree of inaccuracy as to where the actual perceived ASB is taking place, but after checking the textual fields in some of the reports, it is thought that the persons making the complaint are within a reasonable proximity to the person(s) allegedly causing the perceived disorder and the subsequent computerised records are therefore relatively accurate. This ASB data will, in the future, improve. There will be the ability to automatically geo-code all addresses referenced across all the textual fields not just the location of a caller. South Yorkshire Police is already in the early stages of drafting the requirements for a brand new command and control system which relies on geographical software utilised in this body of research.

### **The Sheffield Neighbourhood Survey (2007).**

It was the intention within this research to utilise in the first instance relevant data from South Yorkshire Polices Your Voice Counts survey<sup>33</sup> which asks certain questions set by the Home Office about local communities. A description of the survey and what it is used for is given below;

*'The 'Your Voice Counts' (YVC) survey was launched in October 2006 in order to gather views from a random selection of residents across South Yorkshire to inform local policing.*

*The survey explores crime and disorder concerns, views on police patrol, neighbourhood policing and the police in general. The survey was adjusted in Year 2 to improve responses to certain questions and to reflect the British Crime Survey (BCS) questions better.'*

The twenty three safer neighbourhood areas (SNA's) across the policing area of South Yorkshire, were in 2007/2008, surveyed once a month throughout the year. The average response rate across the twenty three SNA's was 616. A total of 49,687 survey forms were posted of which 14,159 were completed and returned giving an overall response

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<sup>33</sup> ([http://www.southyorks.gov.uk/embedded\\_object.asp?docid=6877&doclib](http://www.southyorks.gov.uk/embedded_object.asp?docid=6877&doclib) Accessed on 11/10/2011)

rate of twenty nine percent. The survey covers some interesting topics such as perceptions of crime and ASB in a neighbourhood and how people think that the police and local authority are dealing with these matters. It also attempts to gauge public views on quality of life matters such as vandalism, litter, graffiti, noisy neighbours and teenagers hanging around on streets.

The survey data is subsequently analysed by statisticians at South Yorkshire Polices performance review department<sup>34</sup>. This particular data set would have been an excellent starting point for the research project but due to delays in obtaining authorisation from the audit and data protection unit within the organisation to utilise the Your Voice Counts data, the decision was made to use the Sheffield Neighbourhood Survey (SNS) commissioned by Sheffield City Council. The raw data from this survey was then combined with the other South Yorkshire Police data sets. The SNS asked questions of members of the public about their immediate neighbourhood and their views about crime and ASB. These responses were examined to explore if there was any correlation between the crime, ASB data and deprivation data (discussed later in this chapter).

The SNS survey contains some fifty question across four different sections which included local area, views about the local authority, opportunities afforded to local people to participate in the decision making process and consultation exercises for their neighbourhood. The SNS and the Your Voice Counts survey have similarities within them, asking questions about crime, ASB, perceptions of service delivery etc.

### **Strengths and weaknesses of the Sheffield Neighbourhood Survey.**

The main weakness of this data was not the structure of the survey or indeed the responses obtained from it. Rather on later reflection it became apparent that, as the survey data had been utilised based on American research in this field, from a United Kingdom context it potentially left a 'hole' within the research that could be criticised. 225 residents in each of the 100 Sheffield neighbourhoods were sent questionnaires using a non-proportionate stratified sample with neighbourhoods themselves acting as the stratification variable. 9,329 survey forms were completed and returned giving a response rate of 41%. It should be noted that there is a higher response rate for this survey than the Your Voice Counts survey (29%) which was attained from a smaller sample size (SNS n= 22500, YVC n= 49687). It is also worthy of note that the police's postal costs for their survey was in excess of £30,000 for that year which questions the

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<sup>34</sup> Subsequently this department was renamed as the Business Change Directorate.

police use of the information provided in a neighbourhood arena and how the data were subsequently analysed.

Questions asked of the public were similar to those asked within the Your Voice Counts survey with a focus on crime and ASB, quality of life issues and personal safety areas within the neighbourhood that could be improved. The SNS survey, unlike the Your Voice Counts survey was subjected to a far more detailed analysis and produced a large report, but this did not appear to reach a wide audience and its subsequent use by or impact on the council is not clear.

The strength of the SNS data, albeit by proxy, was to enable analysis of the responses of a sample of the members of the Sheffield public about their neighbourhoods. It has become clear from empirical reading in this particular field, that small scale survey techniques repeated across differing neighbourhoods are a more robust way to develop data as it facilitates better analysis and subsequently a greater understanding of the community and neighbourhood dynamics. The Home Office now direct, in South Yorkshire Police's example, the Your Voice Counts survey (ibid) to a smaller sample size within predefined police safer neighbourhood areas and on a more regular basis. This methodology is the correct approach to take in the research area of collective efficacy as it allows subtle adjustments to be made to the questions, if necessary, to improve the utility of the sampled data. Large, scale questionnaires over vast population spreads may take too long to analyse, require many people to work on them and more often than not, because of the size of the results that require explanation, become misinterpreted.

### **Demographic and neighbourhood population data.**

#### **Demographic data.**

This data was provided by Dr. Dan Vickers of the University of Sheffield's Geography Department. He had developed it as part of his Ph.D. research process which was funded by the Office of National Statistics. The demographic data was used within this research analysis to display how differing groups of people living in the 100 neighbourhoods were dispersed across Sheffield and then subsequently how individual neighbourhoods were constructed, statistically and geographically within a developed collective efficacy scoring system. It was posited, that as a result of knowledge gained from empirical reading, that the demography within a neighbourhood potentially influenced collective efficacy levels and also that of crime and ASB. The demographic data assists in displaying how collective efficacy differs in each of the 100

neighbourhoods and Table 3.7<sup>35</sup> describes the available variables held within the dataset;

**Table 3.7. Demographic data characteristics**

1: Blue Collar Communities	1a: Terraced Blue Collar	1a1: Terraced Blue Collar (1)			
		1a2: Terraced Blue Collar (2)			
		1a3: Terraced Blue Collar (3)			
	1b: Younger Blue Collar	1b1: Younger Blue Collar (1)			
		1b2: Younger Blue Collar (2)			
	1c: Older Blue Collar	1c1: Older Blue Collar (1)			
1c2: Older Blue Collar (2)					
1c3: Older Blue Collar (3)					
2: City Living	2a: Transient Communities	2a1: Transient Communities (1) 2a2: Transient Communities (2)			
	2b: Settled in the City	2b1: Settled in the City (1) 2b2: Settled in the City (2)			
3: Countryside	3a: Village Life	3a1: Village Life (1) 3a2: Village Life (2)			
	3b: Agricultural	3b1: Agricultural (1) 3b2: Agricultural (2)			
	3c: Accessible Countryside	3c1: Accessible Countryside (1) 3c2: Accessible Countryside (2)			
4: Prospering Suburbs	4a: Prospering Younger Families	4a1: Prospering Younger Families (1) 4a2: Prospering Younger Families (2)			
		4b: Prospering Older Families	4b1: Prospering Older Families (1) 4b2: Prospering Older Families (2) 4b3: Prospering Older Families (3) 4b4: Prospering Older Families (4)		
	4c: Prospering Semis	4c1: Prospering Semis (1) 4c2: Prospering Semis (2) 4c3: Prospering Semis (3)			
		4d: Thriving Suburbs	4d1: Thriving Suburbs (1) 4d2: Thriving Suburbs (2)		
	5: Constrained by Circumstances	5a: Senior Communities	5a1: Senior Communities (1) 5a2: Senior Communities (2)		
		5b: Older Workers	5b1: Older Workers (1) 5b2: Older Workers (2) 5b3: Older Workers (3) 5b4: Older Workers (4)		
5c: Public Housing			5c1: Public Housing (1) 5c2: Public Housing (2) 5c3: Public Housing (3)		
			6: Typical Traits	6a: Settled Households	6a1: Settled Households (1) 6a2: Settled Households (2)
				6b: Least Divergent	6b1: Least Divergent (1) 6b2: Least Divergent (2) 6b3: Least Divergent (3)
6c: Young Families in Terraced Homes	6c1: Young Families in Terraced Homes (1) 6c2: Young Families in Terraced Homes (2)				
	6d: Aspiring Households	6d1: Aspiring Households (1) 6d2: Aspiring Households (2)			
7: Multicultural		7a: Asian Communities	7a1: Asian Communities (1) 7a2: Asian Communities (2) 7a3: Asian Communities (3)		
	7b: Afro-Caribbean Communities	7b1: Afro-Caribbean Communities (1) 7b2: Afro-Caribbean Communities (2)			

<sup>35</sup> [http://www.sasi.group.shef.ac.uk/area\\_classification/index.html](http://www.sasi.group.shef.ac.uk/area_classification/index.html) (Accessed 25/10/2011)

## **Strengths and weaknesses of the demographic data.**

The variables represent a move towards a nationally recognised data set that makes robust demographic information about the United Kingdom freely available. The data is described on its University of Sheffield hosted website:

'The National Classification of Census Output Areas is a three tier hierarchy consisting of 7 (Super-groups), 21 (Groups) and 52 (Sub-groups). The classification was created from 41 census variables and classifies every output area in the UK based of its value for those variables.

The classification is a joint project between the School of Geography, University of Leeds and the Office for National Statistics (ONS). The project was funded by the Economic and Social Research Council (ESRC) and the ONS.

This site which is hosting the classification in conjunction with [National Statistics Online](#) is designed to give users access to the classification and information about its creation and additional information to aid use.'

[http://www.sasi.group.shef.ac.uk/area\\_classification/index.html](http://www.sasi.group.shef.ac.uk/area_classification/index.html) (Accessed 25/10/2011)

When Vickers created these classifications, it challenged the commercial sector demographic data providers such as ACORN<sup>36</sup> and MOSAIC<sup>37</sup> into being more open about how their data sets were compiled. Put simply, commercial demographic data is 'black boxed' as due to intellectual property rights, no one outside of the company environment is allowed to examine the methodological processes employed.

Vickers' challenged these principles as he argued that demographic data should be transparent and for anyone to inspect and challenge. His website presents all of the data available for analysis, although unlike commercial packages that can be subscribed to or bought outright at great cost, it is not particularly user friendly. The commercial data for a particular geographical area has a heavy graphical/informational 'front end' that enables the user to see information in a very understandable format such as type of newspaper read, income values, number of cars in a household etc. Commercial companies also claim that their data has advantageous value in that it is updated at regular intervals<sup>38</sup>. However whether the data is regularly updated or it has a nice 'front end' cannot resolve the issue of what exactly is in the 'black box' making it work in the first place.

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<sup>36</sup> See [www.caci.co.uk](http://www.caci.co.uk)

<sup>37</sup> See [www.experian.co.uk](http://www.experian.co.uk)

<sup>38</sup> See <http://publicsector.experian.co.uk/Products/Mosaic%20Public%20Sector.aspx>

This research displayed, using examples within the data that the genuine understanding of communities by the police was of critical importance. Two communities are described as being types of 'oasis' due to their geographic position. They display opposing collective efficacy characteristics, one community displays strong collective efficacy (Abbeyfield) whilst surrounded by areas of low collective efficacy and another community displays weak collective efficacy (Lowedges) whilst surrounded by areas of high collective efficacy. Each neighbourhood appears to be isolated from its surrounding context by its respective collective efficacy score.

An understanding of demography within a collective efficacy context also allows the police to determine which neighbourhoods may be receptive to certain policing strategies and others that may not. It may also suggest the case for a return to genuinely localised policing (see chapter four) and a culture of parochialism.

An examination of the Lowedges and Abbeyfield demographic characteristics then advanced the analysis further to examine the Sheffield neighbourhoods as a whole.

### **Population data**

Population counts of any area for research purposes is always a contentious issue. Sheffield through its post war social and physical development, has a population mass that ebbs and flows between its suburbs and its centre according to times of the day and days of the week. Much of the city centre work force is provided by people living in nearby suburbs and so there are evident temporary shifts in population. The night time economy of the city centre also influences similar temporary shifts in population together with boosts of population coming into the city centre from other county areas.

As has been shown within the main body of the analysis, the night time economy effectively skews the data to such an extent, that for the purposes of this research, the city centre neighbourhood was excluded from the analysis.

A dual approach was taken in attempting to calculate levels of population within each of the 100 neighbourhoods across Sheffield. The Office of National Statistics provided the 2007 mid-year population estimate and data was also obtained from Sheffield's public health register (PHR). The PHR holds details of every person registered with a general practitioners surgery across Sheffield. The data is held at address level and subsequently can be aggregated to the 100 neighbourhoods. This data also carries an age variable which allows an age profile for each of the neighbourhoods to be calculated. This data does contain some inaccuracies. It relies upon members of the public to notify

a general practitioners surgery when they move address and a person or household could be registered at multiple surgeries across the city. Similarly a person could be registered with a surgery and then move away from the city completely. This failure to notify or update a surgery of current address details does tend to over-estimate population figures for the city.

The Office of National Statistics publishes annual estimates for all parts of the country which are called mid-year population estimates and, like the public health register data contain age records which in this case are broken down into five year age ranges or groups. This overall estimate of population has been used as a baseline against which the PHR data has been apportioned to. Through this process, it has been possible to estimate neighbourhood populations by age groups, which will aggregate to the overall population estimate for Sheffield derived by ONS.

The age of groups of population within neighbourhoods, as part of the overall demography of a neighbourhood, is important within this research as it enables analysis of whether or not age factors contribute or detract from social cohesion within a particular area. When considered together with the indices of multiple deprivation data, it further strengthens the overall analysis within a research context and reveals findings about the value of knowing a neighbourhood intimately from a policing perspective. Further variables such as the ethnicity and gender of people within a neighbourhood were considered but not used. This was due to the already 'over complicated' analysis of the selected data and the time taken to utilise it within the research. Much of the American based research, from which this work flourished, has an ethnicity based background. This occurs because much of the United States urban social problems are empirically known to be strongly influenced by issues of race. This research was steered to test new variables to examine if new discoveries about collective efficacy were to be made. Nevertheless, gender and ethnicity, within a United Kingdom context are important factors that should be considered in further collective efficacy based research.

### **The 2010 Indices of Multiple Deprivation (IMD).**

Due to the time span of this research and due to a long term illness suffered by the author, no further access was available to the geographic information system software to engineer the IMD data through the accurate boundaries of each of Sheffield's 100 neighbourhoods as has been previously achieved with the other data sets.

Although this might appear to be disappointing from a research continuity point of view i.e. (all the data being analysed through a similar set of processes) a discovery was made that revealed a new way of thinking about how such data could be analysed, in a more

accessible format without any specialist knowledge about GIS. The analysis of the 2010 IMD is now discussed further.

The 2010 national IMD data set is commissioned by the Communities and Local Government Department. The domains are all individually ranked at lower super output area (LSOA) levels with a low score indicating a high level of deprivation. This data allows small areas of the country to be examined across the domains to identify significant variations. It should be noted that people may fall into more than one of the domains and subsequently they will be counted in each. Each LSOA contains approximately 1500 people and there are 32482 LSOA's across England.<sup>39</sup>

An expanded explanation of each domain is provided in table 3.8 below;

**Table 3.8. IMD Categories Description.**

IMD Category	Category Description
Income Deprivation	This domain relates to the proportion of families that live in low income families who receive means tested welfare benefits.
Employment Deprivation	This includes people who are eligible through age to work but for a variety of reasons such as ill-health or disability are not able to.
Health Deprivation and Disability	In this domain areas have been identified where there are high rates of people that die prematurely, suffer from poor health or who are disabled.
Education, Skills and Training Deprivation	This domain is divided in to two sub-domains. One relates to the lack of educational attainment in children and young people and the other indicates to a lack of formally recognised qualifications within the working age population.
Barriers to Housing and Services	This measures the difficulties people have in accessing housing and other key local services including a general practitioner, supermarkets, post offices and primary schools.
The Living Environment	This is another domain that is divided into two sub-domains. The first sub-domain measures the indoor living environment i.e. the actual quality of the housing stock and the second sub-domain measures the outdoor living environment which includes the quality of the air and road traffic accidents.
The Crime Domain	Four areas of recorded crime are measured in this domain, burglary, theft, criminal damage and violence. <i>For the purposes of this research, the crime domain will not be considered as the SYPOL data mentioned previously will form the basis of the crime data analysis. If both sets of crime data were used it could be argued that crime data (IMD 2010) was being used to explain crime data (SYPOL) or vice versa.</i>
Income Deprivation affecting children and Income Deprivation affecting older people	These two groups are additional groups included in the 2010 data.

<sup>39</sup> <http://www.communities.gov.uk/documents/statistics/pdf/1871208.pdf> (accessed 30/07/2011)

It was important to attempt to get all the data within this research analysed at the same area level. This allows a consistency across the analysis that is not always present in policing analysis. Many police forces often analyse their data using their own policing boundaries and not government defined spatial units such as output areas.

The Sheffield 100 neighbourhoods contain LSOA's and, although not entirely co-terminus, are close enough to allow data to be analysed in a reasonably robust fashion. An examination of the LSOA's within a Sheffield neighbourhood was undertaken and to address the issue of not being able to access the previously used GIS software, the services of a local data observatory called LASOS (Local Area Statistics Online Service) was engaged.

### **Engineering the IMD data.**

The LASOS website holds its Sheffield boundary data in a 2005 statistical ward format, not the 100 neighbourhood format which has been used throughout this research. However each of the wards are broken down into the lower super output areas, the ward of Arbourthorne as an example has eleven of these low level areas. In order to build up the proxy 100 neighbourhoods to complete the data analysis the relevant codes were joined together of the particular areas of interest. Although some neighbourhoods extended slightly across boundaries, the exercise did enable comparable geographies to be used in the analysis. The accessibility of IMD through a data observatory such as LASOS allows simple but effective analysis of data at a detailed neighbourhood level. It removes the need for highly technical skills as previously utilised within the GIS based analysis in this research. The data, in South Yorkshire's example, is pre-set in a dashboard format that is easy to use and has a similarity with other data observatories. The use of a data observatory within this particular part of the research analysis due to the unforeseen circumstances of not being able to utilise a GIS, enabled, it could be argued, a less elitist approach to the further analysis of the data. This is not to say that the analysis has been 'dumbed down'. Rather LASOS offered a more streamlined and less complicated route within this research to examine how deprivation potentially contributed to the collective efficacy of a selected neighbourhood. The ease of access and subsequent statistical analysis of socially based data is of great importance in furthering the understanding of social processes. Despite not being able to access a specialised software package which had been originally conceived and developed by this author, the use of LASOS data provided an appropriate alternative.

## **Conclusions**

In describing the approaches to the use of the data within this research which has taken place throughout a three year period, there have been some surprising developments in the differing processes employed. By my own admission, the analysis has on some occasions been over complicated and in turn that has detracted from obtaining answers to some of the research questions. But despite the difficulties encountered in this process it has enabled a more intuitive understanding about the strengths and weaknesses of each data set and has shown that, in the absence of meta data the statistics presented by organisations like the police or government should be rigorously examined prior to any detailed analysis being conducted.

This work, did lose its way and it was only brought back on track when other reviewers saw what had been achieved and its future potential. It is an important feature within a methodological context that a researcher doesn't become swamped in a data or information quagmire. There is value in attempting to join quantitative and qualitative data together both statistically and geographically to allow the findings of the analysis to be understood by a much wider audience.

As will be seen subsequently in chapter five, applying the aforementioned methodological processes, attempts to explain in the context of Sheffield, what the data analysis revealed about particular neighbourhoods within the city and the inter-relation between crime, ASB and collective efficacy.

## Chapter Four: Policing in Sheffield

### Introduction

'Every police department is the child of its city. Before attempting to gain any insight into one, it helps to know a little about the other.' (McClure, 1984, p9)

The purpose of this chapter is to provide some insight into the experiences of policing in Sheffield which are drawn from this author, a serving Sheffield police constable and my father who was a city of Sheffield policeman in the late 1950's and early 1960's. Such personalised experiences have a distinct danger of being viewed as mere opinion which, when considering this thesis, could detract from its academic rigour. There is an awareness of the tacit insider knowledge (Dobson, 2009) employed within this specific chapter and the potential for influencing the critical stance of the work as a whole. The chapter endeavours to have a degree of detachment despite an acute involvement with the subject matter but such an involvement for this entire thesis has indicated an inevitability for the research process as a whole (Elias, 1987). This thesis, as will be seen in its final chapter, makes certain recommendations in relation to future policy implications for policing and therefore it would be very difficult for the overall research process to be conducted from an external position as the presence of the researcher has influence over what is being initially observed and, in the case of this thesis, subsequent theoretical considerations (Dobson, 2009, Yanow, 2000). These experiences are combined with a history of policing in Sheffield and also a short focus upon Sheffield's 'gang wars' and the 1984-1985 miners' strike which sets the context for the chapter in describing how post war neighbourhoods within Sheffield have been policed and how a national event such as the miner's strike had a marked effect upon policing across South Yorkshire as a whole.

The discussion is advanced by considering how, with a clear detachment having developed between neighbourhoods and the police, arguably due to the events of the miner's strike, a 'modern' approach, when considering the discourse of ASB within Sheffield, may attempt to prevent the gap between the police and residents in Sheffield neighbourhoods becoming a chasm. The chapter concludes by discussing plans that are currently being considered by Sheffield police management for another restructure of the district<sup>40</sup> which arguably may not be based upon the greater interest of neighbourhoods or effective policy but rather are driven purely by fiscal considerations.

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<sup>40</sup> The previous district restructure occurred in 2007 at an estimated cost of £150,000. No accurate financial information exists.

## **Policing in Sheffield: a potted history**

The first indication of any type of policing taking place in Sheffield can be traced back to 1818 after the passing of an Improvement Act which transferred the lighting, watching and cleansing of Sheffield from the Town Trustees to a body of Commissioners. Colonel Francis Fenton was appointed as first superintendent of the police and was succeeded by Thomas Raynor in 1835. The police constables at this time were just five in number. (Mawby, 2012) In 1836 this had risen to twenty with the appointment of the first day policemen. These officers worked from noon until the night watchmen came out to look after the streets of Sheffield. In 1843, after Sheffield had been incorporated as a borough, Thomas Raynor became Sheffield's first Chief Constable. The Sheffield Archives<sup>41</sup> demonstrate a development in the manner in which the city was being policed and administered;

'...on 4 April 1844 responsibility for the police force was transferred from the Improvement Commissioners to Sheffield Town Council, under the supervision of the Watch Committee, and in June that year the area covered was extended outwards from the centre of the town.'

The primary function of Sheffield's fledgling police force was the prevention of crime (Mawby, 2012) which appears to be almost an exclusively continuing theme today. The Sheffield Archives inform us further;

'At first the force was housed in the Town Hall and it was not until 1864-1865 that a police station was built in Castle Green. The force grew steadily. By 1900 there were eight police stations in addition to the central station and by 1921 this number had risen to thirteen. In 1967 Sheffield and Rotherham Joint Force was formed and in 1974 (under the Local Government Act of 1972) the Sheffield and Rotherham Joint Force was merged with part of the West Yorkshire Constabulary to form South Yorkshire Police (the borough forces of Doncaster and Barnsley had previously merged with the West Yorkshire Constabulary in 1968).'

Whilst the political, economic and (much of) the social history of Sheffield is well documented, history of crime in the city, certainly prior to the 1960's, is under-researched. It is known to have had relatively low crime rates through its significant industrial periods due to its high employment rates and the way that the cutlery and heavy engineering trades lived and worked in exceptionally tight knit and socially cohesive communities. The city in the late nineteenth and early twentieth century has

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<sup>41</sup> <https://www.sheffield.gov.uk/.../Records-of-Local-Police-Forces--Word> Accessed 05.08.2012.

been described as a tough and violent place policed by robust officers (Mawby, 2012) and this 'tradition' appeared to continue to the latter part of the twentieth century and is discussed in more detail later in this chapter. Despite being one of the United Kingdom's larger cities it has never had an extensive gang crime problem as has been experienced in other cities such as Manchester and London. However in the 1920's, Sheffield experienced 'the gang wars', the events of which the police and the gangs themselves exaggerated greatly for their own ends<sup>42</sup>. The police used the gang wars as part of a campaign to recruit more constables and to get the local magistrates to hand out stiffer sentencing especially when police officers were assaulted. The gangs promoted their notoriety to control certain areas in Sheffield such as the Crofts, Norfolk Bridge and the Park and develop their racketeering strategies. The city of Sheffield police headed by their chief constable Sir Percy Sillitoe<sup>43</sup> courted the local press to help them with their work. Sillitoe had a knack for self-publicity<sup>44</sup> which in turn exaggerated his role within the historical context of the gang wars whose zenith had realistically been attained some years earlier. However Sillitoe did instil an element of pride in the way in that the Sheffield police officers conducted their duties and how the image of the Sheffield police was portrayed. Steam presses for the upkeep of uniforms and elocution lessons for constables were introduced. Treatment of venereal disease among the ranks was also arranged to be conducted away from public clinics to spare the embarrassment of officers and maintain the 'prestige' of the force. (Sillitoe, 1955)

The Sheffield media, of which there were four main daily sources, competed for exclusive gang war reports to increase sales of their own newspapers. Whilst the press called for stiff penalties for gangsters they did not simply adopt a 'hang 'em' and flog 'em' approach. The press appeared to accept that crime had social causes not just individual level ones. Even when a number of 'gangsters' were sentenced for murder and manslaughter, the Sheffield Mail editorialised:

'...the men sentenced yesterday are in a sense victims of the uncontrolled orgy of hate and killing which went on during the war years. It is true that no nation can for four years urge its citizens to fight and to kill without setting in store for itself a post-war period of lawlessness and violence'. (Sheffield Mail, 01/08/1925) We see here as far back as 1925 that mention is made of the social climate in which crime within the city was committed.

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<sup>42</sup> There is a considerable literature around the gang war; the best secondary sources being J.P. Bean (1981), *The Sheffield Gang Wars*, D and D Publications, England.

<sup>43</sup> Sillitoe later became the head of M15.

<sup>44</sup> A similar skill held by William Bratton discussed in other parts of this research.

## **Policing in Sheffield in the 1950's and 1960's.**

For continuity within this research work, I now draw on the experiences of my father who was a city of Sheffield police cadet then a constable in the 1950's and 1960's. Although these stories have been recounted frequently through the life of the author, they now have particular relevance in illuminating how neighbourhood policing was conducted in Sheffield at the time just prior to the last Royal Commission report on policing (1964).

The experiences of a police constable working in Sheffield in the 1950/1960 era have a relevance to this body of work. The city was still emerging from the shadow of the Second World War with many people being killed or injured and areas of the city decimated due to extensive bomb damage. Much of the housing and commercial stock was starting to come to fruition at this time and although modernisation was widely embraced in Sheffield, policing was clearly being operated in a more traditional fashion which is reflected in my father's reminiscences.

ASB at this time was an unknown term, but neighbourhoods clearly suffered from crime and disorder and my father's experiences give some insight as to the policing methods employed to prevent many deprived areas of the city falling into further lawlessness. The techniques deployed may in today's climate appear simplistic and perhaps to some draconian, but for the neighbourhoods and the people within them, clear boundaries of behaviour were determined and many lived by them.

There is an irony in such simplicity, in that there has been a long term call to streamline policing methods and reduce bureaucracy allowing<sup>45</sup>, it is thought, a larger visible policing presence to be on the streets. The relevance of my father's anecdotes to this larger body of work is to consider that much of what he was involved in some fifty years ago might still be applicable in today's policing arena without much of the complicated planning and structures being considered which are discussed in the latter part of this chapter.

Policing and its structures were embedded in local communities throughout the city. Its structures are referred to in a physical sense in that due to poor communication facilities, by today's standards at least, local officers were based in many section stations throughout the city. Some officers, usually section sergeants, actually resided with their

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<sup>45</sup> <http://www.homeoffice.gov.uk/publications/police/reducing-bureaucracy/reduce-bureaucracy-police?view=Standard&pubID=838040>. Accessed 25/07/2011. This report authored by Jan Berry, the former Chairwoman of the Police Federation of England and Wales, was produced for the Home office. It is not known whether much attention has been afforded to it at local policing levels due to forces main focus of business being targeted towards balancing lower police budgets.

families within these police stations whilst day to day policing went on around them. The officers regularly working in these neighbourhoods were often revered and on some occasions feared. Many old Sheffield buildings still exist that housed policing services<sup>46</sup>.

What follows are my father's paraphrased recollections of some of his duties and how a policing shift was constructed and worked within a neighbourhood.

These section stations acted as points from which all foot and pedal cycle patrols emanated. The foot officers were backed up by singular officers on motor cycles and then there would be the section sergeant or police inspector available in a motor car. For prisoner transport the infamous 'black maria' was utilised and driven by the 'handiest' men on the shift. Sheffield was serviced by a magistrates, county and crown court system with an underground cell network for prisoner detention that is still used today.

The role of a 1950's/60's foot constable in Sheffield was by modern standards isolated and often dangerous. Much of the hard-line policing ethos instilled by Sillitoe into his officers still existed within the city. Equipment consisted of a uniform, one for day and one for night<sup>47</sup> a truncheon, whistle, handcuffs and a pocket book. If an arrest took place that became violent then the handcuffs, whistle and truncheon played a prominent role in the proceedings. My father relates several tales where arrests took place that have ended with him and the suspect being quite badly injured, but with the police always prevailing.

The prisoner would be taken after handcuffing to the nearest police box. The last remaining police box in Sheffield is situated outside the Sheffield town hall. The police box had a telephone inside it and a lectern style desk. It was designed specifically so that the prisoner could be effectively pinned inside affording no escape. The constable would write up his arrest report and contact the sergeant and black maria team by telephone. The prisoner and completed arrest report would then be transported straight to the cells for an almost immediate court appearance. The arresting officer did not attend the initial court hearing and was free to continue on patrol in his neighbourhood which was considered to be of paramount importance. The process of the defendant through the magistrates court would be completed by a police inspector who would act on behalf of the force, no crown prosecution service was required at this level of the proceedings.

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<sup>46</sup> The Burngreave section house can still be seen with its finely sculptured stonework above its entrance on Barnsley Road. More prominent is the old West Bar Police station (now the fire station museum) at West Bar roundabout which was later superseded by the new police station built next door in the mid-1960's.

<sup>47</sup> All insignia blacked out.

Another feature of neighbourhood patrol in Sheffield was that of the sergeants role in ensuring that officers were where they should be at certain times during their tour of duty. Sergeants knew the neighbourhoods intimately and planned the routes to be taken by patrol officers which were all timed. They were timed to ensure that the neighbourhood received a fair and proportionate amount of policing presence that was visible to the community. Sergeants then 'appeared' at certain patrol 'points' to meet the patrol officer to ask questions about what had happened whilst walking the beat. If these points weren't made, a patrol officer had to give a good reason for not making the 'point' and produce evidence if necessary. Although regimented in style, the city of Sheffield, amongst others, was served very well with this policing method<sup>48</sup>. It has overtones referred to by Wilson and Kelling (1982) in that local officers working in a community had extensive knowledge about the physical landscape and the people that operated within it.

Police Inspectors were very rarely seen and were the link between the patrol officers and the higher ranked staff<sup>49</sup> based at divisional headquarters. Higher ranked staff were rarely seen outside the headquarters building unless dignitaries were visiting certain parts of the city. There was little or no access to higher ranked officers as there is in today's modern police service. The open door attitude came along much later.

Sheffield's hard line and often ugly policing style reached a zenith in 1963 with the media revelation of the rhino whip affair whereby three suspects were seriously assaulted whilst in custody by two detectives from the newly formed crime squad<sup>50</sup>. They were beaten so badly with the confiscated plaited tail of a rhinoceros which had been made into an eight inch whip, in order to obtain a confession that the officers involved, the head and deputy head of the criminal investigation department and finally the chief constable all lost their jobs. (Mawby 2012). It was becoming clear that policing could not continue in this vein and by the mid 1960's, policing in Sheffield, as in many other cities was starting to change.

Better transportation and communication within Sheffield led ultimately to the demise of many section stations which were costly to operate. More officers had access to motorised vehicles such as motor cycles and the 'panda' car. The public also demanded a quicker response to its problems and communication technology such as radios allowed more patrolling freedom as opposed to the regimented 'point' beats. Policing

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<sup>48</sup> Opinion of my Father.

<sup>49</sup> Predominantly male officers. The first female officer to reach the rank of Chief Superintendent was Gillian Bradford in the late 1990's.

<sup>50</sup> The crime squad was formed on a similar model to that of Sillitoes earlier in the century.

was starting to become more 'task based' with emergency situations having an element of social conflict (Reiner, p.1007, 1997) a fact not lost on Wilson and Kelling (ibid) in their American study. Policing in Sheffield also started to attract academic study with Baldwin and Bottoms at the forefront of the early development of the Sheffield school of criminology. Their early work focused upon the spatial distribution of crime across the city and also that of career criminals who were active in neighbourhoods and wider geographic areas. Their early work has had some influence on this thesis with chapter five discussing how crime and anti-social behaviour is presently distributed across Sheffield and how it affects people that live in the neighbourhoods.

This brief and personalised view of the city of Sheffield police in the 1950's and 60's indicates a legacy for policing which the author was to encounter when commencing service in Sheffield in 1982.<sup>51</sup> Initially posted to D group at the new West Bar police station as a South Yorkshire police officer<sup>52</sup> it became apparent that many of the old traditions from the city of Sheffield police had remained. But this early insight into Sheffield policing was placed on hold due to the national miner's strike which took place between March 1984 and March 1985 and this author, unknowingly at the time, was involved in several highly publicised policing incidents that were to change the general perception of British policing as Alderson notes:

'the public image of the British police was to undergo a transformation...millions of television viewers daily watched scenes of violence between the police and picketing miners. The 'people's police' seemed more and more to be the 'government's police'. (Alderson, 1998)

South Yorkshire and Sheffield in particular often became an area for conflict between the police and the picketing miners. One incident described by Mawby (2012) has significant memories for this author. He describes that:

'On the 19<sup>th</sup> of April 1984 approximately 7,000 people attended a National Union of Mineworkers conference at Sheffield City Hall and outside the hall scenes of disorder followed. Later the same day 69 arrests were made at an incident outside the Sheffield Trades and Labour Club'.

The incident outside the Sheffield Trades and Labour Club occurred by accident. This author was on general patrol in a Ford Transit van with other Sheffield officers after the main NUM rally had taken place and many miners had gone to various parts of the city

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<sup>51</sup> Starting service date of 29<sup>th</sup> of December 1982, collar number 1989, warrant number 4440.

<sup>52</sup> City of Sheffield police, Rotherham Borough police, Doncaster Borough police and Barnsley Borough police were amalgamated in 1974.

to be refreshed with food and drink. The serial of officers, numbering ten, came under attack from a body of approximately 300 men who had been inside the club. Everyone within the serial suffered some type of injury including a local member of Parliament Bill Michie who had tried unsuccessfully to calm the stone throwing miners down. The 69 arrests came after the serial put out an urgent assistance call (10/9) and were quickly joined by some 300 officers who were still on duty within the central part of the city. Although this particular incidence of violence was framed within a larger national context of industrial unrest and was to be seen again by the general public at places such as the Orgreave coking plant where the president of the NUM, Arthur Scargill, was publicly arrested, the incident was a salient reminder to this author that policing and violence in Sheffield was never far away. After the strike had ended it became clear that policing in South Yorkshire would change (Green, 1990) especially in the mining communities that were now commencing a long journey of erosion and, in some instances, total decimation.

On returning to general police duties within Sheffield after a year policing the miner's strike, a period of re-engagement took place, learning again the Sheffield 'ways' which are now discussed in further detail.

Chief Superintendent Broomhead, the most senior ranked police officer in Sheffield and his team of senior superintendents regularly patrolled the city with 'their' constables. This allowed vast policing experience to be fed directly to newer officers which had the West Bar way of policing threaded all the way through it. It also helped to build up the confidence of a newly appointed officer who would be safe in the knowledge that there was always a colleague, regardless of rank, close by to give advice and assistance.

Most important of all was the fact that West Bar officers policed their neighbourhoods in what they believed was a firm but fair fashion, something that had been carried over from my father's time as a constable in the city. An officer could expect, the unswerving support of the senior officers in the station. This should not be interpreted as Sheffield police officers running rough shod over the rights of citizens and acting unlawfully, but officers were subjected to greater internal discipline regimes than seen in modern policing and exited far more swiftly from the office of constable if the need arose.

D group was a shift of about 30 constables, 6 sergeants, a station driver<sup>53</sup> and the shift inspector. The constables were allocated a series of beats to patrol who were then overseen by a sergeant who in turn reported to the inspector.

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<sup>53</sup> The inspectors chauffeur and gopher.

Shifts worked were 11pm to 7am nights, 7am to 3pm mornings and 3pm to 11pm afternoons. The shifts gave round the clock cover to the city and were supported by a community shift made up of more experienced constables, CID, shoplifting squad, crime and vandal unit, charge office staff based at Bridge Street, control room staff who directed operations and traffic officers who were attached to each shift. These officers numbered well in excess of 100.

But these days and styles of policing were numbered. The thin blue line started to become the dotted blue line across the city and this happened because of several factors some of which are now discussed and although not exhaustive or unique to general policing had a detrimental cause to neighbourhood policing within the city.

### **The demise of the city of Sheffield 'ways' of policing.**

Many of the longer serving police officers started to retire from the force, in the mid-eighties to early 1990's which allowed officers with differing policing experiences to be promoted into their place. Officers were promoted from other parts of the county as well as from outside the force area. But they had little or no attachment to the city and its neighbourhoods and usually moved on in a short space of time. The feeling of a 'Sheffield spirit' on a duty group was starting to become diluted. Straight line police management was becoming 'omni-directional' as new ideas were put into practice.

### **The dwindling duty groups.**

The life blood of any policing is its front line personnel. The large duty groups that gave round the clock cover to the city started to become fragmented as the new ideas that were being tried and tested placed a drain on the ability of the police to maintain connections with the public.

The police in Sheffield and elsewhere had to contend with performance management and the reliance on crime statistics to evaluate how the police were purported to be doing. In order to excel in a particular crime category under scrutiny such as burglary, squads were set up to focus upon these individual issues. These squads would tackle a particular problem in a neighbourhood for a finite period, depress the statistics to an acceptable level then move onto the next area. The officers were drawn from front line uniform policing which scaled down the number of police officers on front line duties within the Sheffield neighbourhoods. Hit and run, statistically driven policing did not seem to be effective or desired by the neighbourhoods but police managers had to respond to central government directions and reforms.

A duty group based in the city of Sheffield now in 2011 will comprise of between four and eight officers per shift, a significant difference in numbers from the halcyon days of police patrol numbers.

### **The physical environment of Sheffield starts to change.**

As is shown in the data analysis in this research, much of Sheffield's crime and ASB problems are driven by the night time economy and exacerbated by the fact that the city has two football clubs to police, each having a violent hard core set of supporters which during the football season causes a further drain on personnel resources. Sheffield during the last 20 years has seen significant change in its urban landscape with many of the old post war high rise and traditional housing stock being subjected to demolition or redevelopment. This redevelopment is not just confined to domestic premises. The city centre and outlying areas which traditionally hosted steel and engineering services were developed with small footprint, multi-occupancy buildings being constructed in places that would not have previously been considered suitable for development.<sup>54</sup>

This rapid, skywards development attracted a transient population to live and work in the city. This population in turn attracted potentially more crime and disorder, which it should be argued requires the attention of more police officers to deal with the demand. Millie (2009 p.92) suggests that there are also social justice issues of reclaiming urban space for the exclusive use of certain populations at the expense of other parts of the community. Sheffield has seen much of its city centre landscape redeveloped in the fashion that Millie describes and the suggestion is that this is done for the 'consuming majority'. The idea is that by driving out ASB it makes the city a safer place to be and therefore attract more people to the location. This is an important consideration within this research as Skogan (1990:3) suggests that a lack of control towards incivility within any neighbourhood can trigger a spiral of decline.

'Disorder erodes what control neighbourhood residents can maintain over local events and conditions. It drives out those for whom stable community life is important, and discourages people with similar values, from moving in. It threatens house prices and discourages investment.'

It is easy to understand the importance of development and regeneration on any scale, but often there is no cognisance given to how such alterations to a physical landscape may disaffect parts of a traditionally rooted community (although see Allen 2008).

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<sup>54</sup> See development at side of the Hancock and Lant building on Blonk Street and also the numerous University of Sheffield and Sheffield Hallam University buildings across the city centre.

Conversely a degree of control within public space is required if such regeneration or development is to be carried out. So collective efficacy is important in ensuring that a balance is struck between the need to control public spaces and the bringing together of a community to ensure that regeneration, is linked in its effect of creating disaffected groups.

But as has been displayed police levels for the city are at an all-time low and indeed statistically 'reported' crime is also at an all-time low. If crime starts to rise again due to the fiscal constraints placed upon the police service<sup>55</sup>, how will the present chief constable address these issues? These problems are being considered across the United Kingdom not just in Sheffield. The need for communities to strengthen their collective efficacy levels in order that they are able to give support to the police if required is evident. The neighbourhoods across the city may suffer and the Big Society rhetoric will not be enough to paper over the already gaping holes that are starting to appear especially from a policing perspective within the neighbourhoods and it should be said that the public are already starting to notice what is happening.

### **What can be done now in Sheffield to stabilise policing/neighbourhood relationships?**

There has been a clear detachment of the police from the public in Sheffield in recent years. Several reasons for this have been outlined after describing policing from two relatively anecdotal, but relevant points of view. It could be argued that not only in Sheffield but across South Yorkshire, the detachment of policing from its neighbourhoods was triggered after the miner's strike and the community spirit in traditional mining villages excluded the police (Mawby, 2012).

The concluding part of this chapter discusses how the police can use information provided by the public in an attempt to get back to understanding what is happening across the city to help them, with clearly dwindling resources, to address crime and ASB.

The prospective paradigm warrants further explanation as to how it emerged as the research developed. Vitale (2008) explained in enlightening terms the New York City paradigm concept. There was a clear connection with this research. Vitale (2008 p30) crystallises exactly what a paradigm is;

'A paradigm should be understood as a set of practices and conceptualizations, in this case defining social policy as the control of social disorder in public urban spaces. This

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<sup>55</sup>[http://www.redhillandreigatelife.co.uk/news/localnews/9033466.Police\\_warn\\_Government\\_cuts\\_will\\_hit\\_Surrey\\_crime\\_levels\\_and\\_lead\\_to\\_poor\\_service/](http://www.redhillandreigatelife.co.uk/news/localnews/9033466.Police_warn_Government_cuts_will_hit_Surrey_crime_levels_and_lead_to_poor_service/) (Accessed 06/06/2011)

paradigm is a coherent way of thinking about a wide array of social problems, as it indicates both a social theory of the roots of social problems and the form that solutions to the problem should take.'

The suggested paradigm in this thesis is that by using a series of available data and analysing them in concert, the ability exists to;

- Determine levels of social cohesion at a neighbourhood level
- Examine what influences strong or poor social cohesion
- Discover at individual levels how people feel about crime and ASB within their personal environments
- Develop and share good urban governance amongst individuals in neighbourhoods and also within the authorities that provide key services

The available data, on its own, told a very limited tale of the intricate social nuances that were in action across the city. The application of knowledge gleaned from reading other research work (Bowling 1999, Sampson 2001, 2004, Raudenbush 2001, 2004, Taylor 2001, Harcourt 2002) began to suggest that in the case of Sheffield there was data that countered certain theoretical assumptions that were evident in other research sites which had been subjected to far more intense scrutiny.

It became evident in some neighbourhoods that although there was high crime and ASB rates residents expressed relatively high levels of neighbourhood satisfaction. Such areas, it could be argued, had also suffered from historical, post war stigma. Conversely in other neighbourhoods which had no such stigma it was discovered that low crime and ASB rates did not necessarily mean that people enjoyed living where they did. Such findings were discovered by linking proxy survey data to crime and ASB data within a non-police bounded environment. Out of this imperfect set of variables emerged the four key ideas cited above that could be developed further with the consistent use of available data from a single agency source.

This is an important consideration for an organisation such as South Yorkshire Police as they have access to crime data, ASB data, geographical boundary data and more timely survey data in the form of the Your Voice Counts survey which for this research was not readily available for analysis. What South Yorkshire Police do lack is the ability and will to link together such data and then lucidly interpret it to a wider audience. Although they have ably qualified staff and the necessary software to complete such tasks their time is currently wholly performance indicator based and therefore short-term in reference.

A paper outlining the benefits of linking data as outlined was presented to the senior command team of South Yorkshire Police by this author. However its true benefits were not initially realised and the organisation continued in a traditional fashion to show how crime and ASB had either increased/decreased with little or no lucid reasoning or explanation behind the colourfully presented histograms.

If we briefly examine the four key elements of the suggested paradigm there are some positive and practical considerations.

- *Determine levels of social cohesion at a neighbourhood level*

The social cohesion findings described within the research were initially produced as a thematic map and colour coded and ranked appropriately across the 100 neighbourhoods of Sheffield (not policing areas). These neighbourhood boundaries were chosen due to city council conducted research which had determined, via public survey, neighbourhoods and communities as defined and identified by residents.

By using simple geography, although the calculations behind it were anything but simple, the displayed graphic alluded instantly to areas of strong and weak social cohesion across the research site. These type of maps, when correctly annotated have wider influence than any academically styled table and a much wider audience can determine almost instantly the meaning of very complex data. With this understanding an audience can then reasonably move to the second part of the suggested paradigm;

- *Examine what influences strong or poor social cohesion*

Communities and neighbourhoods are made up of individuals who have diverse demographic characteristics and for the purposes of this research this is what particularly interested me knowing what had been revealed within the raw data analysis.

South Yorkshire Police collects some very robust data through their Your Voice Counts survey which consistently gathers information across their safer neighbourhood area (SNA) boundary system. A further survey based exercise has been recently announced<sup>56</sup> through an extensive marketing campaign asking the public what, from a crime and ASB perspective, are important considerations at a local level. In attempting to find out the key driving factors of valuable cohesive influences, the police as an agency will open up new challenges for social science research. It would appear that South Yorkshire Police are discovering the value of asking the people who live in the

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<sup>56</sup> September 2010.

communities they police how they can assist them in making their localities a better place to live.

This leads onto the third suggestion within the paradigm;

- *Discover at individual levels how people feel about crime and ASB within their personal environments*

Historically there was a perception that the police knew everything there was to know about crime and disorder, where it was happening, who was responsible for committing it, when it was happening etc. But in reality this was a fallacious assumption. Anecdotally this author's policing career commenced at the same time as Wilson and Kelling's (1982) broken windows and neighbourhood policing work and there was at this time, as previously described fading elements of traditional neighbourhood policing existing within the city of Sheffield.

Officers in Sheffield, at the time Wilson and Kelling presented their broken windows hypothesis (1982), were practising many of the techniques observed by Wilson and Kelling in Newark, America. The city was policed predominantly by foot officers supported by a small contingent of officers in motorised patrols. These foot officers developed an exceptional knowledge of micro/macro areas, a policy advocated by Wilson and Kelling. It was becoming clearly obvious that as central government started to impose performance based targets for issues that had no relevance to many localities police officers started to become detached and remote from neighbourhoods and could not appropriately gauge crime and ASB issues. The thought here, for this part of the paradigm, is that policing at a local level, should ask the people within its communities, face to face, how they feel about crime and ASB.

Local policing may enter into consultation with neighbourhood residents to canvass 'ground level' ideas about how policing services might be delivered. The striking feature of this idea is that the police already survey on a neighbourhood basis (Your Voice Counts) so why not ask, and where applicable act upon what the communities are actually saying instead of using the gathered information to provide performance based statistics.

As is shown in the ideas presented within a paradigm context, the police have to re-engage with neighbourhood residents and allow them to have an input into the way their localities are policed. With the potential advent of the new Police Commissioners, who will be able to bring Chief Constables and local police commanders to account for their actions, it would be foolhardy to continue to develop policing strategies purely from a policing organisation standpoint<sup>57</sup> as it is becoming clear that greater accountability of the police to the general public is imminent.

Policing has to transform. Vitale (2008 p115) explains what the NYPD faced in the 1980's and 1990's;

'This new quality-of-life approach to policing did not just represent an increase in the number of police or a greater aggressiveness in existing methods; instead, it consisted of new police practices and new ideas about the best way for cities to deal with homeless and disorderly people. Because these people's activities are either legal or only marginally criminal, this new approach had to return police to their nineteenth century roots of order maintenance rather than its twentieth century orientation toward the legal system. While developing these new policing practices and philosophies, they thus laid a large part of the foundation for the new quality-of-life paradigm'.

So the changes that potentially face policing in Sheffield have some similarity to those faced by the NYPD thirty years ago. Policing in Sheffield has already started with some very innovative work in its own right which is undergoing regardless of the force wide perspective which is now considered. Police officers and police community support officers have been systematically conducting short surveys in certain safer neighbourhood areas within Sheffield. Although the questions asked might not have been couched with any sort of thorough research background, the execution of the survey, doorstep and face to face has been excellent. It is apparent that the execution methodology far outweighs any benefit gleaned from the survey itself in that every single domestic residence has had a personal visit from a uniform member of South Yorkshire Police staff. Whether they have opted to complete the survey or not becomes almost secondary to the fact that every residence has been exposed to an unprecedented level of police consultation in this force's history.

Research in this way is a key contributor to the success of this paradigm, as in this time of public sector fiscal constraint, this research style is more cost effective, timely and allows the police to ask more pertinent, locally focused questions that are relevant to

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<sup>57</sup> See end of this chapter for the new policing proposals being considered for the city of Sheffield.

each community. So as research is conducted within communities, how do we engage the people we have surveyed to participate in making their community a better place to live? This leads us to consider the concluding part of the paradigm;

- *Develop and share good urban governance amongst individuals in neighbourhoods and also to the authorities that provide key services*

Something that a utilitarian approach to societal problems can often overlook is that not all individuals are interested in participating in making their immediate space a better place to be, a fact that the current British government coalitions Big Society project has potentially missed. There has to be acceptance that not everyone will be stimulated by the drive of other committed individuals and everyone has the right to choose not to be involved.

It is generally beneficial if research results are given back to the people at individual level to show collectively how the neighbourhood sees itself. It is important to impart such findings as these form the cornerstone of any future strategic planning or desirable goals that are to be attained at a local level. This is where local authorities such as the police, council departments, health etc. play an important part in disseminating succinctly, research findings. Sampson (2004 p109) comments on this point;

'To date, information technologies have been used as tools mainly and perhaps only by 'experts' – namely the police. True to the notion that collective efficacy is fundamentally a levelling process that entails civic participation, such information should not be available only to the police or researchers alone. With the rapid spread of technology, dissemination of crime data and the mapping of hotspots could, in principle, be made available to local residents and community – based organizations. If residents knew when and where incidents were occurring – in more or less real time – innovative and effective mobilization might occur in ways that go well beyond police power'.

But is Sampson taking a utopic view? Many people do have access to the internet that will allow them to view a wide range of information but many, particularly the elderly, might only have traditional access to such information by reading a newspaper or watching the television and has been commented upon earlier many individuals may not be interested.

The use of modern technology is only part of the solution in sharing information<sup>58</sup> and public authorities who hold this data have to be able in the first instance, to share data with each other and then when they have achieved this think about how they would disseminate an orchestrated message to the larger population in a consistent fashion that had the ability to touch a larger proportion of the community.

In considering this potential paradigm, I return to the work of Vitale (2008) who was instrumental in providing the trigger for the four stages under consideration. As much of my research has pivoted around Wilson and Kelling's (1982) broken windows theory and it is frequently quoted as having its first real policing trial in New York City, Vitale (see chapter six) explains what was really going on behind the scenes before any political/police rhetoric came to the fore usually through the New York City mayor, Rudolph Giuliani and his police chief William Bratton.

Giuliani and Bratton both claimed that the quality of life policing methods had been instigated by their respective offices and have since displayed much candour about this fact to advance their respective careers. But in reality and at local neighbourhood level, much of the order maintenance or zero tolerance policing in New York City localities was started prior to Giuliani and Bratton taking charge of their respective departments.

This was developed by local action groups such as Extra Place Neighbourhood Association (EPNA) and East Villagers Against Crack (EVAC) (Vitale 2008,p133) and local businesses such as the Grand Central Partnership (GCP) (Vitale 2008,p128) who had the financial clout to pay for certain services that the city were unable to provide. These action group styles are promoted by the Big Society campaign advocated by the current British coalition government.

This mobilisation of local people taking responsibility for the protection and development of their immediate public space effectively embarrassed the city into action as individual groups were showing the NYPD and the mayors department how it should be done.

There are some salutary lessons to be considered here in relation to this paradigm.

- Local authorities should not ignore the voices of the people. As the New York City example shows us, many people, when acting in concert, are an effective community force.

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<sup>58</sup> See [www.police.uk](http://www.police.uk) as an example of nationwide crime and ASB mapping made available to the general public.

- Authority leaders should not claim praise for the implementation of ideas that aren't theirs. Vitale 2008 (p142) cites Bratton as an example:

'Moreover, most of the innovations created by Bratton were organizational rather than institutional. While he helped diffuse the quality-of-life style throughout the department, he was not the original source of the new mission, values, and core strategies. Even the CompStat system, which helped advance the spread of the quality-of-life style, was as much a mechanism of organizational innovation as one of institutional innovation.'

- Where the public or other information sources indicate that there are difficulties with crime and ASB, local authorities should not be afraid to work in concert with each other and the public to arrive at a satisfactory conclusion. The authorities and the public should then discuss how the problems arose in the first place, (e.g. bad housing, poor access to services, racial mix etc.) and use this as a springboard to build stronger collective efficacy.

As public authorities have to learn how to be fiscally efficient to unprecedented levels, paradigms such as this have a role to play in ensuring that the public are protected and service provision is guaranteed across all neighbourhood levels. It is clear that in the future there will be more joined up services between organisation such as the police, housing services and probation. This will have to happen simply for some sort of service level to the neighbourhoods to be attained.

This chapter, which has looked at policing in Sheffield across a 50 year period, has outlined the importance of the participation between the police and the neighbourhoods in which they work and support the community. It has shown the dangers of policing becoming too specialised and how Wilson and Kelling were right to show how policing, if not conducted in an intense ground level fashion, can detach the police from the community.

The anecdotal experiences of the two Sheffield police officers highlight the importance of policing tradition and although there is a recognition that change often has to take place to accommodate the ever changing societal needs it must be done with thought and care. This thought and care is then reflected in a paradigm context making suggestions for policing within Sheffield and perhaps beyond. Whether the ideology of the Big Society is taken up by the community at large remains to be seen. What is in no doubt, that whether the community likes it or not, the implicit consent given by the public for the police to carry out its duties may have to change considerably.

## **Proposed policing changes to the city of Sheffield, Spring/Summer 2011.**

This chapter now considers how the Sheffield senior command police team think that the city should be policed for the next few years. The comments shown below are reproduced verbatim from an internal document published to all personnel across South Yorkshire Polices intranet system.

## **Chief Superintendent Simon Torr's Blog 16 May 2011**

The main subject of this week's Blog is restructuring of the District and rumours circulating that we are going from three sectors to two. Well firstly I can confirm that the rumours are partly true as I am looking at this as part and parcel of identifying savings required for financial year 2012/2013. As I have said at all briefings and other meetings I have attended over the past year or so the main focus and vision for achieving the savings is to create larger and more flexible teams to maximise efficiency and also allow us to deploy resources more flexibly.

One of the issues with three sectors is clearly there are three sets of boundaries and obviously 3 sets of management team costs. One way to save money therefore is to reduce the management on-costs and also remove some of the boundaries to allow resources to be deployed more flexibly. With this in mind, I have asked Superintendent Martin Scothern and Inspector Adrian Brown to research the feasibility of moving from three sectors to two sectors. They will do this by looking at the demand patterns, the crime patterns, natural neighbourhood boundaries and the like to look at whether or not this would achieve savings, whilst not compromising service levels.

I am acutely aware of the fact that the current model we have in Sheffield has served us well over the past three years and has allowed us to achieve significant crime reductions and also maintain response times to immediate and priority incidents. However, I am also aware from various pieces of research, especially by the NPIA, that we could provide a better service if we could operate slightly more flexibly. So, for example, where one part of the city starts to run hot if we redeploy resources quickly we can prevent the problem getting worse.

Clearly resources are tight and I want to make any savings possible without affecting numbers on the front line. Once the research is done then the full Command Team will discuss the feasibility of moving from three sectors to two further and to reassure staff I have invited in the first instance the Federation to be fully involved in the initial research and discussions and will also invite staff, unions and associations to review the plan.

There are no current plans to reduce the number of deployment bases other than looking at the future for Hammerton Road because the building itself is in a poor state of repair and is currently not fit for

purpose. Options for its replacement are currently being viewed and whether or not we retain a response and SNA function purely at Hammerton Road or we look to build a new SNA base are yet to be progressed to any significant degree.

Finally this week as we move now some seven weeks into the new year the District has started well in terms of response to crime and we are seeing some significant and excellent arrests of prolific criminals being carried out in a variety of different ways. On the Intranet there is a new interview with the Chief Constable in which he puts forward his priorities for the next year. I would like to pick out two of these really as the ones that we should really concentrate on. The first one is what he terms as maximising time in public contact, that means making full use of new equipment such as Blackberries to ensure we spend as much time as possible visible to the public and outside the police station. The second one is doing the basics right and as well as we can on each and every occasion. This is in line with the "Your Job" initiative that we launched at the beginning of this year and is really about making sure that at all times victims of crime and people we are in contact with are kept updated, are treated with fairness and respect and are treated as we would ourselves expect to be treated if we were victims of crime. It is this concentration on doing basics well that will allow us to continue to achieve what we need to over the next few months.

Once again, I would like to thank all staff for their continued commitment to providing a great service to the people of Sheffield. This has continued despite some significant disruption for example, the move from West Bar to Snig Hill and the creation of the Citywide Pro-Active Team but both of these moves have now bedded in well and are starting to achieve significant results.

Regards

**Simon Torr**  
**Chief Superintendent**

As can be seen from this blog, the existing way of policing the city, in three sectors, has only been in place for three years. The last restructure, it is thought, cost the Sheffield district c.£100k to implement and included items such as the renegotiation of staff contracts, office furniture, building development, promotion of police officers to fill new management vacancies etc. Chief Superintendent Torr<sup>59</sup> defends this rapid change by stating that the current way of working 'has served us well over the past three years has allowed us to achieve significant crime reductions and also maintain response times to immediate and priority incidents'.

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<sup>59</sup> Now an Assistant Chief Constable at Nottinghamshire Constabulary.

It should be noted in this particular comment that the benefits of the last three years focus on performance measures and no comment is made as to any benefits gleaned to the neighbourhoods across the city. It could be argued that the reduction of crime benefits the community, but the generalistic and oblique nature of the comment hides the fact that in some communities crime has either remained at a relatively constant level or increased. Other communities have indeed displayed a downward trend.

Financial savings clearly have to be made and in order to do this and 'maximise efficiency' larger and more flexible policing teams will be created. We see here police management rhetoric at its finest. It would appear that to get the best from Sheffield's dwindling police officer resource, there will be a move to group specialised teams together, such as burglary and robbery units. But once again there is no mention of the direct benefit to the neighbourhoods and how they are policed.

It is easy to be critical of management enforced changes, but the personnel that work in the city have only just got to grips with the current boundaries and processes and now it would appear they are to be changed again. This fact is exacerbated by the recent voluntary redundancies experienced within the civilian staff stream with fewer people struggling to maintain the delivery levels of the past. It was strongly argued three years ago from many quarters (ground level officers, lower and middle ranked supervisors) that the existing arrangements of two sectors worked quite adequately having been realigned previously (again) three years earlier.

Chief Superintendent Torr cites the use of new technology that allows the police to be more visible to the public and outside the police station. But visibility is limited in its impact if the calibre of the officer is poor either through lack of knowledge about the law or a neighbourhood or due to a shortened length of practical experience<sup>60</sup>.

Despite the promotion of doing the basics right and achieving significant results across the city, the approach taken appears to benefit the police service alone with little recognition given to community needs. The 'policing ship' in Sheffield from a management perspective, has been listing from side to side on a three year cycle for about nine years with new commanders at the helm changing course to show that their

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<sup>60</sup> Nottinghamshire Constabulary recently admitted to having many officers on front line uniform duties with less than three year's service. Many officers migrate to specialist non-uniform teams at the earliest opportunity which creates a difficult to fill vacuum at ground level.

new regime is progressing forward, all in the name of leadership. What is certain is that staff morale has been reduced, civilian staff numbers have started to decline with the possibility that police officer numbers will decrease in a similar fashion, the neighbourhoods have little or no say in the manner in which they are policed and yet senior South Yorkshire Police managers insist that nothing in the form of front line service provision will be affected.

Policing in the 1950's, the 1960's and the early 1980's is far removed from the way that Sheffield is policed today. What can be argued as lacking from today's policing style within the city is balance and stability and the public knowledge that with this balance and stability comes confidence that neighbourhoods might once again start to develop cohesion and collective efficacy and a desire in some quarters at least, to assist the police in making Sheffield a better place to live.

The final word in this chapter is given to Jane Jacobs (1961, p40) who eloquently captures the mechanics of cohesion within public space, words which the police in Sheffield should be influenced by;

'The first thing to understand is that the public peace-the sidewalk and the street peace-of cities is not kept primarily by the police, necessary as police are. It is kept primarily by an intricate, almost unconscious, network of voluntary controls and standards among the people themselves, and enforced by the people themselves'.

## **Chapter Five: The data analysis.**

### **Introduction.**

The fulcrum to most pieces of research is the analysis of data or information. This chapter provides the analysis of the data sets described in chapter three which have been generated during the lifetime of this research. The evolutionary process that has taken place in obtaining data from varying sources, understanding its content, gauging its relevance in answering the research questions and learning new analytical and enquiring skills is arguably the 'pure' element within the philosophical process overarching this research.

The analysis is of course driven by the continuous empirical reading that takes place throughout the life of the research. By examining what has been undertaken by other researchers, in this case mainly American based, thought is given within the research site of the city of Sheffield as to whether similar analytical techniques may be utilised, looking at other research findings, data experimentation and the future benefits in this case for neighbourhoods and how they might be policed in the future.

Explanations are given as to why this data has been considered. This research has attempted to connect quantitative data to qualitative data not only by traditional statistical methods but also using complementary geographical techniques which may be considered to be 'vanguard' but are most certainly 'embryonic' in development. Geographical enquiry within a social research context, although not a new discipline, is often not developed further due to the sometimes complicated and technical nature of the geographical software used to manipulate the data.

As has been alluded to in chapter three, the use of remote data observatories such as LASOS, which has been called upon within the latter stages of this analysis, can open up the use of geography to a far greater audience and requires little in the way of specialist knowledge to handle various data sets and contributes to the streamlining of the overall research process.

### **The South Yorkshire Police crime and anti-social behaviour data.**

A full description of the variables within this data are to be found within chapter three of this thesis. Police data such as this in its raw form is valuable and the checks and controls placed on its handling prior to analysis were in the environment of the author. This ability to be able to select the variables to work with, in consultation with the supervisors of this work, provided at a later stage, the ability to consider some important research questions. St.Jean (2007 p.249) when examining broken windows and collective efficacy from the

criminal point of view, could not access the Chicago police data that he requested until the very end of his research some two years later. He had largely relied upon his ethnographic work throughout the term of his research and the police data ultimately supported those findings. This research has therefore been fortunate in being able to use South Yorkshire Police's data in a raw format that is not often seen within a research environment such as this.

### **Anti-social behaviour data.**

The same techniques employed with the crime data have been used for ASB data sets, the exception being that the data has been drawn from South Yorkshire Police's command and control system as opposed to the crime management system.

The command and control system is used by South Yorkshire Police to record details of an incident when a person contacts the organisation either for help or advice. There are differing methods of contacting South Yorkshire Police ranging from a 999 telephone call to information points scattered across the county. Members of the public specifically resident in Sheffield also have the facility to report ASB-related incidents by using the 101 telephone number<sup>61</sup> Whatever the manner of contact to the police, the ASB data has been captured and considered within this research.

The data selected relates specifically to contact made by members of the public in relation to incidences of ASB. As with the crime data this data is also pre geo coded but it is worthwhile mentioning the context in which the geo code is assigned. The geo code for the ASB data is assigned to the address from which the call to the police is being made. This address could be residential, commercial or a remote location such as a public telephone kiosk. There is an assumption made by the organisation that the caller can see from their location where the ASB is taking place. So it is important to remember that in some instances the incident being reported maybe a distance away from the actual location from where the call is being made.

Another consideration in relation to this data is the immediacy in which a policing response may be required. A variable within the data is a date and time stamp which accurately displays when details of the call are being taken and acted upon. This allows a reasonable assumption that the research data can reasonably reflect when ASB has taken place. When considering the crime data, time parameters are slightly different in that many crimes are not immediately witnessed or are reported some time after being

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<sup>61</sup>[http://www.direct.gov.uk/en/CrimeJusticeAndTheLaw/Reportingcrimeandantisocialbehaviour/DG\\_185338](http://www.direct.gov.uk/en/CrimeJusticeAndTheLaw/Reportingcrimeandantisocialbehaviour/DG_185338) (Accessed 17/04/2011)

committed. Subsequently different calculations have to be made in relation to the temporal aspects of the two data sets to determine when incidents have occurred. The temporal element of each data set can be subjected to robust analysis and may play an important part in answering questions raised within the research when allied to other data.

This data has been mined for the periods between the 16<sup>th</sup> of February 2007 and the 5<sup>th</sup> of September 2008 and amounts to 89805 rows with 22 variable fields. The dates for the ASB data differ from the crime data as South Yorkshire Police only archive crime data and incident data is deleted from their databases after approximately 12 months.<sup>62</sup>

### **The Sheffield City Council Neighbourhood Survey.**

This data has been obtained for analysis from Sheffield City Council. The findings of the original data analysis were published in 2007. This quantitative social capital survey was carried out by Sheffield City Council to gauge citizen's views on quality of life, perceptions of crime and ASB and other issues that the council are statutorily obliged to record and report upon. Sheffield City Council had never recorded data at such a detailed level prior to this survey. The survey was conducted at a neighbourhood level which is one of 100 areas that divide the city. The 100 neighbourhoods are the independent variable against which the other data will be analysed. A random sample of residents from each neighbourhood was sent 225 questionnaires of which a total of 9329 were returned giving a response rate of 41%<sup>63</sup>. The response rate table per neighbourhood is displayed in table 5.1 below;

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<sup>62</sup> SYPOL claim technical barriers (data storage capacity) do not allow them to hold incident information for any great length of time due to the size of some of the data sets.

<sup>63</sup> Information acquired from the surveys executive summary.

**Table 5.1. Response rates to the SCC survey by neighbourhood<sup>4</sup>**

Greenhill	57.1	Stocksbridge	47.3	High Green	41.8	Southey Green	37.4
Millhouses	57.0	Greystones	47.0	Shiregreen	41.7	Brincliffe	37.1
Totley	55.8	Loxley	46.8	Nether Edge	41.6	Colley	36.9
Dore	55.1	Stannington	46.8	Walkley	41.2	Upperthorpe	36.9
Fulwood	54.1	Norton	46.4	Norfolk Park	41.2	Heeley	36.7
Bradway	53.2	Woodland View	46.1	Westfield	41.2	Park Hill	36.7
Ranmoor	52.7	Owlthorpe	45.5	Woodseats	40.6	Flower	36.6
Bents Green	51.6	Sothall	45.4	New Parson Cross	40.5	Birley	36.5
Wharcliffe Side	51.4	Chapelton	44.8	Crookes	40.4	Firth Park	36.0
Beauchief	51.2	Wadsley	44.8	Hemsworth	40.4	Hillsborough	35.9
Oughtibridge	50.5	Wisewood	44.8	Brightside	40.3	Gleadless Valley	35.5
Lodge Moor	50.4	Rural Area	44.6	Old Parson Cross	40.2	Longley	35.4
Base Green	50.2	Beighton	44.3	Handsworth	39.9	Endcliffe	35.2
Meersbrook	50.2	Fox Hill	44.0	Stubbin / Brushes	39.4	Broomhill	35.1
Burncross	50.2	Worrall	44.0	Granville	39.0	Shirecliffe	34.7
Crosspool	50.0	Acres Hill	43.8	Woodhouse	39.0	Burngreave	34.5
Whirlow / Abbeydale	49.8	Mosborough	43.7	Wybourn	38.5	Tinsley	34.3
Ecclesall	49.1	Wincobank	43.7	Houstea ds	38.2	Sharrow	34.0
Charnock	49.1	Deepcar	43.6	Arbourthorne	38.1	Netherthorpe	33.6
Batemoor / Jordanthorpe	48.5	Manor	43.5	Richmond	38.1	Crookesmoor	30.5
Grenoside	48.2	Ecclesfield	42.7	Darnall	38.0	Woodside	30.2
Waterthorpe	48.0	Halfway	42.5	Lowedges	37.9	Fir Vale	27.6
Gleadless	47.8	Hackenthorpe	42.3	Abbeyfield	37.8	Broomhall	26.9
Middlewood	47.5	Firshill	42.2	Woodthorpe	37.8	Highfield	25.6
Walkley Bank	47.5	Hollins End	41.9	Langsett	37.6	City Centre	21.5

The questionnaire was presented in four separate sections and had a total of 50 questions. Section 1 asked eighteen questions about the local area in which people lived. Section 2 had fourteen questions which focused on residents views on how the local authority operated in their area. The seven questions in section 3 considered the opportunities afforded to citizens to participate in the local area decision making process such as consultation exercises and area panels. Section 5 had eleven questions which concentrated on the socio-demographic characteristics of the respondent. The questionnaire data in its raw form has been converted to allow it to be spatially and statistically analysed. Post codes were assigned to each respondent and this has been geo coded and loaded into the mapping system as well as SPSS.

### **The Indices of Multiple Deprivation 2007.**

This is a national data set commissioned by the Communities and Local Government department. This data contains seven key domains which are income deprivation, employment deprivation, health deprivation and disability, education skills and training deprivation, barriers to housing and services, living environment deprivation and crime. The domains are all individually ranked at super output area (SOA) levels with a low rank indicating a high level of deprivation. This data allows small areas to be examined across the domains to identify significant variations. It should be noted that people may fall into more than one of the domains for example an individual could be considered to be

<sup>4</sup> Taken from the survey's executive summary (p 13).

classed in the employment deprivation domain and also the barriers to housing and services domain. Individuals can therefore appear across a range of different domains and are not just counted in singular domains and measured accordingly. An expanded explanation of each domain is provided below;

**Income Deprivation:** This domain relates to the proportion of families that live in low income families who receive means tested welfare benefits.

**Employment Deprivation:** This includes people who are eligible through age to work but for a variety of reasons such as ill-health or disability are not able to.

**Health Deprivation and Disability:** In this domain areas have been identified where there are high rates of people that die prematurely, suffer from poor health or who are disabled.

**Education, Skills and Training Deprivation:** This domain is divided in to two sub-domains. One relates to the lack of educational attainment in children and young people and the other indicates to a lack of formally recognised qualifications within the working age population.

**Barriers to Housing and Services:** This measures the difficulties people have in accessing housing and other key local services including a general practitioner, supermarkets, post offices and primary schools.

**The Living Environment:** This is another domain that is divided into two sub-domains. The first sub-domain measures the indoor living environment i.e. the actual quality of the housing stock and the second sub-domain measures the outdoor living environment which includes the quality of the air and road traffic accidents.

**The Crime Domain:** Four areas of recorded crime are measured in this domain, burglary, theft, criminal damage and violence. For the purposes of this research, the crime domain will not be considered as the SYPOL data mentioned previously will form the basis of the crime data analysis. If both sets of crime data were used it could be argued that crime data (IMD 2007) was being used to explain crime data (SYPOL) or vice versa. The decision to use SYPOL crime data was made as it includes every recorded offence for Sheffield which will include the IMD offence variables. The crime data, having been subjected to review and checking processes prior to analysis and comment is therefore considered suitable for research at this particular level.

## The Oxford Centre for Social Inclusion (OCSI).

This organisation carries out work for many different public organisations utilising the IMD data. They have devised a technique for making the seven domains even more relevant to the geographic areas which are covered across the UK. The IMD data has been modelled to output area level (OA). Each of the OA's contains approximately 100 households and is the lowest governmental level for analysis.

Data for Yorkshire and the Humber has been obtained from OCSI and thematically mapped to act as a context for the research project to possibly consider the IMD data domains and how these may play a part in influencing crime and ASB within the research site. There are certain advantages in this two tailed, statistical/geographical approach to the data analysis shown in table 5.2.

**Table 5.2. Comparison of analytical techniques**

<i>Statistical Analysis</i>	<i>Geographical Analysis</i>
Accurate measurement of quantitative/qualitative data applying a range of statistical tests used in other empirical research.	Plotting of quantitative/qualitative data applying a range of geographical tests to examine densities/holes across spatial distributions.
Limited ability to measure the usefulness of the data at differing output levels i.e. output area level, super output area level.	Allows data to be measured at differing output levels i.e. output area level, super output area level. Plugs the gap left by the statistical analysis.
Accurate measurement of statistical shifts or differences in data over periods of time.	Accurate measurement of spatial and temporal data movements over cross-sectional and longitudinal time spans.

### The collected data

The collection of the data took some nine months and was undertaken after a series of consultations with the supervisors of the research. Obtaining the research data took a degree of negotiation with relevant organisations<sup>64</sup> but the crime and ASB data was directly drawn from the core repositories by this researcher.

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<sup>64</sup> South Yorkshire Police and the Sheffield City Council.

To reflect previous related research carried out by Sampson (2001, 2004, 2009), Raudenbush (2001, 2004) and St.Jean (2007) the crime data was subjected to detailed filtering, to extract for use, three key categories of crime. The categories were drugs, robbery and violence. These crimes are consistently chosen for research as the structures of opportunity table described by St.Jean (2007) is shown in table 5.3.

**Table 5.3. Structures of opportunity.**

<i><b>Crime Category</b></i>	<i><b>Examples of crime in category</b></i>	<i><b>Opportunity structure needed to flourish</b></i>
<i><b>Non violent entrepreneurial</b></i>	Narcotics, prostitution	Market opportunities.
<i><b>Predatory</b></i>	Strong-arm and aggravated robberies, sexual assault, theft, motor vehicle theft, burglary, criminal trespass to property and criminal damage to property.	Easy and spontaneous access to suitable targets.
<i><b>Grievance</b></i>	Homicide, simple and aggravated batteries, simple and aggravated assaults.	Unresolved and intensified conflicts with easy access to targets.

The direct access to South Yorkshire Police data has afforded this research project distinct advantages in that having reviewed other empirical research projects it became clear that in many cases it was difficult to access law enforcement data, review it or select particular variables of interest. Table 5.4 shows the data collected within the drug category.

**Table 5.4. Drug categories of crime.**

DRUGS - POSSESS CANNABIS
DRUGS - POSSESS (EXCLUDES CANNABIS ON OR AFTER 1 APRIL 2004)
DRUGS - POSSESS WITH INTENT TO SUPPLY
DRUGS - CULTIVATE / PRODUCE CANNABIS
DRUGS - SUPPLY/OFFER TO SUPPLY
DRUGS - CULTIVATE CANNABIS
DRUGS - PRODUCE
DRUGS - PERMIT PREMISES TO BE USED FOR UNLAWFUL PURPOSE
DRUGS - KETAMINE - POSSESSION OF CONTROLLED DRUG
DRUGS - IMPORT CLASS A DRUG
DRUGS - GHB - POSSESSION OF CONTROLLED DRUG

As table 5.4 displays, four out of the eleven categories are specific to cannabis. This drug is predominant in its possession and production within the UK. The Home Office Counting Rules (HOCR) however have had to keep pace with the changing drug market and this is how such crime categories develop to assist local police forces and the Home Office keep track of offending rates. The variables within the violence category are shown in table 5.5.

**Table 5.5. Violence categories of crime.**

ASSAULT OCCASIONING ACTUAL BODILY HARM (OAPA SECTION 47)
COMMON ASSAULT
PUBLIC ORDER - HARASSMENT ALARM OR DISTRESS (POA 1986 S. 5)
PUBLIC ORDER - FEAR OR PROVOCATION OF VIOLENCE (POA 1986 S. 4)
WOUNDING WITH INTENT TO DO GRIEVOUS BODILY HARM - OAPA 1861 SECTION 18
HARASSMENT - (PROTECTION FROM HARASSMENT ACT 1997 SECTION 2)
ASSAULT ON A POLICE CONSTABLE
AFFRAY
WOUNDING (OAPA SECTION 20)
RACIALLY AGGRAVATED HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY AGGRAVATED INTENTIONAL HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
PUBLIC ORDER - CAUSE INTENTIONAL HARASSMENT, ALARM OR DISTRESS (POA 1986 S. 4A)
HARASSMENT - (PFHA SECTION (4)) PUTTING PEOPLE IN FEAR OF VIOLENCE
RACIALLY AGGRAVATED ACTUAL BODILY HARM, C&D ACT 1998 S. 29(1)(B),(2)
VIOLENT DISORDER
RACIALLY AGGRAVATED COMMON ASSAULT (C&D ACT 1998 S. 29(1)(C),(3))
RACIALLY AGGRAVATED HARASSMENT (C&D ACT 1998 S. 32(1)(A),(3))
INFLECTING GRIEVOUS BODILY HARM WITHOUT INTENT (PART EXCLUDING LESS SERIOUS WOUNDING WITHIN CLASS 8G) (OAPA SECTION 20)
RACIALLY AGGRAVATED FEAR OR PROVOCATION OF VIOLENCE SECTION 31(1)(A)
ATTEMPTED MURDER
MURDER PERSONS AGED 1 YEAR AND OVER
MALICIOUS WOUNDING (OAPA SECTION 20) PART CODE - EXCLUDING GBH WITHIN 8F
RACIALLY AGGRAVATED PUT PEOPLE IN FEAR OF VIOLENCE S. 32(1)(B),(4))
MANSLAUGHTER

RACIALLY OR RELIGIOUSLY AGGRAVATED ACTUAL BODILY HARM (AOABH) S 29 (1)(B),(2)
RACIALLY OR RELIGIOUSLY AGGRAVATED INTENTIONAL HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY AGGRAVATED MALICIOUS WOUNDING (GBH), C&D ACT 1998 S. 29(1)(A),(2)
RACIALLY OR RELIGIOUSLY AGGRAVATED HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RELIGIOUSLY AGGRAVATED ACTUAL BODILY HARM (AOABH) S 29(1)(B),(2)
RELIGIOUSLY AGGRAVATED INTENTIONAL HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY OR RELIGIOUSLY AGGRAVATED COMMON ASSAULT (C&D ACT 1998 S 29(1)(C),(3)
RELIGIOUSLY AGGRAVATED HARASSMENT, ALARM OR DISTRESS SECTION 31(1)(B)
RACIALLY OR RELIGIOUSLY AGGRAVATED OFFENCE OF HARASSMENT S32 (1) (A), (3)
RELIGIOUSLY AGGRAVATED HARASSMENT (C&D ACT 1998 S. 32(1)(A),(3))
RACIALLY AGGRAVATED GRIEVOUS BODILY HARM, C&D ACT 1998 S. 29(1)(A),(2) (PART CODE - EXCLUDES LESS SERIOUS WOUNDING WITHIN 8J)
RACIALLY AND OR RELIGIOUSLY AGGRAVATED FEAR OR PROVOCATION OF VIOLENCE SECTION 31(1)(A)
RELIGIOUSLY AGGRAVATED FEAR OR PROVOCATION OF VIOLENCE SECTION 31(1)(A)
RIOT

Table 5.5 displays the wide range of offences considered within this research and the complexity of considerations available within the counting rules particularly when thinking about racial and religious offences. These racial and religious categories were introduced by the Home Office in an attempt to measure violence against minority sections of the population and are important in determining the levels of violence against potentially vulnerable groups within neighbourhoods. The variables within the robbery category are shown in table 5.6.

**Table 5.6. Robbery categories of crime.**

THEFT FROM THE PERSON OF ANOTHER
ROBBERY OF PERSONAL PROPERTY
ATTEMPT ROBBERY PERSONAL / ASSAULT WITH INTENT TO ROB - PERSONAL PROPERTY
ROBBERY OF BUSINESS PROPERTY
ATTEMPT ROBBERY BUSINESS / ASSAULT WITH INTENT TO ROB - BUSINESS PROPERTY

No racial or religious element is included within the group but the interesting category is that of 'Theft from the person of another' and warrants an explanation of its significance within this group and across crime categories in general. Crime statistics are an important tool in helping the police portray how well they are performing, or not, in general or specific areas of crime, the offence of robbery being a specific point in case. Where certain crimes are required to be measured at the request of the Home Office, then much emphasis is placed on the control of these categories through traditional targeted policing

deployments, which is often seen by the public at large but also by backroom staff<sup>65</sup> who have the ability to show police managers how crime statistics can be controlled and where the opportunity exists to re-categorise certain crimes. Theft from the person of another is often used as a micro-management tool by crime managers<sup>66</sup>, to suppress the offence of robbery if they are advised that the offence is starting to become unmanageable having tried traditional policing methods. Data manipulation does exist within the police service and the engineering of the relevant categories has been undertaken by this author to meet localised district targets. It should be noted that although a crime may, for charging and processing purposes, meet a strict statute based criteria, for recording purposes the offence classification can be altered. In conclusion, it can be stated that the actual offence that has taken place may have little or no relational context to the manner in which it is ultimately recorded. All of the South Yorkshire Police crime and ASB data was loaded into the SPSS software and joined to the neighbourhood survey data. This was done to allow the police data to be analysed across the 100 neighbourhoods through which the survey had been conducted. Within the independent variable data, the social survey, the 100 neighbourhoods that cover the city of Sheffield are the lowest common geographical unit and survey data has not been collected at a lower level than this.

### **Correlations of crime categories within the 100 neighbourhoods.**

Counts of the crime categories of drugs, violence and robbery have been grouped within each of the neighbourhoods in which they are recorded as having occurred. Three correlation tests have been conducted to gauge how the level of each crime category within a neighbourhood correlates with the other crime categories within that same neighbourhood. The correlation tests conducted were:

- Drugs versus Robbery.
- Robbery versus Violence.
- Drugs versus Violence.

These correlation tests were done using Pearson's correlation coefficient, which is a standardised measure of the strength of the relationship between two variables. Pearson's correlation coefficient can range between -1, which would show a perfect

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<sup>65</sup> This author became a specialist in advising district and headquarters based police management in how to manipulate and control certain crime categories with statistical based analysis.

<sup>66</sup> Usually officers that hold the rank of Detective Inspector or Detective Chief Inspector.

negative correlation between variables<sup>67</sup>, through 0, which would show no correlation at all between the variables, up to +1, which would show a perfect positive correlation between variables<sup>68</sup>. Before undertaking these correlation tests, the data was assessed for any significant outliers that would skew the results. This check showed that the City Centre neighbourhood had much higher crime rates than all other neighbourhoods, for all 3 crime categories. This was identified by standardising the crime numbers to z scores. The City Centre neighbourhood had z scores above 7 for all three crime types and crime overall. This indicates this neighbourhood is a significant outlier, and could potentially skew the results of any statistical model applied to the data. The City Centre neighbourhood was therefore removed from the correlation analysis. The results of the Pearson correlation tests are displayed in table 5.7.

**Table 5.7. Crime correlation tests.**

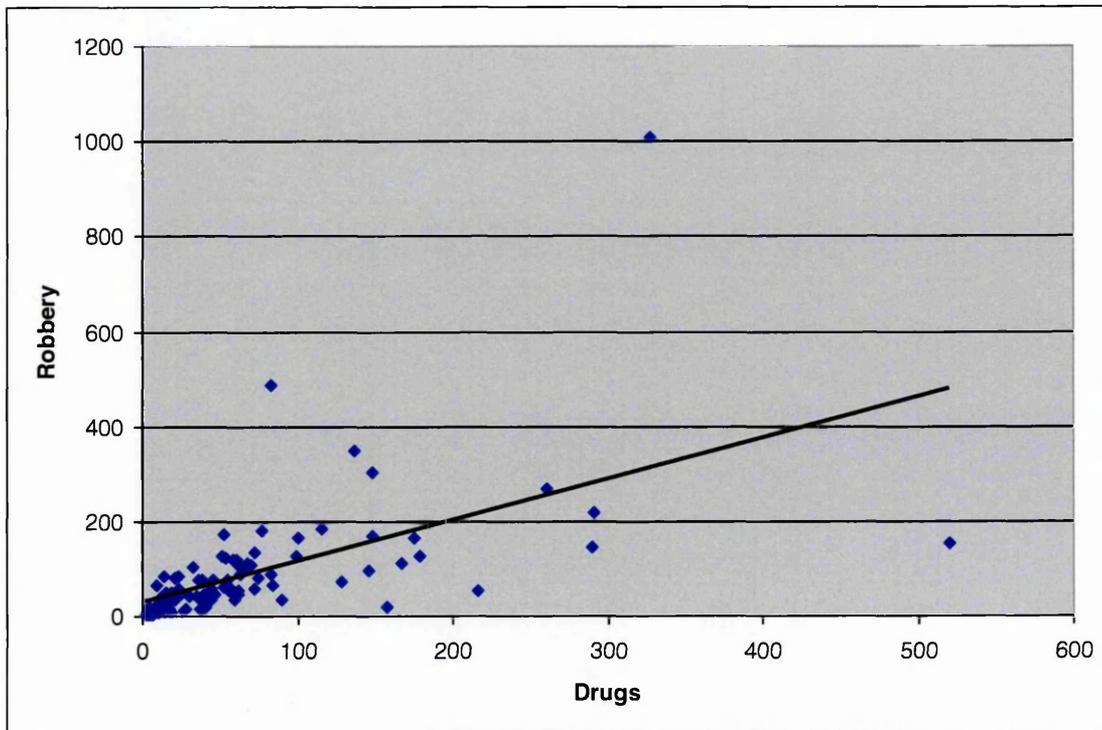
Drugs versus Robbery: Test 1.
Pearson's r coefficient: .852
Significance (p-value): <.000
Drugs versus Violence: Test 2.
Pearson's r coefficient: .900
Significance (p-value): <.000
Robbery versus Violence: Test 3.
Pearson's r coefficient: .910
Significance (p-value): <.000

<sup>67</sup> As one variable decreases, the other decreases by the same amount.

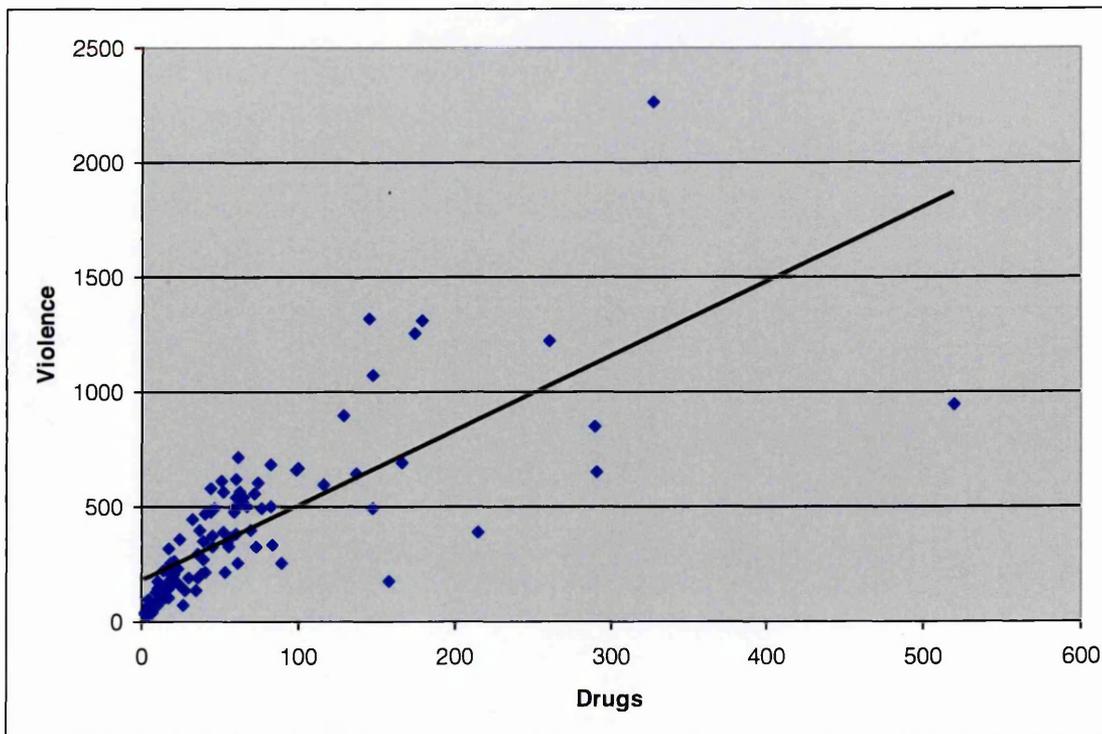
<sup>68</sup> As one variable increases, the other increases by the same amount.

The scatter plot diagrams are displayed in figures 5.1 to 5.3 inclusive;

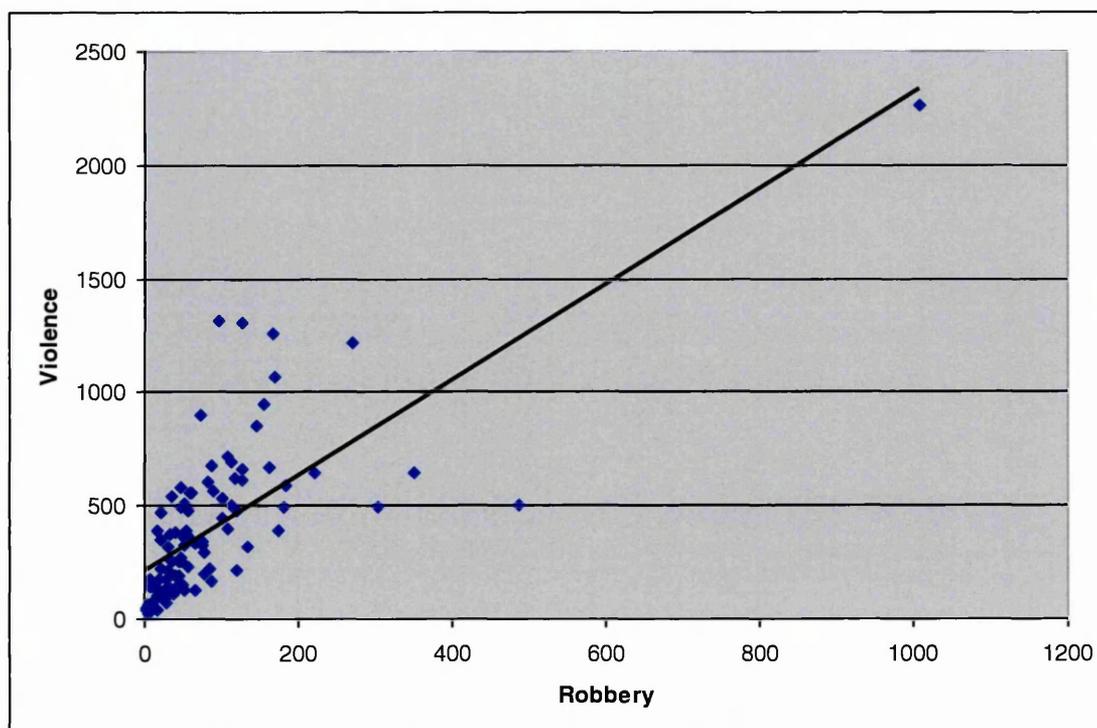
**Figure 5.1. Test 1 scatter plot diagram, drugs versus robbery.**



**Figure 5.2. Test 2 scatter plot diagram, drugs versus violence.**



**Figure 5.3. Test 3 scatter plot diagram, robbery versus violence.**



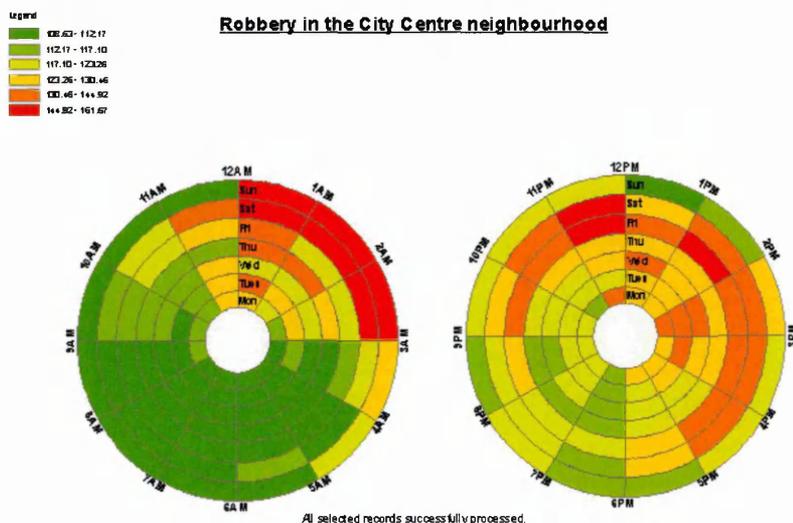
These results show that all three crimes are strongly correlated with each other. In other words, if one crime type frequently occurs in a neighbourhood, in relative terms, the other crime types will also frequently occur. However, the weakest correlation is between drugs and robbery.

#### **City Centre neighbourhood crime and anti-social behaviour, reasons for it becoming an 'outlier'.**

Some explanation is warranted as to how the City Centre neighbourhood manifested itself as an outlier and was excluded during further statistical analysis. The neighbourhood has the 11<sup>th</sup> lowest population count within the data set indicating 2,673 residents. Most of the neighbourhood is located within the heart of the city which includes a high proportion of commercial and light industrial property. For the three crime groups subjected to statistical analysis, some further temporal analysis was conducted to examine whether there were any distinctive patterns during days of the week and hours during the day that might influence the committal of crimes within the groups.

The robbery, violence and drug data which has been geographically plotted across the city of Sheffield has been individually exported out through the boundary of the neighbourhood so that it is effectively partitioned off from the rest of the other data. This allows the data to be subjected to a series of simple geographic and temporal tests if required.

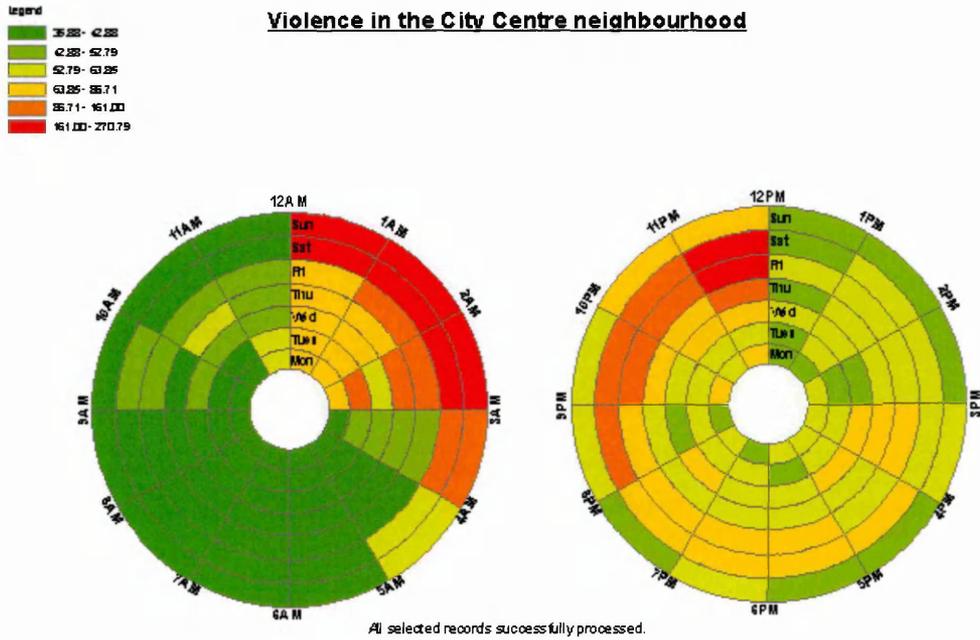
**Figure 5.4. Robbery in the City Centre neighbourhood – aoristic calculations**



The time and date stamps held within the robbery data set<sup>69</sup> have been analysed and displayed pictorially within Figure 4 to show the days of the week and hours during the day when the offences have occurred. The two temporal clocks clearly give an indication that during Saturdays and Sundays between midnight and 3am there is a concentration of offences being committed within this neighbourhood. The darker the shading within the clock indicates a higher offending rate within a particular time sector. A reason for this is the influx of people into the city centre to visit licensed premises and night clubs. The transient population swells the normal resident population of 2,673 residents and creates a larger population base for offences to be committed, with alcohol related incidents being significant.

<sup>69</sup> 2,381 robbery records are recorded within the City Centre neighbourhood.

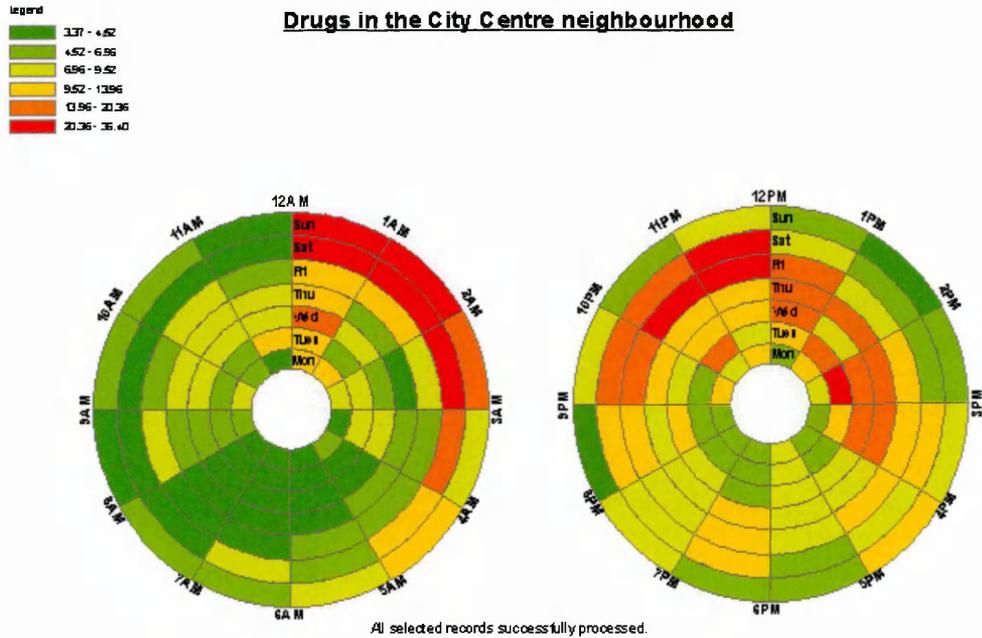
Figure 5.5. Violence in the City Centre neighbourhood – aoristic calculations



A similar temporal pattern within the violence data<sup>70</sup> displayed in figure 5.5 appears as it did in figure 5.4. Once again it could be suggested that similar circumstances fuel offences of violence and robbery within this particular neighbourhood.

<sup>70</sup> 4,982 violence records are recorded within the City Centre neighbourhood.

**Figure 5.6. Drugs in the City Centre neighbourhood – aoristic calculations**



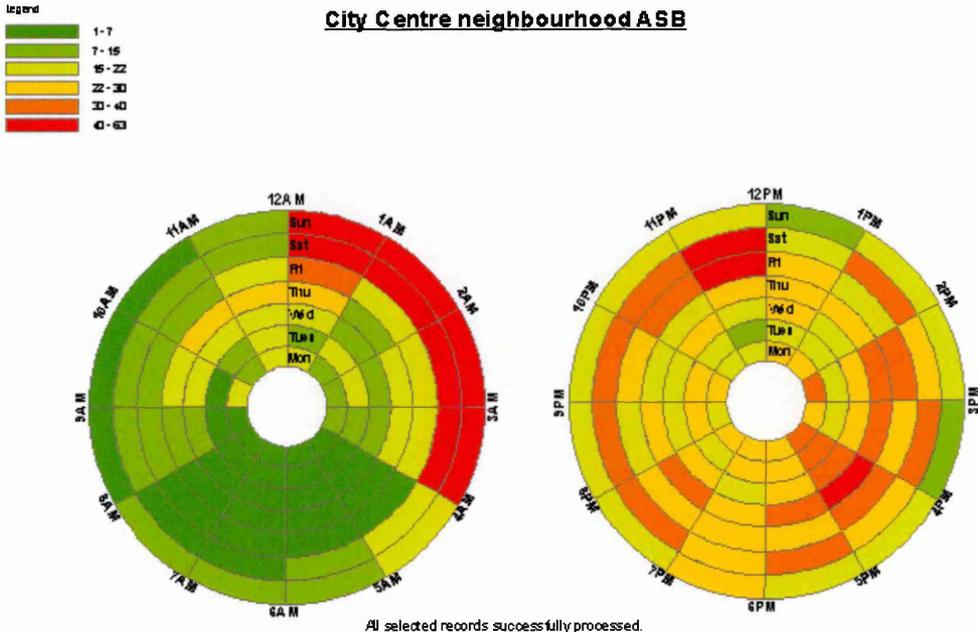
A similar temporal pattern also appears in relation to the drug data set.<sup>71</sup> It should be noted that within the data set many drug locations are identified to police premises within the city. These include South Yorkshire Police headquarters, West Bar Police station and Bridge Street charge office. These offences appear to occur at these locations due to Home Office counting rules which indicate that for certain offences, the complainant is in fact the Chief Constable of the force, hence the address is attached to a police premise. The timings of the offences are unaffected as they still accurately reflect the time parameters in which the offence was committed.

The principles applied to the crime data have been replicated within the ASB data to determine if certain neighbourhoods become outliers within the data. Outliers can be identified by converting scores or results into 'z-scores'. These are standardised scores based on the mean and standard deviation within the scores. A z score is calculated by taking the mean score away from the score for the relevant data and then dividing this by the standard deviation of the scores. For instance, if the mean number of ASB incidents across all neighbourhoods is 900, and the standard deviation within this is 500, to calculate the z score for a neighbourhood with 1500 ASB incidents the calculation is  $(1500-900)/500 = 1.2$ . This figure becomes the z score for the neighbourhood.

<sup>71</sup> 1,031 drug records are recorded within the City Centre neighbourhood.

In a normal distribution, a set of scores that has a perfect normal, bell-shaped distribution with no outliers, about 5% of neighbourhoods would be expected to have a z score above 2 or below -2, and about 1% of cases to have a z score above 2.58 or below -2.58. Few if any cases would be expected to have a z score greater than about 3.29. Therefore, any neighbourhoods with a z score greater than 3.29 can be seen as a significant outlier. The City Centre neighbourhood has a z score of 3.81 and is therefore a significant outlier and is likely to skew any ASB analysis conducted across all neighbourhoods. This neighbourhood was therefore excluded from further crime and ASB data analysis. Figure 5.7 gives a strong indication that ASB<sup>72</sup> is occurring within the City Centre neighbourhood on similar days of the week and during similar times and reinforces the reasoning for excluding this data from further analysis.

**Figure 5.7. City Centre neighbourhood ASB – aoristic calculations**



**Neighbourhood populations**

The next stage of the analysis was to consider whether population counts within the independent variable had any bearing when analysed against the crime and ASB data. This took the form of a normalisation process whereby the data was weighted against counts of population held within the Sheffield Neighbourhood survey.

<sup>72</sup> 3,430 ASB data records were used in this temporal analysis.

Populations for each of the 100 neighbourhoods were estimated using a combination of overall population figures for Sheffield based on the ONS<sup>73</sup> 2007 mid-year population estimate, and data obtained from the Public Health Register (PHR) in Sheffield. The PHR contains details of the addresses of the population registered with a general practitioners (GP) surgery in Sheffield. As this data is at an individual address level, it can be aggregated to the 100 neighbourhoods. In addition, the PHR data can also be broken down by age, and can therefore be used to estimate the age profile for each of the 100 neighbourhoods. A limitation of the PHR data is that it contains potential inaccuracies in terms of the overall numbers of population. It is reliant on people updating their GP whenever they move address. For example, a member of the public could move to a different address within a different neighbourhood, but not inform their GP. The PHR may show that person as living at their previous address. Similarly, a member of the public could move out of the Sheffield area but not inform their GP. As a result, the PHR tends to over-estimate the overall population of Sheffield. There is also a counter-argument that some people may not be registered with a local GP so there could be instances of under counting within the PHR data.

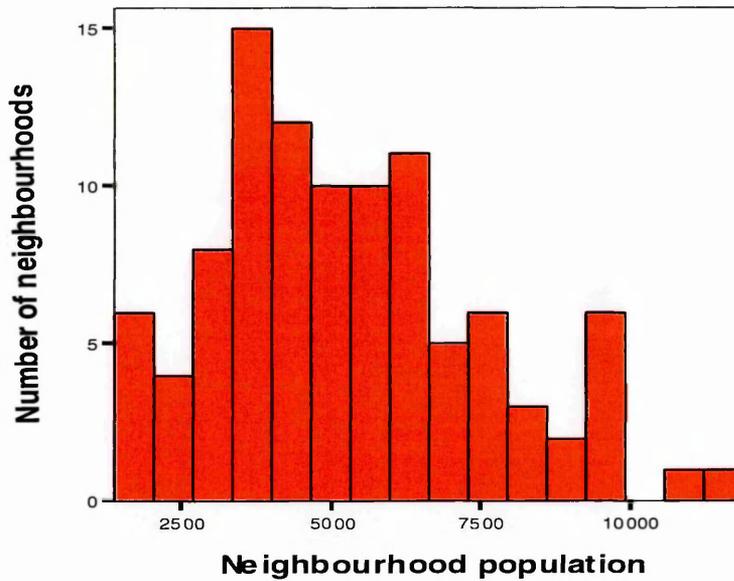
The ONS publish annual estimates of the overall population of all districts in the country. These are called mid-year population estimates. These estimates are also broken down into 5 year age bands. This overall estimate of population has been used as a baseline against which the PHR data has been apportioned to. Through this process, it has been possible to reasonably accurately estimate neighbourhood populations by age groups, which will aggregate to the accurate overall population estimate for Sheffield derived by ONS. The overall Sheffield population is 530,300<sup>74</sup>. This gives a mean neighbourhood population of 5,303. However, neighbourhood populations range between 1,389 in Wharncliffe Side to 11,886 in Nether Edge. Figure 5.8 shows the distribution of population levels across the 100 neighbourhoods.

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<sup>73</sup> Office of National Statistics.

<sup>74</sup> ONS 2007 mid-year estimate.

**Figure 5.8. Neighbourhood population**



It is important to consider this variation in population across the neighbourhoods when analysing the levels of crime and ASB. Neighbourhoods with higher populations would generally expect higher levels of reported crime and ASB. Therefore, crime and ASB incidents have been standardised against the neighbourhood population levels. This provides a crime/ASB rate per 1000 head of population for each neighbourhood and allows neighbourhoods to be directly compared, as population levels have been controlled for.

Population is used as the standardising denominator rather than households as the crimes under examination - violence, robbery and drugs - are all crimes against the person rather than against a property, such as burglary or criminal damage. ASB can also generally be seen as person rather than property focused, although it is acknowledged that some ASB, such as graffiti, maybe property based. The 5 neighbourhoods with the highest ASB, violence, robbery and drugs crime rates are shown in Table 5.8.

**Table 5.8. Top 5 neighbourhoods for crime and ASB**

ASB	Violence	Robbery	Drugs	Total crime
Park Hill	City Centre	City Centre	City Centre	City Centre
City Centre	Highfield	Park Hill	Burngreave	Park Hill
Gleadless Valley	Park Hill	Highfield	Park Hill	Highfield
Lowedges	Burngreave	Tinsley	Woodside	Burngreave
Manor	Flower	Broomhall	Ecclesfield	Woodside

The neighbourhoods of Park Hill and the City Centre both have z scores above 3.29 based on the ASB incidents per 1,000 population.

**Crime incidents per 1000 head of population.**

For consistency purposes within the overall analysis, rates per 1000 population for three crime categories drugs, violence and robbery have been calculated. This has been done to explore whether or not population levels influence correlation between the three groups. Three correlation tests were run to examine how the rate for each crime category within a neighbourhood correlates with the other crime categories within that same neighbourhood. The correlation tests were:

Drugs vs. Robbery.

Drugs vs. Violence.

Violence vs. Robbery.

These correlation tests were done using Pearson's correlation coefficient, which is a standardised measure of the strength of the relationship between 2 variables. The results of the Pearson correlation tests are displayed in table 5.9.

**Table 5.9. Correlation results per 1000 head of population**

Drugs vs. Robbery:
Pearson's r coefficient: .832
Significance (p-value): <.000
Drugs vs. Violence:
Pearson's r coefficient: .876
Significance (p-value): <.000
Robbery vs. Violence:
Pearson's r coefficient: .917
Significance (p-value): <.000

Scatterplots for the 3 correlations are displayed in figures 5.9 to 5.11 inclusive. These show the relationships between the crime rates per 1000 population for each of the crime groups.

Figure 5.9. Test scatter plot diagram, drugs versus robbery.

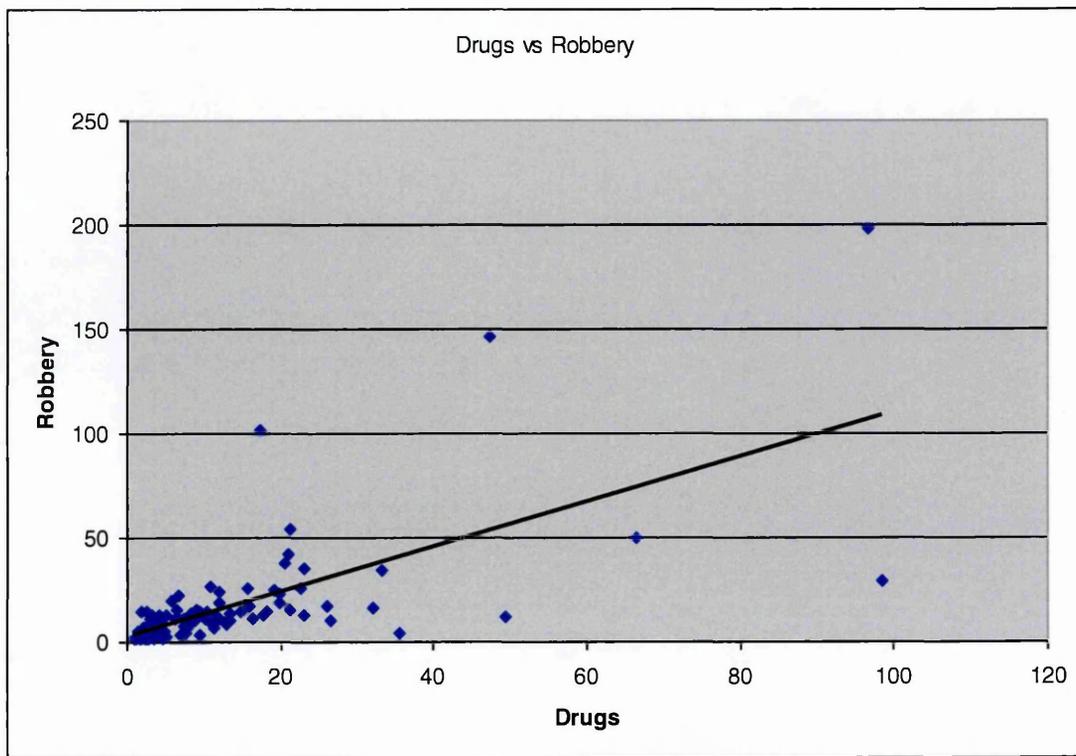
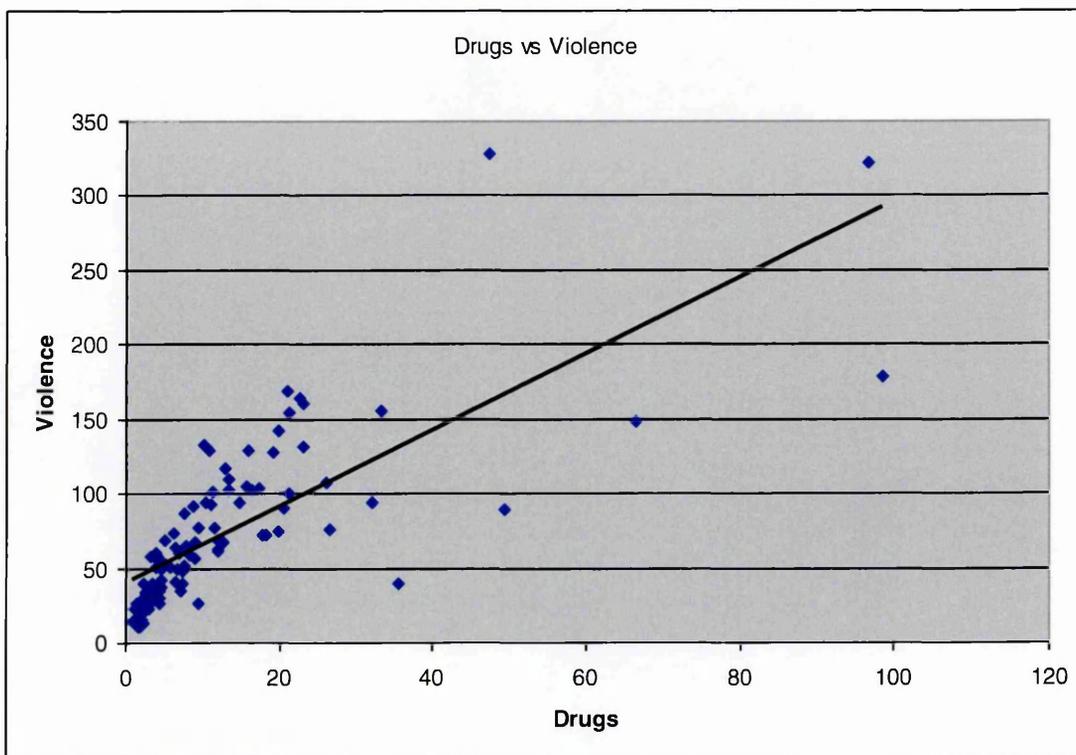
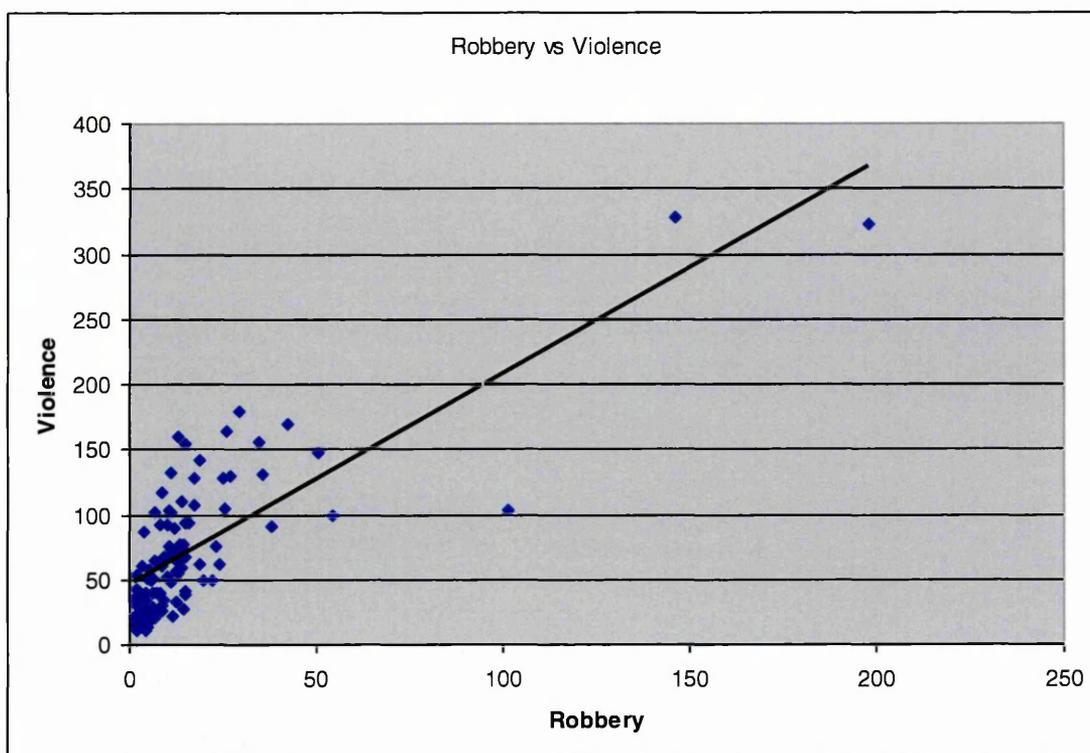


Figure 5.10. Test scatter plot diagram, drugs versus violence.



**Figure 5.11. Test scatter plot diagram, robbery versus violence.**



As was shown previously without the analysis of population counts, it is shown that all 3 crimes are strongly correlated with each other. If one crime type frequently occurs in a neighbourhood, in relative terms, the other crime types will also frequently occur. The weakest correlation identified is again between drugs and robbery. Having seen how offences of drugs violence and robbery and incidences of ASB are distributed across Sheffield both as a flat count and measured against 1000 head of population within the 100 neighbourhoods the research examined the strengths of the correlations between the data. This approach identified one neighbourhood, City Centre, as displaying particular characteristics and it was excluded from further analysis. The reason for its exclusion has been explained in a geographic and temporal context which gives strong indications that the night time economy of the city has great significance in skewing data. (This phenomena has also been identified in Doncaster as a series of anecdotal comments received by this author).<sup>75</sup>

<sup>75</sup> It has been noticed within SYPOL's new neighbourhood information system on display to the general public that despite low population levels in the town centre area of Doncaster the data always appears to be exceptionally high for counts of ASB and crime.

## **Adding the Sheffield Neighbourhood survey to the analysis**

The data analysis developed further with the introduction of the Sheffield Neighbourhood survey data, the findings of which were first published in 2007. A selection of questions from the survey were selected for analysis including those that potentially made the respondent think about their neighbourhood and their individual perception of crime and ASB. Utilising proxy surveys does generate difficulties when used for a different research purpose, but the selected questions were of value to this research.

The respondent data from the questionnaire was combined with the crime and ASB data and information from the neighbourhood boundary data. The data analysis was conducted within SPSS and then further examined from a geographical perspective. Some of the questions within the neighbourhood questionnaire had multi-level responses and it would have been difficult to interpret any lucid meaning, within the parameters of this research, when looking at multiple questions with this response facility. A decision was therefore taken to examine the most salient answer available to the respondent which related to the crime and ASB data. This does not negate future examination of the questions that have multiple responses within the context of this research. The addition of complex quantitative data into the analysis, with hindsight should have been considered further before embarking on the task. As will be seen the results develop some important findings but the level of input and analysis needed to achieve this were bordering on a 'team-based' research project scenario, not that of a PhD thesis. Once again for consistency purposes within the analysis, Pearson's correlation test was employed to test the crime and ASB data against the following questionnaire responses;

### **Analysis of Neighbourhood Survey: Section 1**

Question 1 asked; 'Thinking generally, which of the things below would you say are most important in making somewhere a good place to live?' (Respondents were allowed up to five choices)

Question 2 asked; 'And thinking about this local area, which of the things below, if any, do you think most need improving?' (Respondents were again allowed up to five choices from the same list available to question 1<sup>76</sup>)

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<sup>76</sup> The responses for questions 1 and 2 available were, access to nature, activities for teenagers, affordable decent housing, clean streets, community activities, cultural facilities (e.g. cinemas, museums), education provision, facilities for young children, health services, job prospects, the level of crime, the level of pollution, the level of traffic congestion, parks and open spaces, public transport, race relations, road and pavement repairs, shopping facilities, sports and leisure facilities, wage levels and cost of living, other (free text allowed for comments), none of these and don't know.

Pearson's correlation tests were run on both questions, as outlined below.

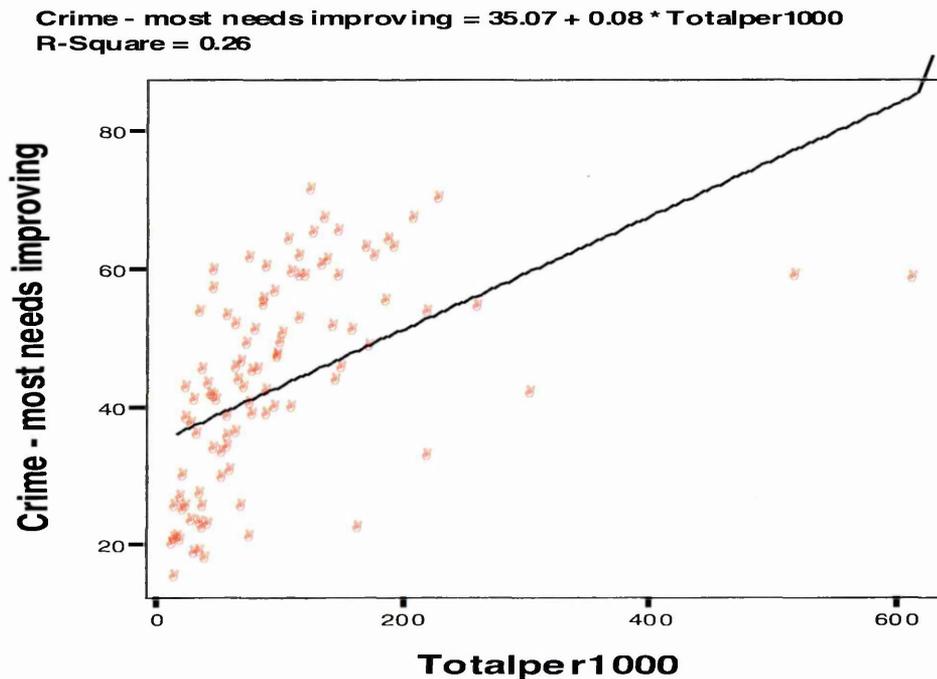
**Test 1:** Question 1, proportion of respondents who gave level of crime as being one of most important things that made somewhere a good place to live, versus overall crime rate (Drugs, Robbery and Violence combined).

Test 1 found no significant correlation between the 2 variables, Pearson's r coefficient = -.067,  $p > 0.05$ . In other words, the importance placed on crime in terms of making somewhere a good place to live was equally distributed across neighbourhoods, regardless of whether they had high or low crime rates.

**Test 2:** Question 2, proportion of respondents who gave level of crime as being one of things that most need improving in their local area, versus overall crime rate (Drugs, Robbery and Violence combined).

Test 2 found a very significant positive relationship between actual crime rate and whether respondents said crime most needed improving in their local area, Pearson's r coefficient = .508,  $p < 0.001$ . This result indicates that neighbourhoods with higher crime rates were more likely to say the level of crime needed improving in their local area. This is illustrated in Figure 5.12. The scatterplot includes a linear regression line of best fit and the regression equation.

**Figure 5.12. Neighbourhoods that stated levels of crime needed to improve**



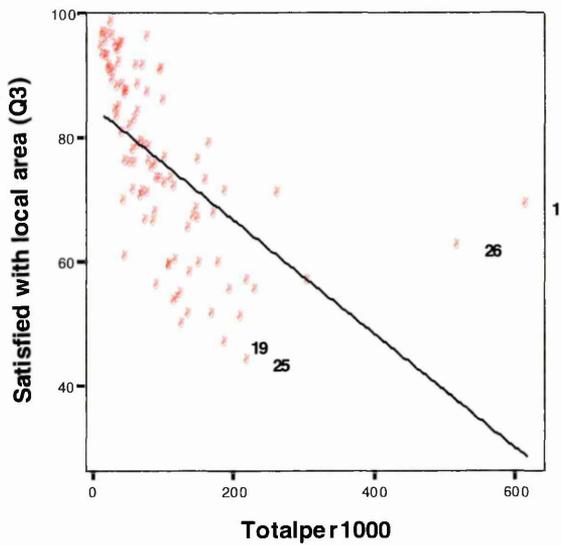
Question 3 asked; 'Overall, how satisfied or dissatisfied are you with your local area as a place to live?' Respondents selected one of the following options: 'very satisfied', 'fairly satisfied', 'neither satisfied' nor 'dissatisfied', 'fairly dissatisfied' and 'very dissatisfied'.

A correlation test between responses to this question, proportion of respondents who said they were very or fairly satisfied and the total crime rate in the neighbourhood showed a significant negative correlation between the two variables (Pearson's  $r$  coefficient =  $-0.580$ ,  $p < 0.001$ ). This analysis showed that low satisfaction levels correlated with high crime rates and vice versa. Correlation tests were also run between question 3 and drug rates, robbery rates and violence rates. As expected, because all crime types are inter-correlated, all 3 crime types correlated (negatively) significantly with levels of satisfaction with the neighbourhood. The analysis showed that the strengths of the correlations varied, with the strongest being between the violent crime rate and the weakest being between the robbery crime rate. Correlation between the ASB rate and neighbourhood satisfaction levels was also tested. Interestingly this analysis revealed higher correlation than crime rates (Pearson's  $r$  coefficient =  $-0.729$ ,  $p < 0.001$ ).

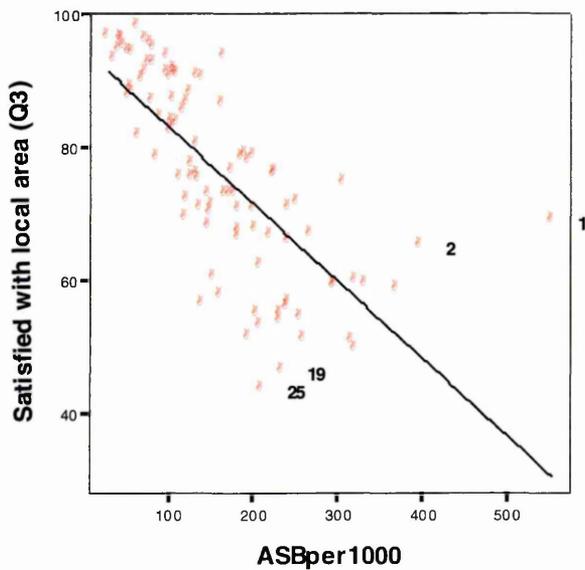
The three crime types of robbery, violence and drugs were chosen because of the overt nature in which they are generally committed, in open public view. These crime types (as opposed to burglary dwelling for example which is a more covertly committed crime by its very nature) potentially effect more strongly the perception of the neighbourhood population of either strong collective efficacy or a 'broken windows' dynamic.

But if ASB is a greater predictor of levels of neighbourhood satisfaction than crime, this may show that a greater number of households are affected by ASB in each neighbourhood compared to crime as ASB rates tend to be higher than crime rates. So this finding had an important consideration in determining answers to the research question which might indicate that ASB rather than crime rates have significance for residents in neighbourhoods within Sheffield. For example the mean average neighbourhood ASB rate per 1,000 population is 163, compared with total mean crime rate for neighbourhoods of 101. Figure 5.13 shows the total crime rate per 1000 population and figure 5.14 the ASB rate per 1000 population correlated with the proportion of survey respondents who were satisfied with their neighbourhood.

**Figure 5.13. Total crime rate per 1000 population (respondents satisfied with their neighbourhood)**



**Figure 5.14. Total ASB rate per 1000 population (respondents satisfied with their neighbourhood)**



Figures 5.13 and 5.14 show the strength of the correlation between the variables. They also illustrate a number of outlier neighbourhoods. Neighbourhoods 1 and 26 in figure

5.13 and 1 and 2 in figure 5.14 are neighbourhoods with the highest rates of crime and ASB, but their satisfaction levels are average. These neighbourhoods appear to 'buck the trend' of high crime/ASB rates being related to low neighbourhood satisfaction. The neighbourhoods identified in the diagrams are Park Hill (1), Gleadless Valley (2) and Highfield (26). This phenomena has been seen before in the work of Richard Taub, Garth Taylor and Jan Dunham (1984: 20, 172) where the examination of two neighbourhoods in Chicago revealed both high crime rates and positive 'satisfaction with safety' scores.

The neighbourhoods of Park Hill and Highfield are geographically adjacent to the City Centre neighbourhood. The data within figures 5.13 and 5.14 appears to indicate that there may be a ripple effect occurring from the city centre in relation to both crime and ASB but as has been mentioned earlier survey respondents indicate that their satisfaction levels sit mid-range within the data. The respondents within the neighbourhoods of Old Parson Cross (19) and Darnall (25) in figures 5.13 and 5.14 show the lowest satisfaction levels but the rates of crime/ASB are again mid-range within the overall data. Given the correlation between satisfaction and crime/ASB there would be an expectation that crime/ASB would be higher but again these neighbourhoods appear to 'buck the trend'.

Survey question 5 asked; 'Thinking about your local area, how much of a problem do you think are..... (one box per row was allowed to be ticked with a range of responses including 'a very big problem', 'a fairly big problem', 'not a very big problem', 'not a big problem at all' or 'don't know'.

All of the ASB-related factors had significant correlations with the ASB rate per 1000 population for the neighbourhood ( $p < 0.01$ ). However, the strength of these correlations varied. The strongest correlations with the ASB rate were for people using drugs and people dealing drugs. The correlation coefficients (Pearson's correlation test) are summarised in Table 5.10.

**Table 5.10. ASB-related factors within neighbourhoods**

ASB-related factor (proportion of respondents who see it as a very or fairly big problem in their neighbourhood)	Correlation coefficient with ASB rate per 1,000 population
Parents not taking responsibility for children - problem	0.703359
Not treating others with respect - problem	0.70182
Noisy neighbours loud parties - problem	0.416868
Teenagers hanging round street - problem	0.671618
Rubbish and litter lying round - problem	0.549501
Drunk and rowdy in public places - problem	0.304597
Abandoned or burned out cars - problem	0.533393
Vandalism, graffiti and damage to property or vehicle - problem	0.665967
People attacked because of race - problem	0.468927
People attacked because of religion or culture - problem	0.432717
People using drugs - problem	0.740552
People dealing drugs - problem	0.713568

As would be expected, the rate of drugs crimes in a neighbourhood correlates strongly with whether survey respondents thought that people using and dealing drugs was a problem ( $r = .581, .591, p < 0.001$ ). What is notable is that the rate of ASB correlates more strongly with people seeing drug use and drug dealing as a problem, than the actual rate of drugs crimes recorded. Similarly, the rate of violent crime also correlates more strongly with perceptions of drug problems, compared to the actual rate of recorded drugs crimes ( $r = .700, .681, p < 0.001$ ).

Survey question 7 asked; 'What has been your experience and/or your neighbours' experience of children and young people causing trouble in your neighbourhood this past year?' The variable used to analyse this question was the proportion of respondents who said it was a 'very big' or 'fairly big' problem. All the different types of incidents were significantly positively correlated with the rate of ASB in the neighbourhood. Therefore, neighbourhoods with higher rates of ASB were likely to have more residents who saw young people causing different types of trouble in their neighbourhood. However, the different types of troublesome behaviour varied in terms of the strength of their correlation with the ASB rate. Table 5.11 shows the correlation coefficients for each of the types of behaviour asked about in the survey, correlated with the ASB rate of the neighbourhood.

**Table 5.11. Correlation coefficients for behaviour types**

Troublesome behaviour caused by young people	Correlation coefficient with ASB rate per 1,000 population
Noisy behaviour public place	0.631842
Damage to property	0.615158
Damage to public property	0.598856
Hanging around outside shops	0.54321
Swearing causing offence on street	0.690393
Creating litter or graffiti	0.634894
Stealing cars and riding around	0.670812
Buying and drinking alcohol	0.536927
Being drunk and disorderly	0.520786
Shoplifting	0.711369
Stealing	0.736555
Intimidating residents	0.723189
Riding motorbikes illegally	0.729801
Taking drugs	0.743028
Being out after dark	0.702659
Answering back	0.672738
Regularly playing in streets	0.705707
Begging	0.589034
Committing racist behaviour	0.437265

As with question 5 in the survey, drug taking as reported as a problem by respondents was the behaviour with the strongest correlation to the actual rate of ASB in a neighbourhood.

Survey question 10 asked; 'How safe do you feel?' The response options available were 'when you are alone in your home during the day', 'when you are alone in your home at night', 'when walking out alone during the day' and 'when walking out alone at night'.

The variable used in the analysis of these questions was the proportion of respondents who said they felt 'very safe' or 'fairly safe'. Correlation tests were run between the four questions above and ASB, drugs, robbery, violence and total crime rates. ASB again showed the strongest correlations with all 4 questions – the safer respondents felt, the lower the ASB rate in their neighbourhood. Similar significant correlations ( $p < 0.05$ ) were

found between each of the 4 questions and the drugs, violence and total crime rates. However, significant correlations were not found between any of the above questions and the rate of robbery ( $r$  ranged between  $-0.119$  and  $-0.194$ ,  $p > 0.05$ ).

In order to identify neighbourhoods of particular interest, the analysis looked at the 'standardised residual' scores for each neighbourhood in a linear regression analysis. This involves looking at how close or far away from the regression model each neighbourhood is. Large residuals indicate the neighbourhood doesn't fit the regression model very well. For example, a regression model involving ASB rate as the dependent variable and feeling safe at home during the day shows that high feelings of safety predict low rates of ASB. However, this general prediction does not fit all neighbourhoods equally well. The residual is the difference between the actual ASB rate from that predicted by the regression model. Therefore, neighbourhoods with high standardised residuals were ones which 'buck the trend' and were selected for further investigation.

Residuals were examined for regressions models between ASB rate as the dependant variable and the four questions above, separately, as the independent variable. These consistently identified neighbourhood number 1, Park Hill as standing out. Specifically, the ASB rate in Park Hill was much higher than the regression model predicted, based on the results to the four questions identified above. Residuals were also examined for regression models between the total crime rate and the four questions above. This again identified Park Hill as standing out, but it also identified neighbourhood 26, Highfield as another neighbourhood worthy of note. For both these neighbourhoods the rates of crime were much higher than the feelings of safety estimated from the above questions predicted through the regression model.

### **Summary of the initial data analysis**

This analysis focused on the use of three crime categories, drugs, robbery and violence together with ASB and a social capital survey. The data has been used within 100 neighbourhood environments across the city of Sheffield. Pearson's correlation tests have been predominantly used to consider how the survey respondents perceive their immediate environment when asked about crime and ASB. Some interesting findings have been discussed but this preliminary analysis revealed, from using similar data as generated in other empirical research (Sampson and Raudenbush 2001, 2004) within a Sheffield context produced limited results, due in part to the way that drugs offences are recorded by South Yorkshire Police.

Another consideration with this initial data is the amount available for analysis. The initial three categories of crime<sup>77</sup> represent 18.4 percent of the overall crime data harvested from South Yorkshire police's crime management system<sup>78</sup>. This vanguard data demands analysis from a wider perspective and should, for further research purposes include all the categories that have been obtained.

Multiple correlation tests can also be restrictive due to the volume of tests conducted. The standard statistical convention is to use a confidence level of 95 percent. In doing statistical tests, data is examined to see if there are significant relationships or differences between sets of the data, things that are 'real' rather than just random occurrences within the data. This is why tests for 'significance' are important. The confidence level is the degree to which it can be stated that any difference or relationship found within the data is real. By repeatedly using a 95 percent confidence level the convention states that if a significant relationship is found such as a correlation between crime rates and satisfaction within a neighbourhood the resultant analysis can be 95 percent sure that relationship is real, it is a real effect. If the test was repeated 100 times the same significant relationship between the variables would re-occur 95 times. Conversely the data will also show that 5 times in 100 (or 1 in 20) the relationship will be flagged as significant and real when it isn't. In short a false positive will be displayed. This false positive is also referred to as a type I error. A type II error is where no relationship is found when in fact there is one, in other words a false negative. The repetition of correlative tests gives a greater probability of producing a false positive. It would therefore be prudent to reduce the number of tests to reduce the chances creating a type I error.

#### **Further statistical testing within the research.**

The research focused on reducing the number of statistical tests by employing ANOVAs<sup>79</sup>, which can provide a single statistical outcome after comparing a range of variables. This decision was made after consultation with the supervisors of this research at the University of Sheffield as it became apparent, after discussion, that analysis was required that focused more upon collective efficacy within the Sheffield neighbourhoods. Grouping variables that correlate strongly and those that measure the same underlying or latent variable using factor analysis would be prudent in achieving this aim. Some of the questions in the survey were grouped together to create underlying factors such as

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<sup>77</sup> n = 62,138.

<sup>78</sup> n = 338,403.

<sup>79</sup> ANalysis Of VAriance between groups.

collective efficacy and social disorder, combined with the IMD data, in order to group together a range of indicators within a range of themes.

In contemplating the analysis of large data and in order to produce robust outputs, an important consideration is weighting the data consistently and correctly. Weighting is used to correct the distributions in the sample data to approximate those of the population from which it is drawn. It allows expansion and correction or adjustment for both non response and non-coverage. It serves the purpose of providing data that reflects the views, in the social survey context, of the population rather than the actual responses received in the data sample. Data in most major surveys has some form of weighting applied to it. The British Crime Survey (BCS) and the ONS Labour Force Survey (LFS) as two UK based examples apply a technique described as calibration weighting. This technique attempts to eradicate certain responses from being missed or excluded from analytical outputs. Lundström and Särndal (1999) claim that this highly sophisticated technique 'leads to consistent estimates, a property that appeals to a broad group of subject-matter statisticians.' The LFS uses a three stage process which is continually repeated to ensure that certain data fit within a set of parameters. The BCS also adopts this approach to ensure a fully inclusionary methodology.

Within this research a simple weighting process applied to the sophisticated data was considered sufficient to provide robust results. Previous analysis indicated that a minority of crimes made up the majority of reported crime incidents. This was illustrated through the analysis of the top 10 crime categories for each of the 100 neighbourhoods in Sheffield. Figure 5.15 shows the number of neighbourhoods featuring each crime category in its 'top 10' of crimes, in terms of volume of recorded incidents.

Figure 5.15. Neighbourhoods with crime in top 10.

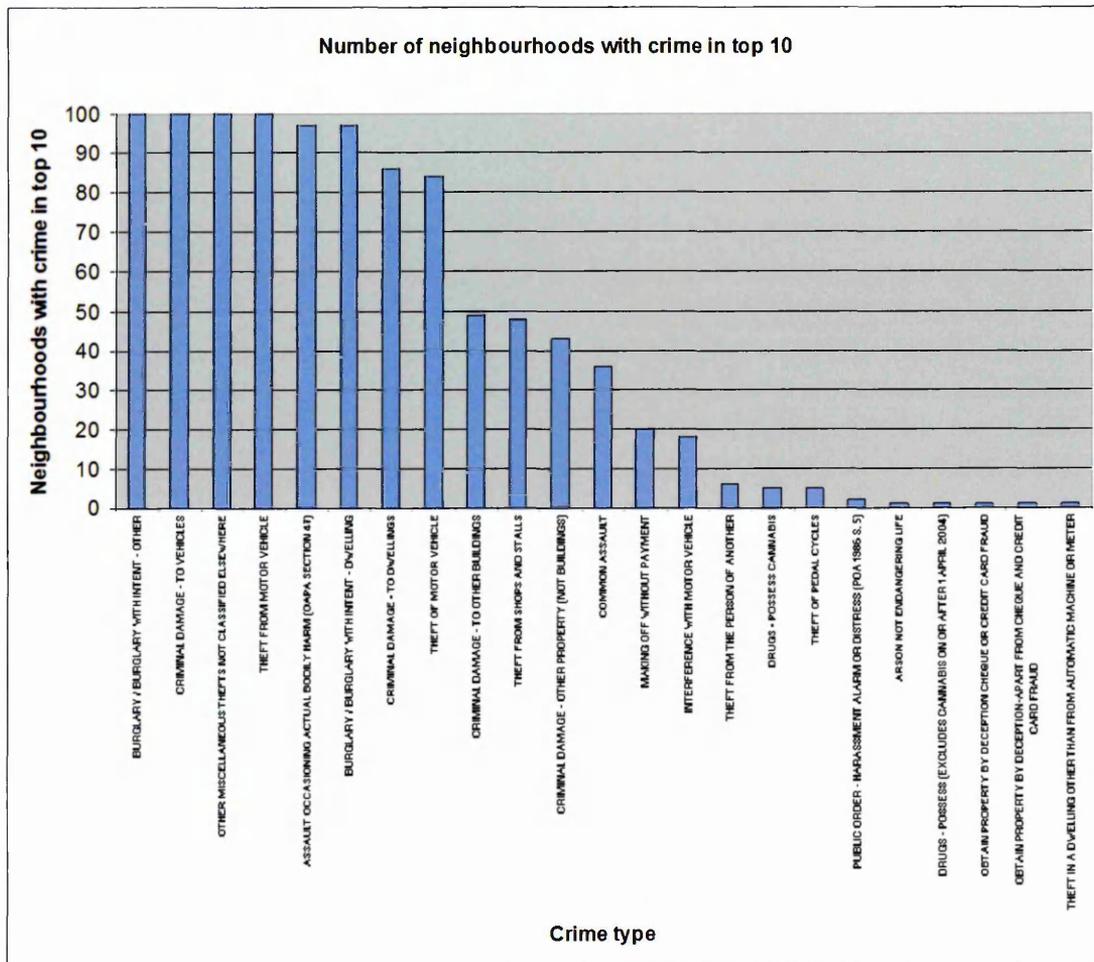


Figure 5.15 displays the visible 'cut off' between the 8<sup>th</sup> and 9<sup>th</sup> most common crimes. The 8<sup>th</sup> most common crime, Theft of Motor Vehicle, features in the top ten most common crimes of 84 neighbourhoods. The 9<sup>th</sup> most common crime, Criminal Damage – Other Buildings, features in the top ten of 49 neighbourhoods. Based on this 'step change', it was agreed that only the top eight crimes would be included in further analysis. The relevant crime categories are displayed in Table 5.12.

**Table 5.12. The top eight crimes subjected to further analysis.**

<b>Crime classification</b>	<b>No. of neighbourhoods with crime classification in the top 10</b>
BURGLARY / BURGLARY WITH INTENT - OTHER	100
CRIMINAL DAMAGE - TO VEHICLES	100
OTHER MISCELLANEOUS THEFTS NOT CLASSIFIED ELSEWHERE	100
THEFT FROM MOTOR VEHICLE	100
ASSAULT OCCASIONING ACTUAL BODILY HARM (OAPA SECTION 47)	97
BURGLARY / BURGLARY WITH INTENT - DWELLING	97
CRIMINAL DAMAGE - TO DWELLINGS	86
THEFT OF MOTOR VEHICLE	84

The new set of data from these eight crime types were standardised against population figures in the neighbourhoods, creating a per 1000 people crime rate for each crime in each neighbourhood. This crime rate data was added to a new SPSS database along with the ASB data from the previous stage of analysis, which was similarly standardised to a per 1000 people rate. The crime and ASB data was then tested for skewness and kurtosis to check for normal distribution. The Kolmogorov-Smirnov test for normality showed that all data variables were significantly different from a normal distribution which is displayed in Table 5.13.

**Table 5.13. Tests of normality.**

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Burglary - other	.121	99	.001	.854	99	.000
Criminal damage to vehicle	.116	99	.002	.938	99	.000
Other miscellaneous thefts	.187	99	.000	.636	99	.000
Theft from vehicle	.206	99	.000	.651	99	.000
Assault (section 47)	.136	99	.000	.862	99	.000
Burglary dwelling	.153	99	.000	.895	99	.000
Criminal damage to dwelling	.192	99	.000	.805	99	.000
Theft of vehicle	.102	99	.014	.898	99	.000
Antisocial behaviour incidents	.094	99	.030	.927	99	.000

a Lilliefors Significance Correction

To allow the use of parametric statistical tests on the data, it was transformed using a logarithmic algorithm (base 10 logarithm). This transformation adequately removed non-normality from all variables, as Table 5.14 displays.

**Table 5.14. Non-normality removed from the crime data.**

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Burglary other, transformed	.071	99	.200(*)	.988	99	.505
Criminal damage to vehicle, transformed	.078	99	.146	.981	99	.163
Other miscellaneous thefts, transformed	.068	99	.200(*)	.980	99	.134
Theft from motor vehicle, transformed	.085	99	.075	.971	99	.028
Assault, transformed	.072	99	.200(*)	.983	99	.244
Burglary dwelling, transformed	.067	99	.200(*)	.986	99	.399
Criminal damage to dwelling, transformed	.057	99	.200(*)	.983	99	.244
Theft of motor vehicle, transformed	.065	99	.200(*)	.985	99	.304
Antisocial Behaviour, transformed	.062	99	.200(*)	.984	99	.265

\* This is a lower bound of the true significance.

a Lilliefors Significance Correction

### Correlation between crime and ASB variables

Pearson's correlation tests were carried out between all the transformed crime and ASB variables. The test was one-tailed<sup>80</sup>, as it was predicted that all variables would be positively correlated with each other. This prediction turned out to be correct, with all variables strongly correlated with each other. The correlation matrix is displayed in Table 5.15.

<sup>80</sup> \* Correlation is significant at the 0.05 level (1-tailed).

\*\* Correlation is significant at the 0.01 level (1-tailed).

lation matrix, transformed crime and ASB variables.

	Burglary other, transformed	Criminal damage to vehicle, transformed	Other miscellaneous thefts, transformed	Theft from motor vehicle, transformed	Assault, transformed	Burglary dwelling, transformed	Criminal damage to dwelling, transformed	Theft of motor vehicle, transformed	Antisocial B transformed
Pearson Correlation	1	.704(**)	.814(**)	.538(**)	.733(**)	.444(**)	.580(**)	.721(**)	.698(**)
Sig. (1-tailed)		.000	.000	.000	.000	.000	.000	.000	0
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.704(**)	1	.654(**)	.524(**)	.865(**)	.536(**)	.831(**)	.861(**)	.801(**)
Sig. (1-tailed)	.000		.000	.000	.000	.000	.000	.000	.000
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.814(**)	.654(**)	1	.583(**)	.750(**)	.466(**)	.444(**)	.682(**)	.564(**)
Sig. (1-tailed)	.000	.000		.000	.000	.000	.000	.000	.000
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.538(**)	.524(**)	.583(**)	1	.387(**)	.587(**)	.207(*)	.519(**)	.295(**)
Sig. (1-tailed)	.000	.000	.000		.000	.000	.020	.000	.001
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.733(**)	.865(**)	.750(**)	.387(**)	1	.511(**)	.841(**)	.849(**)	.864(**)
Sig. (1-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.444(**)	.536(**)	.466(**)	.587(**)	.511(**)	1	.525(**)	.571(**)	.416(**)
Sig. (1-tailed)	.000	.000	.000	.000	.000		.000	.000	.000
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.580(**)	.831(**)	.444(**)	.207(*)	.841(**)	.525(**)	1	.776(**)	.851(**)
Sig. (1-tailed)	.000	.000	.000	.020	.000	.000		.000	.000
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.721(**)	.861(**)	.682(**)	.519(**)	.849(**)	.571(**)	.776(**)	1	.769(**)
Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.000		.000
N	99	99	99	99	99	99	99	99	99
Pearson Correlation	.698(**)	.801(**)	.564(**)	.295(**)	.864(**)	.416(**)	.851(**)	.769(**)	1
Sig. (1-tailed)	.000	.000	.000	.001	.000	.000	.000	.000	
N	99	99	99	99	99	99	99	99	99

This correlation matrix identifies key findings. Some of the strongest correlations are between 'linked' crimes, for example Theft of Motor Vehicle and Criminal Damage to Motor Vehicle. However, there are also some very strong correlations between seemingly unrelated crime types, for example Theft of Motor Vehicle and Assault. It is evident that ASB is most strongly correlated with Assault. However, it is also strongly correlated with criminal damage offences. In conclusion, neighbourhoods with high rates of certain crimes are likely to have high rates of other crimes as well. Many of the strongest correlations are between related crime types. However, there are also very strong correlations between some seemingly unrelated crime types, which would require further investigation. To consolidate the data analysis further, consideration was given to determining which neighbourhoods displayed strong elements of collective efficacy. As has been previously discussed, the Sheffield Neighbourhood survey used within this analysis wasn't specifically designed to measure collective efficacy, but some of the questions served the function of acting as rudimentary proxies for collective efficacy.

### **A suggested method for measuring collective efficacy across Sheffield's neighbourhoods**

The technique employed to measure collective efficacy within the survey data was that of a scoring system. The following questions displayed in Table 5.16 were shortlisted as potential measures of collective efficacy, with a view to selecting the strongest of these following further analysis.

**Table 5.16. Collective efficacy questions.**

Q5 - Thinking about your local area, how much of a problem do you think are... - people not treating other people with respect and consideration - people being attacked because of their skin colour/ethnic origin - people being attacked because of their religion/culture
Q7 Experience of young people causing trouble in last year... - intimidating other residents - answering back if told off for their behaviour
Q13 To what extent do you agree or disagree that this local area is a place where people from different backgrounds get on well together?
Q14 To what extent do you agree or disagree that people in this local area treat you with respect and consideration?
Q15 To what extent do you agree or disagree that this local area is a place where residents respect ethnic differences between people?
Q18 How much formal volunteering have you engaged in over the past year?
Q22 Do you use a community centre in your area?
Q34 Do you agree or disagree that you can influence decisions affecting your local area?
Q36 Generally speaking, would you like to be more involved in the decisions your Council makes that affect your local area?
Q38 Did you vote in the last local elections?
Q39 Do you intend to vote in the next local elections in May?

The responses to these questions were converted into variables for each of the neighbourhoods in Sheffield (excluding the City Centre). This was based on the proportion of respondents answering each of the above questions in a particular way, as Table 5.17 displays.

**Table 5.17. Collective efficacy question response variables.**

<p>Q5 - Thinking about your local area, how much of a problem do you think are...</p> <ul style="list-style-type: none"> <li>- people not treating other people with respect and consideration – <b>% who said ‘not a very big problem’ or ‘not a problem at all’</b></li> <li>- people being attacked because of their skin colour/ethnic origin – <b>% who said ‘not a very big problem’ or ‘not a problem at all’</b></li> <li>- people being attacked because of their religion/culture – <b>% who said ‘not a very big problem’ or ‘not a problem at all’</b></li> </ul>
<p>Q7 Experience of young people causing trouble in last year...</p> <ul style="list-style-type: none"> <li>- intimidating other residents – <b>% who said ‘not a very big problem’ or ‘not a problem at all’</b></li> <li>- answering back if told off for their behaviour – <b>% who said ‘not a very big problem’ or ‘not a problem at all’</b></li> </ul>
<p>Q13 To what extent do you agree or disagree that this local area is a place where people from different backgrounds get on well together? - <b>% who said ‘definitely agree’ or ‘tend to agree’</b></p>
<p>Q14 To what extent do you agree or disagree that people in this local area treat you with respect and consideration? - <b>% who said ‘definitely agree’ or ‘tend to agree’</b></p>
<p>Q15 To what extent do you agree or disagree that this local area is a place where residents respect ethnic differences between people? - <b>% who said ‘definitely agree’ or ‘tend to agree’</b></p>
<p>Q18 How much formal volunteering have you engaged in over the past year? - <b>% who said ‘at least 1 hour per week’ or ‘2 or more hours per week’</b></p>
<p>Q22 Do you use a community centre in your area? - <b>% who said ‘yes’</b></p>
<p>Q34 Do you agree or disagree that you can influence decisions affecting your local area? - <b>% who said ‘definitely agree’ or ‘tend to agree’</b></p>
<p>Q36 Generally speaking, would you like to be more involved in the decisions your Council makes that affect your local area? - <b>% who said ‘yes’</b></p>
<p>Q38 Did you vote in the last local elections? - <b>% who said ‘yes’</b></p>
<p>Q39 Do you intend to vote in the next local elections in May? - <b>% who said ‘yes’</b></p>

These variables were designed so that a higher value signified greater collective efficacy. As with the crime and ASB data the variables were tested for normality of distribution using the Kolmogorov-Smirnov statistic. A number of the variables showed significant

deviation from a normal distribution. Therefore, to remove this problem and allow the use of subsequent parametric tests with these variables, they were transformed using the log10 function. These transformed variables were used in all subsequent statistical testing. In order to test whether these questions were actually measuring the same thing or similar things, i.e. collective efficacy, they were all correlated with each other using the Pearson's correlation coefficient. The correlation matrix is shown in Table 5.18.

...tive efficacy questions (transformed variables) correlation matrix.

**Correlations**

	people being attacked because of their religion/culture	people being attacked because of their skin colour/ethnic origin	People not leaving other people with respect and consideration	Intimidating other residents	Answering back if told off for their behaviour	Do you agree or disagree that this local area is a place where people from different backgrounds get on well together?	Do you agree or disagree that this local area is a place where people respect and consider each other?	Do you agree or disagree that this local area is a place where residents respect ethnic differences between people?	How much formal volunteering have you engaged in over the past year?	Do you use community centre in your area?	Do you agree or disagree that you can influence decisions affecting your local area?	Generally speaking, would you like to be more involved in the decisions our Council makes that affect your local area?	Did you vote in last local election?
Person Correlation (2-tailed)	1	.504**	.479**	.799**	.793**	.459**	.819**	.530**	.478**	.098	.051	.240**	.3
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.334	.614	.017	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.504**	1	.932**	.537**	.467**	-.075	.445**	.120	.113	-.167	-.320**	-.122	.1
	.000	.000	.000	.000	.000	.461	.000	.237	.264	.100	.001	.229	.1
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.479**	.932**	1	.498**	.400**	-.077	.403**	-.101	.161	-.146	-.250**	-.140	.0
	.000	.000	.000	.000	.000	.447	.000	.320	.111	.150	.013	.167	.3
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.799**	.537**	.498**	1	.866**	.477**	.741**	.606**	.427**	-.130	.133	.119	.2
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.334	.614	.017	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.793**	.467**	.400**	.866**	1	.553**	.741**	.651**	.474**	-.070	.158	.096	.3
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.488	.118	.343	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.459**	-.075	-.077	.477**	.553**	1	.557**	.844**	.431**	.074	.525**	.291**	.1
	.000	.461	.447	.000	.000	.000	.000	.000	.000	.467	.000	.003	.2
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.819**	.445**	.403**	.741**	.741**	.557**	1	.643**	.465**	.092	.122	.166	.3
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.368	.228	.100	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.530**	.120	.101	.606**	.651**	.844**	.643**	1	.484**	-.009	.447**	.202**	.2
	.000	.237	.320	.000	.000	.000	.000	.000	.000	.927	.000	.045	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.478**	.113	.161	.427**	.474**	.431**	.465**	.484**	1	.166	.179	.217**	.3
	.000	.264	.111	.000	.000	.000	.000	.000	.000	.100	.076	.031	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.098	-.167	-.146	-.130	-.070	.074	.092	-.009	.166	1	-.104	.182	.2
	.334	.100	.150	.200	.488	.467	.368	.927	.100	.000	.307	.071	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.051	-.320**	-.250**	.133	.158	.525**	.122	.447**	.179	-.104	1	.181	.0
	.614	.001	.013	.188	.118	.000	.228	.000	.076	.307	.000	.111	.7
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.240**	-.122	-.140	.119	.096	.291**	.166	.202**	.217**	.182	.161	1	-.0
	.017	.229	.167	.242	.343	.003	.100	.045	.031	.071	.111	.111	.8
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.321**	.145	.097	.291**	.300**	.128	.354**	.226**	.368**	.209**	.033	-.019	
	.001	.152	.341	.003	.003	.207	.000	.024	.000	.038	.745	.850	
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99
Person Correlation (2-tailed)	.452**	.199**	.151	.438**	.469**	.421**	.541**	.440**	.413**	.142	.230**	.305**	.6
	.000	.049	.135	.000	.000	.000	.000	.000	.000	.160	.022	.002	.0
	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99

...icant at the 0.01 level (2-tailed).  
...icant at the 0.05 level (2-tailed).

The results shown in Table 5.18 were difficult to interpret. The questions varied in terms of the number of significant correlations they had with the rest of the set of questions. Table 5.19 displays the number of significant correlations across the question matrix.

**Table 5.19. Significant correlations identified from the correlation matrix.**

<b>Question</b>	<b>Number of significant correlations with other questions</b>
People being attacked because of their religion/culture	11
People being attacked because of their skin colour/ethnic origin	7
People not treating other people with respect and consideration	6
Intimidating other residents	10
Answering back if told off for their behaviour	10
To what extent do you agree or disagree that this local area is a place where people from different backgrounds get on well together?	9
To what extent do you agree or disagree that people in this local area treat you with respect and consideration?	10
To what extent do you agree or disagree that this local area is a place where residents respect ethnic differences between people?	10
How much formal volunteering have you engaged in over the past year?	9
Do you use a community centre in your area?	1
Do you agree or disagree that you can influence decisions affecting your local area?	5
Generally speaking, would you like to be more involved in the decisions your Council makes that affect your local area?	5
Did you vote in the last local elections?	8
Do you intend to vote in the next local elections in May?	11

In order to determine which of these questions indicated a strong collective efficacy factor within the sample any question that had a score of 6 or above was included in subsequent analysis. This threshold was determined as the third question listed in Table 5.19 is an important consideration in determining social cohesion and places itself in this pivotal part of the correlation range across all the questions.

**Quantifying collective efficacy at the neighbourhood level: - a description of the methodology**

In attempting to show which neighbourhoods display strong cohesive bonds through use of the Sheffield Neighbourhood survey, a scoring system was developed resulting from testing the data for correlations. Only certain questions from the survey had any sort of relativity to the collective efficacy debate. Correlative tests were employed between the questions to check whether they were measuring the same or similar concepts. This led to the full survey being cut down to the eleven questions shown in Table 5.20 which had the most number of significant correlations with other questions.

**Table 5.20. The key eleven collective efficacy questions.**

Q5_2	People not treating other people with respect and consideration
Q5_9	People being attacked because of their skin colour/ethnic origin
Q5_10	People being attacked because of their religion/culture
Q7_12	Intimidating other residents
Q7_16	Answering back if told off for their behaviour
Q13	To what extent do you agree or disagree that this local area is a place where people from different backgrounds get on well together?
Q14	To what extent do you agree or disagree that people in this local area treat you with respect and consideration?
Q15	To what extent do you agree or disagree that this local area is a place where residents respect ethnic differences between people?
Q18	How much formal volunteering have you engaged in over the past year?
Q38	Did you vote in the last local elections?
Q39	Do you intend to vote in the next local elections in May?

In order to create a variable to measure collective efficacy, responses to each question were given a score between 1 and 4. A score of 4 indicated the highest level of collective efficacy from that question, and 1 indicated the lowest level. The scores were derived are shown in Table 5.21.

**Table 5.21. Collective efficacy question responses with variable scoring applied.**

Q5_2	
Q5__9	1 = A very big problem
Q5_10	2 = A fairly big problem and Don't know
Q7_12	3 = Not a very big problem
Q7_16	4 = Not a problem at all
Q13	1 = Definitely disagree
Q14	2 = Tend to disagree or Don't know or Too few people in local area or All the same background 3 = Tend to agree 4 = Definitely agree
Q15	1 = Definitely disagree 2 = Tend to disagree or Don't know 3 = Tend to agree 4 = Definitely agree
Q18	1 = None at all 2 = Occasional, not regular or Don't know 3 = At least one hour per week on average 4 = 2 or more hours per week on average
Q38	2 = No
Q39	4 = Yes

Any missing values were given the 'neutral' value of 2.

Using these new variables, an overall collective efficacy score was created, combining a respondent's score on each of the above variables. However, it was deemed that questions number five, thirteen and fourteen were better indicators of collective efficacy. These three questions asked about respect and consideration (Q5\_2 and Q14) and how people from differing backgrounds got on (Q13).

As will subsequently be explained, the demographic makeup of a Sheffield neighbourhood in some instances is important in identifying strong and weak collective efficacy. The lack of respect and consideration within neighbourhoods for differing demographic groups potentially leads to weak collective efficacy and it is later shown that in neighbourhoods with a more uniform demographic type of resident, may get on better together and display stronger collective efficacy.

Therefore, the scores for Q5\_2, Q13 and Q14 were doubled during the combination of all variables. The equation for creating the overall collective efficacy score therefore looked like this:

$$2Q5\_2 + Q5\_9 + Q5\_10 + Q7\_12 + Q7\_16 + 2Q13 + 2Q14 + Q18 + Q38 + Q39$$

This provided an overall collective efficacy score for each survey respondent. The highest possible score on this overall variable was 56, and the lowest possible score was 16. The mean, standard deviation, minimum and maximum scores for this variable are displayed in Table 5.22.

**Table 5.22. Collective efficacy scores for survey respondents**

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Overall collective efficacy score	10720	17.00	56.00	37.2766	6.55614
Valid N (listwise)	10720				

The mean collective efficacy score was then calculated for each of the 100 neighbourhoods across Sheffield.

**The spatial distribution of collective efficacy across Sheffield**

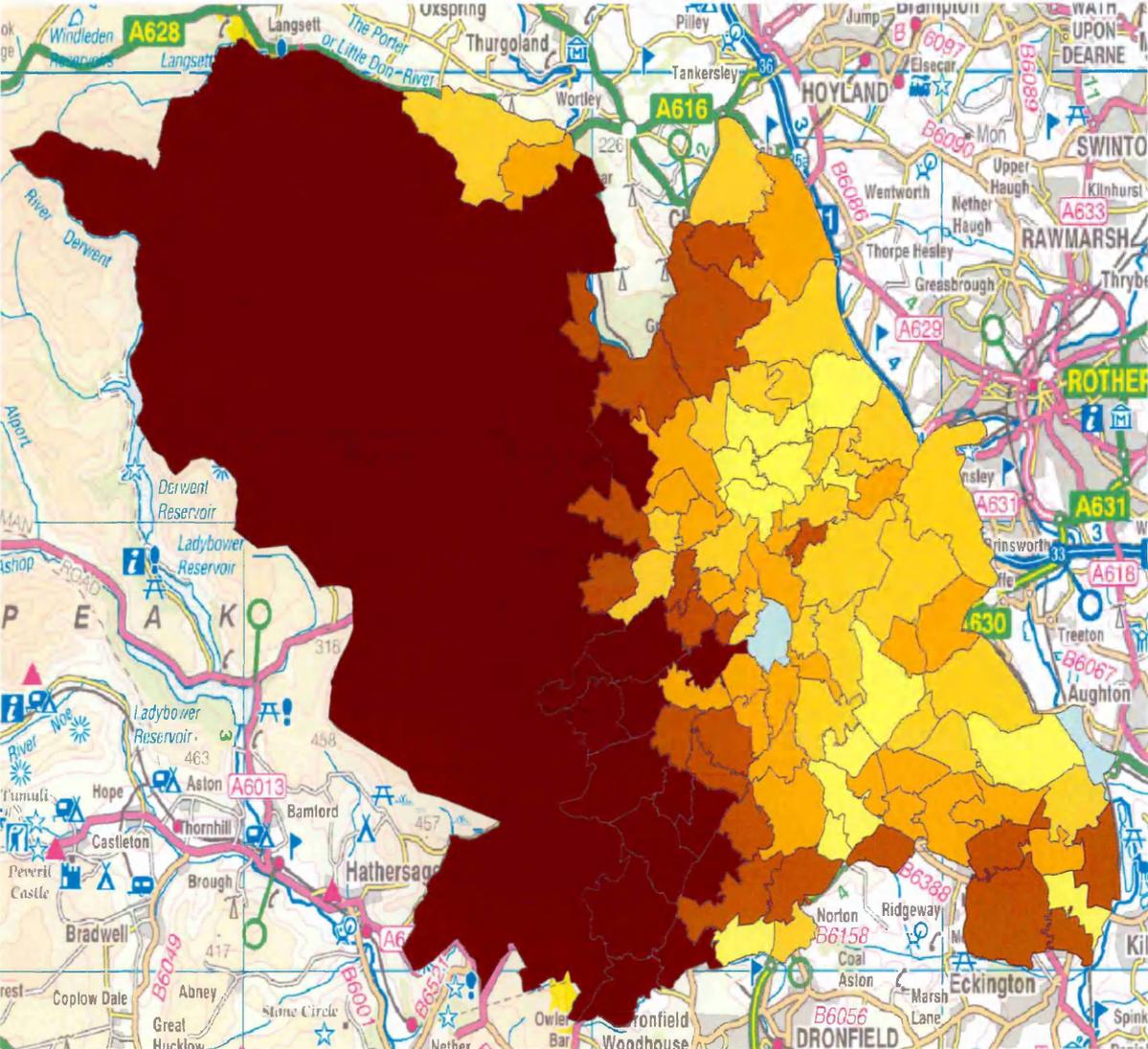
The collective efficacy scores for each neighbourhood displayed in Map 5.1 were geographically plotted and displayed in a thematic map. The data has been separated into five different range categories and coloured accordingly. The darker the colour the stronger the calculated collective efficacy score from the survey. Table 5.23 displays the ranges of the score within the mapped data.

**Table 5.23. Colour coded scoring range**

**Overall\_collective\_efficacy\_score**

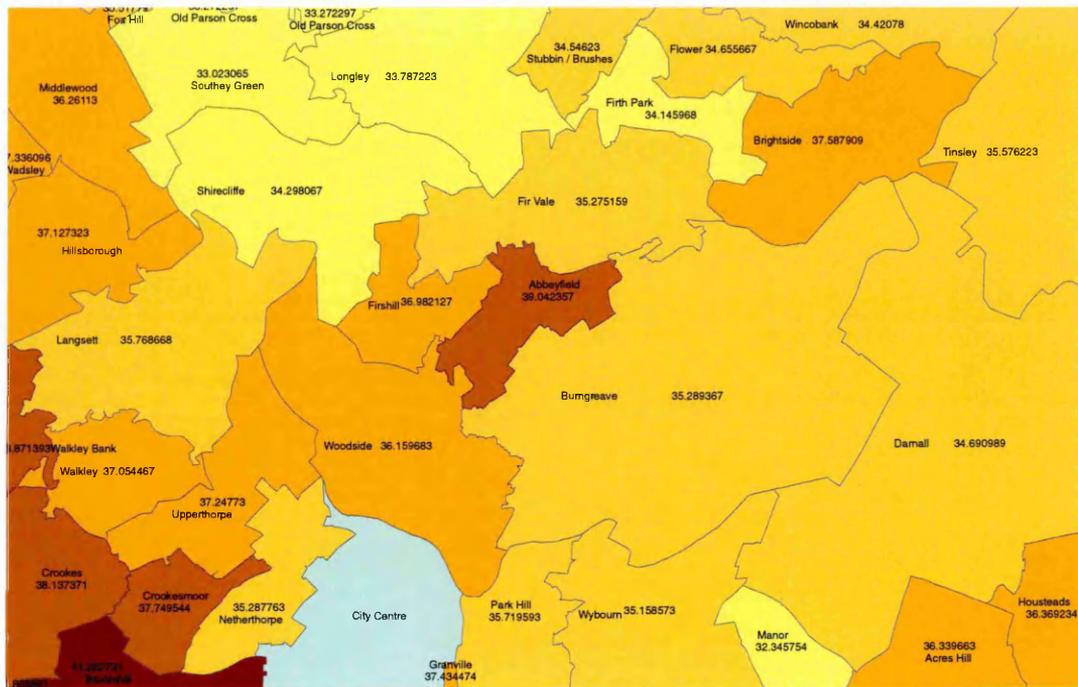
	32.345754 - 34.307050
	34.307051 - 35.976887
	35.976888 - 37.620011
	37.620012 - 39.928662
	39.928663 - 43.101045

Map 5.1. The distribution of collective efficacy across Sheffield



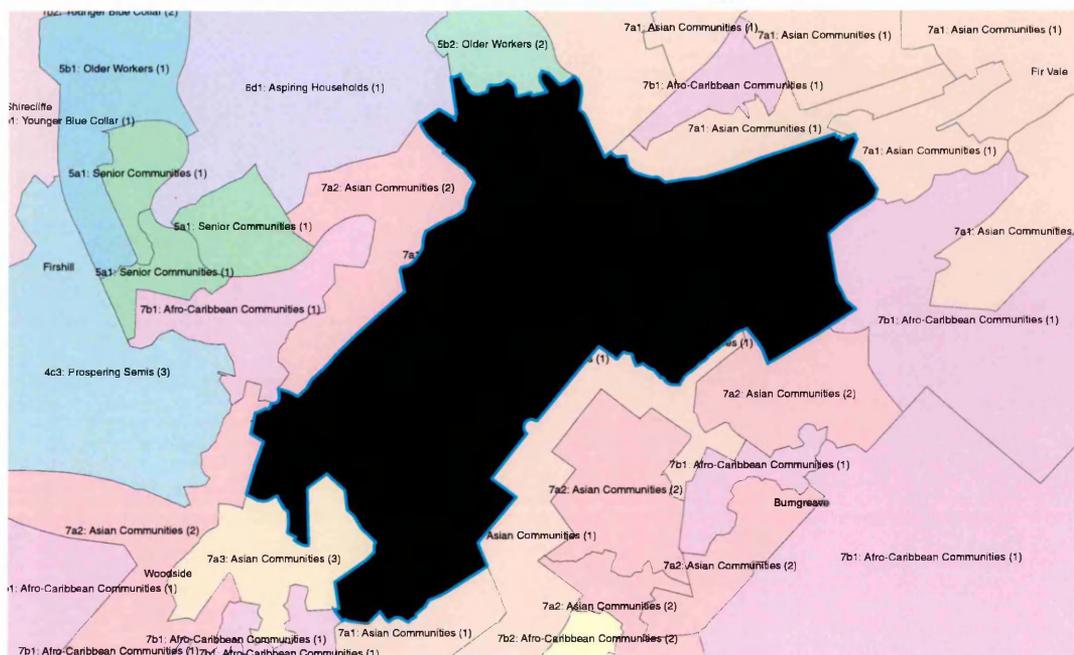
As can be seen from Map 5.1 there appears to be stronger collective efficacy displayed to the West of the city but there are indications that strong social cohesion appears in other pockets of neighbourhoods across the city. The blue area in the centre of the map is City centre neighbourhood.

## Map 5.2. Collective efficacy 'oasis' Abbeyfield



The Abbeyfield neighbourhood has a strong collective efficacy score, when surrounding neighbourhoods had lower scores. As the data is aggregated down to output area level, the Abbeyfield neighbourhood characteristics such as demography can be examined as displayed in Map 5.3.

**Map 5.3. Demographic characteristics of the Abbeyfield neighbourhood.<sup>81</sup>**



Map 5.3 indicates this area of strong collective efficacy has a predominant Asian population. There are three classifications of Asian ethnicity within this demographic data set details of which are described in Figures 5.16, 5.17 and 5.18.

<sup>81</sup>All demographic classifications including Figures 5.16, 5.17 and 5.18 were provided by Dr. Dan Vickers, University of Sheffield, as part of his own PhD, funded by the Office of National statistics. These classifications and their geographical location will be superseded in 2012 with the release of the 2011 census information.

**Figure 5.16. The demographic description of the Asian community (7a1).**

**Subgroup 7a1: Asian Communities (1)**

The members of this subgroup can mainly be found in England, with concentrations around Birmingham. There is one ward, Daneshouse with Stoneyholme in the North-West, that has all its output areas classified in this subgroup. There are 6 other wards that have 80% or more including Bradford Moor and University in Yorkshire and the Humber, Belgrave and Latimer in the East-Midlands, Foleshill and Small Heath in the West-Midlands, Whitefield in the North-West and Dallow in the East of England. Within this subgroup:

The variable with proportions far below the national average is<sup>1</sup>

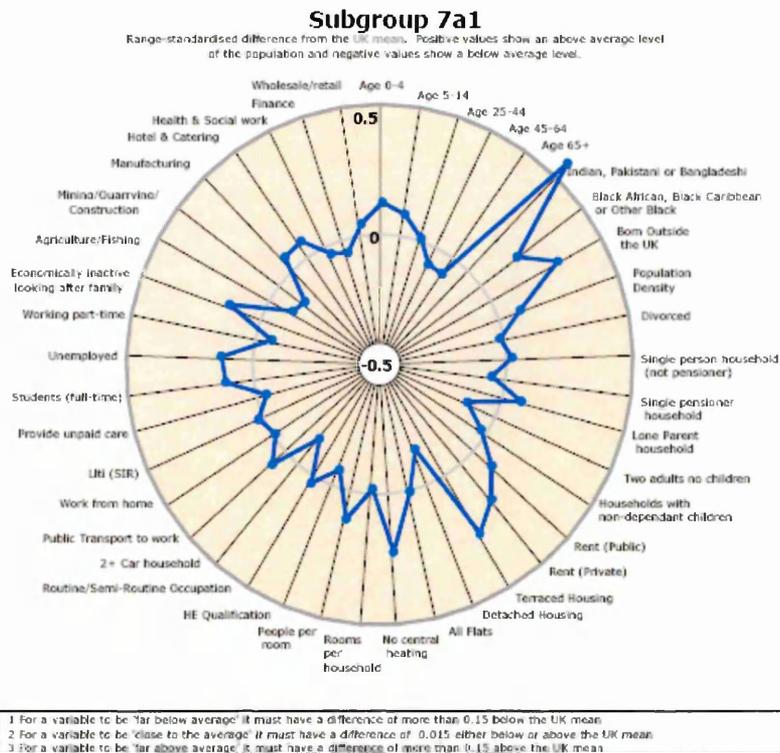
- Detached Housing

The variables with proportions close to the national average are<sup>2</sup>

- Rooms per household
- Age 25-44
- Work from home

The variables with proportions far above the national average are<sup>3</sup>

- Students (full-time)
- Unemployed
- Economically inactive looking after family
- Black African, Black Caribbean or Other Black
- Rent (Private)
- No central heating
- Terraced Housing
- Born Outside the UK
- Indian, Pakistani or Bangladeshi



**Figure 5.17. The demographic description of the Asian community (7a2).**

**Subgroup 7a2: Asian Communities (2)**

The members of this subgroup can mainly be found in England, with concentrations around Birmingham and London. There is one ward, Micklefield in the South-East, that has 72% of its output areas classified in this subgroup. There are 6 other wards that have 50% or more including Becontree, Burnt Oak, Higham Hill and St Helier in London, Burnage in the North-West and Northwell in the East of England. Within this subgroup:

The variable with proportions far below the national average is<sup>1</sup>

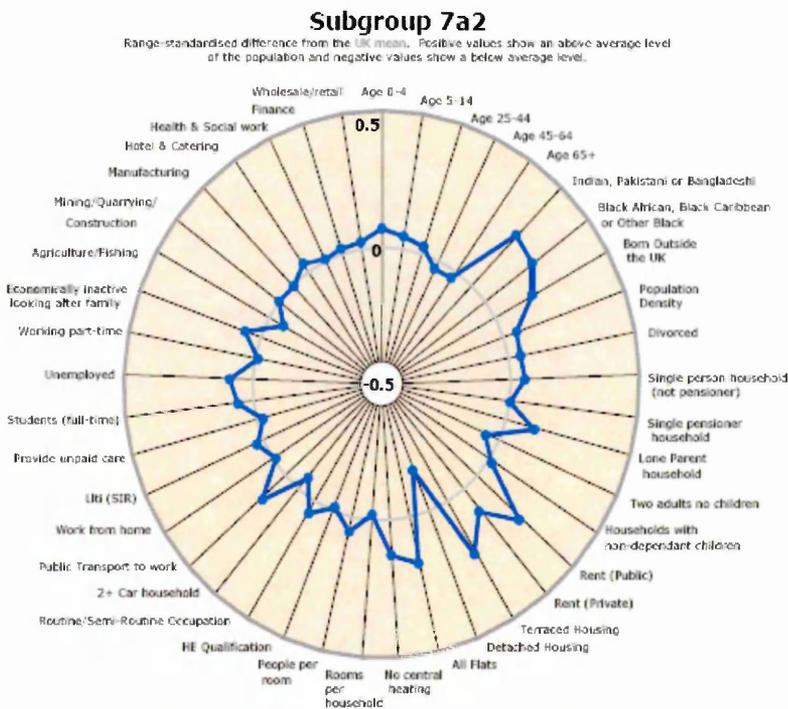
- Detached Housing

The variables with proportions close to the national average are<sup>2</sup>

- Manufacturing employment
- Mining/Quarrying/Construction employment
- Health and Social work employment
- Single pensioner household
- Households with non-dependant children

The variables with proportions far above the national average are<sup>3</sup>

- All Flats
- Born Outside the UK
- Terraced Housing
- Rent (Public)
- Black African, Black Caribbean or Other Black
- Indian, Pakistani or Bangladeshi



1 For a variable to be 'far below average' it must have a difference of more than 0.15 below the UK mean.  
 2 For a variable to be 'close to the average' it must have a difference of 0.015 either below or above the UK mean.  
 3 For a variable to be 'far above average' it must have a difference of more than 0.15 above the UK mean.

**Figure 5.18. The demographic description of the Asian community (7a3).**

**Subgroup 7a3: Asian Communities (3)**

The members of this subgroup can be found in areas of concentration in London. There is one ward, Newbury in London, that has 92% of its output areas classified in this subgroup. There are 12 other wards that have 80% or more including Cranbrook, Edgware, Forest, Goodmayes, Graveney, Lady Margaret, Parivale, Queensbury, Roxeth, Seven Kings and West Thornton in London and Vicarage in the East of England. Within this subgroup:

The variable with proportions far below the national average is<sup>1</sup>

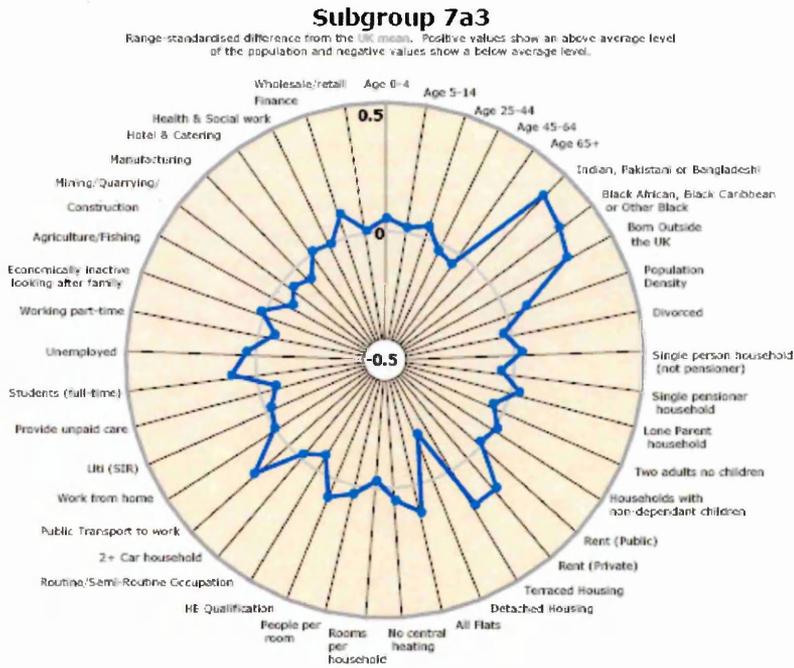
- Detached Housing

The variables with proportions close to the national average are<sup>2</sup>

- Rooms per household
- Liti (SIR)
- Health and Social work employment
- Rent (Public)
- Wholesale/retail trade employment
- 2+ Car household
- Hotel & Catering employment

The variables with proportions far above the national average are<sup>3</sup>

- All Flats
- Rent (Private)
- Terraced Housing
- Public Transport to work
- Born Outside the UK
- Black African, Black Caribbean or Other Black
- Indian, Pakistani or Bangladeshi

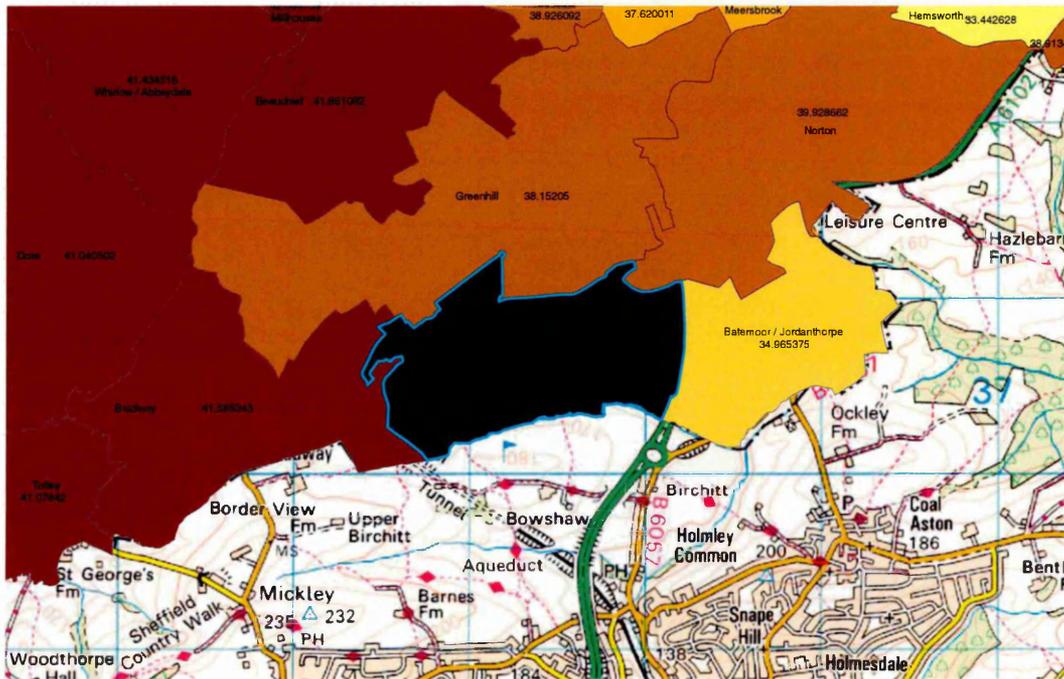


1 For a variable to be 'far below average' it must have a difference of more than 0.15 below the UK mean.  
 2 For a variable to be 'close to the average' it must have a difference of 0.015 either below or above the UK mean.  
 3 For a variable to be 'far above average' it must have a difference of more than 0.15 above the UK mean.

As can be seen in Figures 5.16, 5.17 and 5.18 the data displayed in Map 5.3 is reflected similarly in each of the 41 classifications shown within the range charts. The prominent feature of each of the Figures is that of the ethnicity type which shows Indian, Pakistani and Bangladeshi which makes up the predominant part of the Asian community.

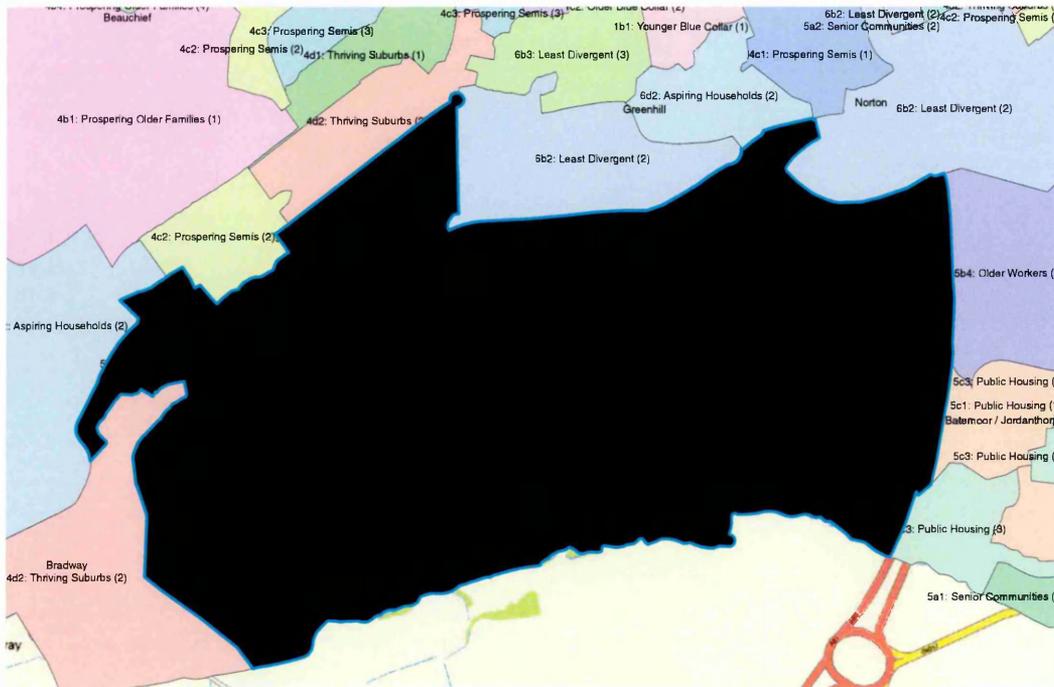
Another 'oasis' type of demographic examination is now conducted at the opposite end of the scale looking at a low collective efficacy area surrounded by other neighbourhoods displaying strong collective efficacy. The neighbourhood in question is Lowedges which is in the South of the city and is shown in Map 5.4.

**Map 5.4. Collective efficacy oasis, Lowedges.**



Map 5.5 displays the demographic profile of the population of the Lowedges neighbourhood.

**Map 5.5. Demographic characteristics of the Lowedges neighbourhood.**



The diverse demographic groups listed in the Lowedges neighbourhood are senior communities (category 1), older workers (categories 1 to 4) and public housing (category 3).

The common key features that appear across all these demographic categories is that there is a higher than the national average level of social housing. The examination of Abbeyfield and Lowedges in these two examples raises some interesting questions which further data analysis may quantify:

- Does a neighbourhood made up of a single ethnicity, i.e. Asian in the case of Abbeyfield, promote strong collective efficacy?
- Does a neighbourhood such as Lowedges that has a fragmented and diverse community have difficulty in developing collective efficacy?
- Does strong or weak collective efficacy affect rates of crime and disorder in a particular neighbourhood?

Similar questions were posed by Sampson (2009:14): 'If affluent residents use a neighbourhood's racial composition as a gauge for the level or seriousness of disorder, unconsciously or not, they may disinvest in predominantly minority areas or move out; such action would tend to increase physical disorder in those neighbourhoods'. Wikstrom (2009:61) expands this when examining the construction of a neighbourhood area: 'Is

the putative explanatory role of perceived disorder (assessed seriousness of disorder) specific to particular kinds of communities? Are there different causes of neighbourhood change in different kinds of communities?’

As Maps 5.2, 5.3, 5.4 and 5.5 show the demographic make-up of a community appears to be correlated to levels of collective efficacy across Sheffield. The strong collective efficacy displayed in Abbeyfield may be attributable to the fact that there is a community made up of a similar demographic type. Conversely the demographic make-up of Lowedges which showed weak collective efficacy had a more diverse community. Sampson (2009) argues that his research suggests that increased diversity and heterogeneity in a community might reduce levels of crime and disorder. If that is the case in the United States then the model doesn't appear to fit with these Sheffield findings.

Wikstrom (2009:62) counters Sampson's argument which tends to support the Sheffield analysis: In European countries like Sweden the neighbourhoods with the highest levels of disorder and crime are often neighbourhoods with the highest number of immigrant groups (in some cases well over 100 different nationalities live in a single neighbourhood), which seems to contradict Sampson's Chicago findings that increased ethnic diversity is related to less disorder and crime. Cross-national study of these relationships may help elucidate more general underlying social processes.

These two simplified examples demonstrate from a geographic perspective how the survey data, when combined with demographic data, can examine certain neighbourhoods in a collective efficacy context. The use of demography in criminological research has consistently shown that it plays an important part influencing what happens within a social context in relation to crime and disorder.

## **Links between collective efficacy, crime and ASB**

### **Preparing the data**

Collective efficacy scores for each neighbourhood in Sheffield were created for each of the questions assessed to measure collective efficacy, and an overall collective efficacy score for each neighbourhood was created. When these collective efficacy variables were tested for normality, the Kolmogorov-Smirnov statistic showed that most were not sufficiently normally distributed to allow subsequent parametric statistical tests. Therefore, each of the collective efficacy variables were transformed using the Log10 function, to create normally-distributed variables. Subsequent statistical tests used these transformed variables.

## Collective efficacy as a predictor of crime and ASB

A series of linear regression tests were completed using the overall collective efficacy variable as the independent variable and the different crime and ASB variables as dependent variables. This included a test of the overall crime variable, which was based on the combination of the 8 main crime categories identified in previous work. The regression between the overall collective efficacy variable and the overall crime variable was highly significant ( $R^2 = 0.474$ ,  $df = 98$ ,  $p < 0.001$ ). This indicates that the overall collective efficacy variable can account for 47 percent of the variation in the overall crime variable, and collective efficacy is a significant predictor of overall crime. Linear regression tests were also performed using individual crime category variables as the dependent variable. The  $R^2$  statistic and significance of these tests are shown in Table 5.24.

**Table 5.24. Regressions between collective efficacy and crime variables**

Crime category	R <sup>2</sup> statistic	Significance (p value)
Burglary – other	0.32	<0.001
Criminal damage to vehicle	0.60	<0.001
Other miscellaneous thefts	0.20	<0.001
Theft from motor vehicle	0.015	>0.05
Assault	0.65	<0.001
Burglary dwelling	0.14	<0.001
Criminal damage to dwelling	0.79	<0.001
Theft of motor vehicle	0.54	<0.001
Antisocial behaviour	0.68	<0.001

The  $R^2$  statistic indicates the proportion of the variation in the dependent variable (in Table 5.24, these are the crime categories) that can be accounted for by the overall collective efficacy variable. There are some differences in how strong a predictor

collective efficacy is, as measured by the overall variable for different crime types. No significant link was found between collective efficacy and theft from motor vehicle offences, and this was the only crime type that was not significantly linked to collective efficacy.

Also noticeably, the extent to which collective efficacy was able to account for variation in criminal damage to dwelling offences was very high – 79 percent. This indicates an extremely strong link between collective efficacy and criminal damage to dwellings. The relationship is a negative one in that preliminary data tests showed that the stronger that collective efficacy is, crime and ASB appeared to manifest itself in relatively low levels. But this statement is a generalisation across the neighbourhoods of Sheffield so a selective focus was required on areas that showed potential to buck the empirical trend.

**Identification of neighbourhoods that don't fit the collective efficacy predictive model**

A linear regression was carried out to assess how well overall collective efficacy predicted overall crime rates in each neighbourhood in Sheffield. This showed that collective efficacy was a significant predictor of overall crime (see Table 5.24). Casewise diagnostics were carried out during the regression test to identify cases with large residuals, where their observed statistic for level of crime was significantly different from the predicted statistic based on the collective efficacy predictive model.

Residual statistics were standardised, and cases with a standardised residual of +/-2 or more were highlighted. Table 5.25 shows those cases with standardised residuals of +/- 2 or more:

**Table 5.25. Neighbourhoods with standardised residuals that are +/-2 or more**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	All crime (log)	Predicted Value	Residual
1 Whamcliffe Side	-2.732	2.03	2.4758	-.44238
2 Stannington	-2.246	2.09	2.4561	-.36372
97 Broomhill	2.666	2.71	2.2760	.43176
98 Highfield	2.696	3.00	2.5599	.43655
99 Park Hill	3.624	3.19	2.6022	.58676

a Dependent Variable: All crime (log)

A positive residual indicates the observed level of crime was higher than that predicted. A negative residual indicates the observed level of crime was lower than that predicted. Linear regression tests and casewise diagnostics were also carried out to analyse the relationship between collective efficacy and the different categories of crime included in this research. Tables 5.26 to 5.33 inclusive show those cases that weren't well predicted by the regression models.

**Table 5.26. Relationship measure between collective efficacy and burglary other**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Burglary other, transformed	Predicted Value	Residual
4 Woodland View	-2.280	1.22	1.6539	-.42916
21 Walkley	-2.151	1.16	1.5649	-.40496
38 Walkley Bank	-2.040	1.09	1.4742	-.38402
95 Norton	2.017	1.80	1.4234	.37973
96 Burngreave	2.830	2.19	1.6573	.53263
98 Highfield	2.341	2.04	1.5987	.44063
99 Park Hill	2.547	2.11	1.6343	.47949

a Dependent Variable: Burglary other, transformed

**Table 5.27. Relationship measure between collective efficacy and criminal damage to vehicle**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Criminal damage to vehicle, transformed	Predicted Value	Residual
1 Whamcliffe Side	-2.824	1.20	1.6166	-.41681
94 Granville	2.490	2.01	1.6409	.36749
99 Park Hill	2.617	2.15	1.7651	.38628

a Dependent Variable: Criminal damage to vehicle, transformed

**Table 5.28. Relationship measure between collective efficacy and other miscellaneous thefts**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Other miscellaneous thefts, transformed	Predicted Value	Residual
1 Wharncliffe Side	-2.289	1.00	1.5656	-.56218
71 Tinsley	2.107	2.19	1.6740	.51764
96 Burngreave	2.109	2.21	1.6886	.51796
97 Broomhill	2.540	2.03	1.4058	.62392
98 Highfield	2.557	2.26	1.6329	.62798
99 Park Hill	3.572	2.54	1.6668	.87735

a Dependent Variable: Other miscellaneous thefts, transformed

**Theft from motor vehicle**

The regression test between collective efficacy and theft from motor vehicle showed that collective efficacy was not a significant predictor of this type of crime.

**Table 5.29. Relationship measure between collective efficacy and assault**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Assault, transformed	Predicted Value	Residual
48 Endcliffe	-2.223	.99	1.4124	-.42060
95 Norton	2.099	1.55	1.1528	.39717
97 Broomhill	2.039	1.41	1.0283	.38565
98 Highfield	3.424	2.15	1.4986	.64768
99 Park Hill	2.971	2.13	1.5688	.56216

a Dependent Variable: Assault, transformed

**Table 5.30. Relationship measure between collective efficacy and burglary dwelling**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Burglary dwelling, transformed	Predicted Value	Residual
1 Wharnccliffe Side	-2.611	.90	1.5352	-.63648
3 Stocksbridge	-2.262	1.07	1.6166	-.55137
5 Deepcar	-2.404	.98	1.5685	-.58608
82 Crookesmoor	2.189	2.07	1.5364	.53376
97 Broomhill	2.179	1.94	1.4080	.53112

a Dependent Variable: Burglary dwelling, transformed

**Table 5.31. Relationship measure between collective efficacy and criminal damage to dwelling**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Criminal damage to dwelling, transformed	Predicted Value	Residual
48 Endcliffe	-2.089	.97	1.4194	-.44551
69 Birley	2.093	1.89	1.4398	.44644
81 Rural Area	-3.350	.24	.9591	-.71441

a Dependent Variable: Criminal damage to dwelling, transformed

**Table 5.32. Relationship measure between collective efficacy and theft of motor vehicle**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Theft of motor vehicle, transformed	Predicted Value	Residual
15 Lowedges	-2.281	1.14	1.5863	-.44177
25 Whirlow/Abbeydale	-2.388	.49	.9549	-.46250
94 Granville	2.058	1.67	1.2670	.39875
97 Broomhill	2.174	1.39	.9661	.42117
99 Park Hill	2.707	1.94	1.4112	.52433

a Dependent Variable: Theft of motor vehicle, transformed

**Table 5.33. Relationship measure between collective efficacy and ASB**

**Casewise Diagnostics(a)**

Case Number	Std. Residual	Antisocial Behaviour, transformed	Predicted Value	Residual
5 Deepcar	-2.322	1.81	2.1513	-.33983
41 Crookes	-2.084	1.74	2.0498	-.30493
48 Endcliffe	-2.754	1.72	2.1233	-.40301
81 Rural area	2.264	2.22	1.8893	.33128
99 Park Hill	3.343	2.74	2.2536	.48926

a Dependent Variable: Antisocial Behaviour, transformed

Tables 5.26 to 5.33 show neighbourhoods in Sheffield, when examining specific crime categories that buck the trend of the collective efficacy variable in the Sheffield neighbourhoods being able to significantly predict crime and ASB. This is important when examining the Sheffield neighbourhoods many of which, to the general population or residents living within them have a certain stigma or a view that they are 'better' than some other neighbourhoods. The casewise diagnostic tests allow in the case of collective efficacy, to examine if it can predict general crime in a neighbourhood consistently and it has been shown that the variable does have its limitations for certain types of crime.

## **The introduction of the 2010 Indices of Multiple Deprivation (IMD) data**

This data was considered much later in the overall research process. It was not analysed with the other data as it was considered that the Sheffield Neighbourhood Survey would produce more relevant localised data allowing the identification of neighbourhoods that bucked the empirical evidence available at the time. The late introduction of the IMD data should not be seen as an attempt to 'plug a gap' to meet a need for the manner in which much social science experiments are conducted. It should be viewed as an experiment within an experiment that utilises the data in a different manner from the rest of the analysis in that access was not available to the original geographic software but an innovative online system was utilised instead (LASOS).

### **How the IMD data was used.**

The Lower Super Output Area (LSOA) deprivation scores for each neighbourhood were examined to develop an average score for each of the Sheffield neighbourhoods and then ranked the neighbourhoods relative to each other. Neighbourhoods of interest were identified. These neighbourhoods were: Park Hill, Gleadless Valley and Highfield - these neighbourhoods showed relatively high satisfaction rates given the high levels of crime and ASB. Old Parson Cross and Darnall - these neighbourhoods showed mid-ranged crime and ASB levels, which was surprising given the low levels of satisfaction amongst residents. Neighbourhoods, based on the 'casewise diagnostics' analysis completed earlier (these were neighbourhoods that showed abnormal levels of crime and ASB, given their collective efficacy that had been calculated from the survey, similar really to reason the neighbourhoods above were of interest): Park Hill, Broomhill and Highfield - crime and ASB in these neighbourhoods was higher than their collective efficacy would have predicted. Wharncliffe Side and Stannington - crime and ASB in these neighbourhoods was lower than their collective efficacy would have predicted.

**Rankings of the Sheffield neighbourhoods that didn't fit the predictive collective efficacy model**

Average of IMD - Deprivation Income	Average of IMD - Deprivation - Employment	Average of IMD - Deprivation - Health Deprivation & Disability	Average of IMD - Deprivation - Education Skills & Training	Average of IMD - Deprivation - Barriers to Housing & Services	Average of IMD - Deprivation - Living Environment	Average of IMD - Deprivation - Income Deprivation affecting Children
7.0	0.0	18.1	5.0	63.6	68.6	16.1
98.9	86.8	95.9	97.9	93.9	79.7	98.9
83.8	88.8	73.7	85.8	90.9	63.6	84.8
55.5	22.2	57.5	67.6	45.4	98.9	87.8
93.9	92.9	91.9	96.9	50.5	90.9	91.9
71.7	83.8	89.8	73.7	92.9	95.9	83.8
17.1	15.1	20.2	20.2	42.4	18.1	10.1
48.4	55.5	33.3	44.4	80.8	28.2	48.4

Wharncliffe Side and Stannington are neighbourhoods whose collective efficacy would forecast relatively high crime and ASB, but the actual statistics don't reflect this (i.e. crime and ASB lower than collective efficacy would predict).

Broomhill, Highfield and Park Hill are neighbourhoods whose collective efficacy would forecast relatively low crime and ASB, but the actual statistics don't reflect this (i.e. crime and ASB higher than collective efficacy would predict).

Park Hill, Gleadless Valley and Highfield are neighbourhoods with high rates of crime and ASB, but the social survey indicated residents were relatively satisfied with where they lived.

The figures in Table 5.34 are the percentile rank of each neighbourhood relative to other neighbourhoods in Sheffield (i.e. where the neighbourhood lies amongst the 100 neighbourhoods). A higher rank indicates the neighbourhood is more deprived. The ranks have been based on averaged (mean average) deprivation scores from the IMD, using scores for the LSOAs in each neighbourhood. Stannington is the only neighbourhood that displays consistently low deprivation scores across the measured categories. Conversely the neighbourhood of Darnall shows high deprivation scores across the categories.

### **Park Hill, Gleadless Valley and Highfield**

The crime and ASB data for these neighbourhoods in the previous analysis displayed very high levels but the Sheffield Neighbourhood survey<sup>82</sup> also revealed that despite such elevated levels there was an indication that people living in these areas reported a high satisfaction level with their neighbourhood. The 2010 IMD data reveals that Park Hill and Gleadless Valley display high levels of deprivation across all the categories. Highfield however shows lower deprivation scores particularly in the employment category (the second best within the selected group of neighbourhoods). Highfield as a neighbourhood 'double bucks the trend' in that considered with the neighbourhoods of Park Hill and Gleadless Valley on the 2010 IMD data, Highfield doesn't fit fully with its original peer group. Highfield is therefore certainly worth further research within a separate environment to examine why it has high crime, high ASB, exceptionally high deprivation within the living environment, strong employment levels but high neighbourhood satisfaction levels.

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<sup>82</sup> Highfield had the second lowest response rate (25.6% from n=225) for this survey.

### **Is demography in Highfield playing a part?**

The demographic characteristics of the Highfield neighbourhood appear to have some influence over its collective efficacy. Earlier in this chapter a suggestion was made about two other Sheffield neighbourhoods, Abbeyfield and Lowedges. When the analysis was viewed from a geographic perspective, checks were made on the demographic consistency of the neighbourhood which revealed that Abbeyfield has a predominantly Asian community. So a check of the demographic characteristics of Highfield were made and it should be noted that this latter analysis was conducted in a totally different fashion using the 2010 IMD data. A check of the same demographic data used in the previous analysis reveals once again that the Highfield community displays the same demographic qualities as the Abbeyfield community, they are both predominantly Asian in make-up.

### **Old Parson Cross and Darnall**

Both these neighbourhoods displayed mid-ranged levels of crime and ASB and low satisfaction rates within the Sheffield Neighbourhood survey. The 2010 IMD data possibly throws some light on the low satisfaction levels with the neighbourhood with high deprivation being displayed across all the considered categories. It appears that the 2010 IMD data has a degree of correlation with the Sheffield Neighbourhood survey although there has been a three year time span difference between the two surveys.

### **Wharnccliffe Side and Stannington**

These neighbourhoods display low levels of collective efficacy which would suggest higher levels of crime and ASB. But as has been previously seen these neighbourhoods display low levels of crime and ASB and when looking at the 2010 IMD data the respective areas are not relatively highly deprived. Conversely Stannington doesn't appear to have strong collective efficacy. The potential answer once again points towards the demographic make-up of the neighbourhood with Stannington displaying a diverse and fragmented profile, similar to that of Lowedges.

### **Interim data conclusions**

All of this analysis work was completed whilst at the University of Sheffield under a post graduate research programme of work. It became clear that this and other work completed at this institution would be of far more relevance in allying it with other empirical work that was more socially grounded and that had the ability to develop usable policies for authorities such as Sheffield City Council, South Yorkshire Police and potentially for policing across the United Kingdom and beyond. Having utilised a

qualitative survey commissioned by Sheffield City Council and connecting it to the quantitative data owned by the police, a realisation emerged that there was far greater potential to learn about collective efficacy.

This data analysis took a pragmatic approach to using simple crime, ASB and survey data and applying various statistical and geographical modelling regimes to try and gauge which neighbourhoods in the city of Sheffield displayed strong or weak traits of collective efficacy when the data were correlated against each other. The 2007 IMD data was not initially considered within the analysis due to the fact that the correlations between the crime, ASB and survey data started to reveal findings that hadn't previously been known within Sheffield. The 2010 IMD data was analysed and appeared to confirm the results of the other statistical testing that has taken place in that there are certain neighbourhoods that 'buck the trend' when considering how satisfied people are (or not) when examining levels of crime and ASB in their specific locale. This additional analysis reinforces the fact as far as gauging any sort of social cohesion within a predefined geographical area is concerned, there is value in allying quantitative with qualitative information. A nine month data collection plan was developed to harvest data which having read empirical research was thought to have 'new research' potential. The initial three general headings of data considered were drugs, robbery and violence. The early results of this correlative testing revealed that the three crime types were strongly correlated to each other across all of the Sheffield 100 neighbourhoods. The weakest correlation was between drugs and robbery. What this meant for the research within Sheffield was that if one crime type occurred there was a strong propensity for the other two crimes to occur within close proximity.

At this point in the analysis, the issues of outliers was considered. Simply put outliers are data which within certain boundaries, such as Sheffield's 100 neighbourhood structure, that can skew or adversely affect overall data analysis results and potentially bring even further confusion within complicated statistical tests.

It was noted statistically that the city centre neighbourhood (numbered 100) due to its high concentration of recorded crime was skewing the distribution of the rest of the data. A similar statistical test for ASB data was conducted which revealed a similar result. Geographical and temporal distribution testing of this statistical data was then carried out in an attempt to explain why this phenomenon occurred within this small central neighbourhood. Its conclusion was that this data was driven largely by the night time economy of the city centre, licensed premises, night clubs etc. This particular neighbourhood was excluded from any further participation within the analysis.

The crime and ASB data was then measured against population counts within Sheffield. An explanation was given as to how population was measured and then a simple ranked count of the crime and ASB data was measured against it and presented in a tabular display.

Correlation tests of the three offence categories when allied to population counts were conducted to see if this affected the strengths of correlation effects within the data. There was no indicated change in the correlation of any of the categories. The introduction of the survey data was then developed. This posed certain problems in connecting it to the crime and ASB data and also to the neighbourhood boundary qualifiers. The attempt at this stage was to try and make a large considered data set in SPSS from different sources and subject it to a series of statistical and geographical tests. The survey data proved to be a little difficult in that the available responses to some of the questions were not uniform in style and this sometimes compounded difficulties within the analysis to make lucid interpretations of what the data was suggesting.

The key result that emerged from this part of the analysis was that ASB tended to be a better predictor of neighbourhood satisfaction of survey respondents across the neighbourhoods than the crime data. This from a research perspective has clear significance and to understand its future ramifications for the police, an explanation has to be given as to how this ASB data comes to be collected.

South Yorkshire Police archives its crime data on server systems and keeps its electronic records for analysis, both cross sectional and longitudinal. Its ASB data forms part of its command and control (PROCAD system) and due to the volume of data recorded by the police is held for a maximum of thirteen months and then effectively dumped making it un-retrievable for any sort of analysis. Bearing in mind what this early research unearthed, South Yorkshire Police would do well to consider how they might extract the important pieces of the data from PROCAD and storing it effectively for future use.

With the new knowledge of the potential importance of the ASB data, further correlation tests were carried out with the crime, ASB and survey data. More interesting findings were quickly revealed that bucked the known empirical researched trend. (High crime/ASB=Low Satisfaction, Low crime/ASB=High Satisfaction) Through this thorough testing of the data across the crime categories of drugs, robbery and violence it became apparent that these categories, which had been chosen after empirical consideration, did not do justice to the Sheffield research site.

A change of direction was decided upon. Fortunately during the data mining process all recorded crimes had been harvested which made it relatively easy to expand the analysis of the data. But in order to make the analysis manageable across the research site, a certain amount of 'top-slicing' of the most prominent crimes<sup>83</sup> had to take place. The crime categories examined were burglary dwelling, burglary other, criminal damage to dwelling, criminal damage to vehicles, theft from motor vehicle, theft of motor vehicle, assault occasioning actual bodily harm and other miscellaneous theft.

When examined against the ASB data some interesting correlative findings were displayed. As was expected all the responses between the crime and ASB data were positively correlated against each other across the neighbourhoods within the research site. The next step within the analysis was to connect the crime and ASB categories with the responses from the survey data. The survey did not focus directly on issues of collective efficacy as it was not designed for that purpose. But there were questions<sup>84</sup> within the survey that had the propensity, by proxy, to add to the empirical evidence. The qualitative data (CMS and ASB data) was then joined to some of the responses from the quantitative data (Neighbourhood survey). Using a series of statistical tests for the data across the research site and developing a scoring system which could be applied to each of the neighbourhoods a spatial representation was devised which showed across Sheffield the areas that displayed varying levels of collective efficacy.<sup>85</sup>

The range of collective efficacy scores (five in total) was geographically displayed across the Sheffield neighbourhoods. The research was roughly divided, as displayed in Map 5.1, east to west which, to a degree, replicates other types of spatial data distribution such as deprivation and crime. It is interesting to note that the policing area across the city has also subsequently been divided in an east/west fashion<sup>86</sup>

Such measures of collective efficacy are important to consider even though the results raised extra questions which to date haven't been answered, but due to its pictorial representation as opposed to a statistical table, two neighbourhoods immediately came to the fore as worthy of inspection. The neighbourhoods of Abbeyfield and Lowedges displayed strong and weak collective efficacy scores respectively. The interesting fact was not the levels of score on an individual basis, but where they each sat

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<sup>83</sup> Eight crimes in total were considered at this stage of the analysis.

<sup>84</sup> Eleven survey questions were thought to be useful in determining some measure of collective efficacy.

<sup>85</sup> Map 5.1 displays the overall spatial distribution across the research site.

<sup>86</sup>As of 01/04/2012, the Sheffield policing area has been subjected to yet another restructure which has produced seven safer neighbourhood areas, spread across two sectors, East and West. The new safer neighbourhood areas are now a co-terminus match for Sheffield City Councils community assembly areas.

geographically, each being surrounded by neighbourhoods that displayed potentially converse characteristics i.e. low and high collective efficacy scores, hence the 'oasis' analogy. The next inspection of the data attempted to determine why the maps displayed the data in this way and so the demographic construction of the neighbourhoods was investigated as one potential explanatory factor.

The demographic data indicated that Abbeyfield, which displayed either directly or by proxy strong collective efficacy had a predominantly Asian community. Lowedges appeared to display a very diverse and fragmented community in its demographic content and displayed levels of low collective efficacy.

The introduction of the 2010 IMD data to the analysis pool seemed to confirm and strengthen the previous geographic findings that collective efficacy and the demographic structure of a neighbourhood within Sheffield might have had some reciprocal influence. It became apparent that the Asian communities in both Abbeyfield and Highfield live in what are considered to be difficult environments and are plagued by high levels of crime and ASB, but they seem satisfied with their surroundings. It has also been shown that where a neighbourhood in Sheffield has a diverse population it potentially suffers from low levels of collective efficacy. The observations in the neighbourhoods of interest gave some strong indications of the value of shaping the research towards examining further how people and their social conditions influence patterns of crime, anti-social behaviour and social cohesion. There is clearly merit in looking at how deprivation affects a neighbourhood and gives a sharp insight towards completing a more rounded picture of what might assist the police for example in delivering a more targeted service to a particular neighbourhood.

To test this further with the knowledge that collective efficacy was a significant predictor of both crime and ASB within the city it was decided to try and find within the data neighbourhoods that didn't fit the collective efficacy prediction model. Across many of the neighbourhoods, when measured against the selected crime categories and ASB, the data frequently did not fit the predicted model and once again this offers further opportunities for research to unearth the contributory social factors that shape neighbourhoods in this way.

## **Chapter Six: The Sheffield Research Findings**

### **Introduction**

This chapter, divided into three parts, reviews the research conducted and presented within this thesis and takes account of what has been discovered within the Sheffield neighbourhood research site.

Part one examines the implications for policing and governance in Sheffield within the overall research context. The time span during which this research has been conducted has seen many changes in policing practice, much of which has been previously referred to. But even as this chapter has been written, continuing changes to the way neighbourhoods in Sheffield are policed have taken place and, it would appear, will continue to do so for the foreseeable future. Some emphasis is placed in this part on the use of geography and geographic information systems, not only within the research that has been conducted, but also within the organisation of South Yorkshire Police. This first part will therefore reflect on the research that has been conducted and then make further comment about how Sheffield might be policed in the future and how this research could influence the shape of future policing within the city.

The second part looks at the implications of this research within a broader, national context. It is based on an understanding that research, findings and policy implications cannot be applied to a 'one size fits all' model and that there will always be the need to adapt to local situations when considering how neighbourhood policing can be effectively delivered. Consideration will be given as to whether the findings within Sheffield could be applied elsewhere and if the research techniques employed in Sheffield could be utilised in a wider variety of neighbourhoods. The third and final part considers how this research advances the current theoretical debate, especially when examining ASB within a neighbourhood environment.

### **Implications for policing and governance in Sheffield**

The city of Sheffield and the data and information used within its geographic perimeters has produced, during this research, some findings which challenge the empirical findings of previous research examining collective efficacy and social capital. It is important to contemplate how some of these findings came to fruition as the research progressed through a six year timeline.

This research has pointed to the academic prowess of Professor Robert Sampson. This chapter continues to utilise his work for inspiration and knowledge, albeit acknowledging the specifics of the United States context, including his recently published volume (Great

American City – Chicago and The Enduring Neighbourhood Effect, 2012). Sampson, within his work and as a social scientist understands the value of pure statistical methodology within research but he is never afraid to look beyond his own research techniques and approaches and he understands the importance of blending statistical techniques with geographic outcomes to get his message across to a wider audience, beyond the academic community. This does not detract from the quality of his work and although this research is not as advanced in technique or style as Sampson's it has purposely been influenced by his methodological ideas for the use of geography in social science research.

It is clear, therefore, that if we are to learn about crime, ASB, the physicalities of landscape, the control of public spaces and the people that occupy neighbourhoods then geography is a useful discipline to refer to within a social science context. I now argue for the continued use of geography within social science research and demonstrate how within the Sheffield research site and South Yorkshire Police's organisational environment, geography and the use of geographic information systems are key to genuinely understanding the concept of neighbourhoods and the approach that public sector bodies, such as police forces, might adopt in providing public services therein.

Sampson (2012, p.70.) gives decisive comment as to how he approached the display of his research findings:

'...this book is largely "coefficient free" and nontechnical. In fact there are no tables. At the same time, data are important to see and I do not believe readers should simply trust authors. Herein lies the dilemma of presenting scholarly and at time densely researched findings in an accessible way. My solution in this book is include for the reader a large number of maps and figures that are meant to portray visually the theoretical ideas and theoretical regularities that have been vetted back and forth with more complicated methods.'

Unlike Sampson, this research could not abstain from producing tables but the aim is to complement the maps and explain what the background data is potentially revealing.

## **GIS within South Yorkshire Police – the Sheffield context**

Until 2000, South Yorkshire Police had no real geographic infrastructure across its core data bases but it was known, casting an eye to law enforcement in the US, that such systems potentially had significant roles in examining how crime and incident data were distributed within Sheffield's neighbourhoods. The organisation had to go through a steep learning curve with many people asking why current policing practices had to change and what in fact was GIS? The answer to the second part of the question was best summarised in the following way by Harries (2000, p.92.), who is a recognised leading authority in the field of crime related geographic information systems:

'A GIS is a computerized mapping system that permits information layering to produce detailed descriptions and analyses of relationships among variables'.

Strictly speaking, any system that permits the representation and analysis of geographic information is a geographic information system. The acronym GIS is understood to refer to computer-based software, generally in the form of a few popular proprietary software packages. Although a prominent component of a GIS, proprietary software does not define a GIS.

The available data at that time could only be analysed using spread sheets and had no spatial configuration to them. In short the data was flat and deciphering any sort of contextual neighbourhood meaning was almost impossible. An explanation of the three parts of the acronym G.I.S. briefly indicates how the 'flat' data can be expanded for spatial usage.

'A GIS ... may be summarized as having the following characteristics:

1. 'Geographic': The system is concerned with data relating to geographic scales of measurement, and which are referenced by some coordinate system to locations on the surface of the earth. Other types of information systems may contain details about location, but here spatial objects and their locations are the very building blocks of the system.
2. 'Information': It is possible to use the system to ask questions of the geographic database, obtaining information about the geographic world. This represents the extraction of specific and meaningful information from a diverse collection of data, and is only possible because of the way in which the data are organized into a 'model' of the real world.
3. 'System': This is the environment which allows the data to be managed and questions to be posed. In the most general sense, a GIS need not be automated

(a non-automated example would be a traditional map library), but should be an integrated set of procedures for the input, storage, manipulation and output of geographic. Such a system is most readily achieved by automated means...'  
(Martin, 1996, p 3).

A simple working definition of GIS which has been adhered to throughout this research is the ability to represent, manipulate and analyse crime and other data spatially. As with many aspects of computer technology early GIS development was hampered by the limitations of older computers. Key obstacles included small computer memories, low running speeds, (maps use enormous amounts of memory and high computing speeds) and poor graphical display capabilities. These drawbacks were quickly overcome with the development of personal computers and the streamlining of traditional mainframe systems. This then fed the development of efficient mapping software. But this rapid technological advancement created a theory vacuum: it became easy to manipulate the data and publish to a media format, but there was little questioning of what was being displayed and how established criminal and sociological theories may be applied to what was being succinctly displayed. As previously mentioned by Sampson (2012) much of his theoretical work was recorded elsewhere but the maps and graphs were considered to be important in getting over the key concepts within his work. The origins of GIS in physical geography where theoretical debates are less developed than in other fields of the social sciences may have been another reason it has developed in a relatively atheoretical way. As previously discussed, the physical structure of a neighbourhood is an important consideration alongside its population. This research has shown that physical structures such as open parkland, public space etc. reveal much about a locality when examining crime and disorder.

Within the field of socio-economic studies the most common initial application of GIS was the analysis of data derived from censuses or other area based measures. Typically, according to Martin (1996, p 37), such data were census enumeration districts, travel to work areas, unit postcodes etc. Early and influential systems for mapping census data developed in the United States were DIME (dual independent map encoding) developed for the 1970 census and TIGER (topologically integrated geographic encoding and reference system) developed for the 1990 census. These allowed the generation of a digital base file from which all significant socio-economic areal units could be derived. In the UK, developments came later. This was partly because areal units are much more irregular than in the United States, being defined by a diverse set of features like roads, railways, streams etc. (Martin 1996, p 40). South Yorkshire Police has invested heavily

in its geographic information systems (GIS) and the associated corporate data systems that are allied to it. Since 2000 the organisation has been continually developing leading edge GIS with its software partner ESRI UK Ltd. It is no coincidence that cognisance has been given to the experiences outlined by Harries (1999) and Martin (1996) whilst developing its various GIS programmes. The corporate introduction of GIS into a complex organisational law enforcement agency has not been without its difficulties and has required the involvement of many individuals both inside and outside the organisation, including information technology specialists, academic advisors and senior budget holders at the highest level within the organisation.

South Yorkshire Police currently utilises two GIS products, one desktop based and the other intranet based. The desktop product allows analysts to develop bespoke reports utilising a series of data relative to a specific geographic boundary such as a police beat or a neighbourhood. The intranet product emulates the desktop version but has a predefined dashboard that can be queried by a wide range of employees and provides results across similar geographic arenas. The desktop product has been used extensively within this research and has been applied for the first time in an academic research context. The benefit of using this software within different environments has not yet come to fruition and the policing strategies for the district of Sheffield, as an exemplar, could be determined more by local neighbourhood structure and population content if they emulated some of the research techniques tried within this research. One benefit to come from this research at a localised level has been the aggregation of survey responses, crime data, ASB data, IMD data and demographic data to quickly learn what different population groups think about the neighbourhood in which they live and how the police deliver services within their locality.

The police in Sheffield should not ignore the perspectives of the population they serve and they now regularly canvass the views of the public through their own Your Voice Counts survey. But South Yorkshire Police limit the potential of the survey findings by the way in which the data are analysed and subsequently published within the organisation. The results only extend to simple comparator graphs and tables with drop down filter systems to allow the viewing of the data. There is nothing in the way of a geographic interface that has aggregated different background data to present information that has contextual neighbourhood meaning.

South Yorkshire Police expends considerable resources on its postal survey of residents. In 2011/2012 between quarter one and quarter four the force sent out 78,469 survey packs of which 36,855 were delivered to Sheffield households. The force area response rate was 15.9 per cent giving a confidence interval of 0.8 per cent. The Sheffield city response rate was slightly lower at 13.8 per cent with a confidence interval of 1.3 per cent.<sup>87</sup> But the published result of this work is very limited, although there is a current review<sup>88</sup> examining the way in which such data can be analysed and utilised in an operational arena. What could be achieved by South Yorkshire Police is illustrated by the way the Memphis Police Department<sup>89</sup> in the United States handles its statistical and geographic information and then uses it in a real time operational environment to influence tactical and strategic deployment of its resources. In the Memphis case study the police faced many of the problems that South Yorkshire Police and other forces now experience such as shrinking budgets and smaller work forces. The Memphis Police Department's use of SPSS brings the Memphis crime, incident and demographic data together and then analyses it using robust statistical and mapping methodologies. Front line resources are then moved like anticipatory chess pieces across boundary free policing domains. So their current work and this research work has some similarities which for comparative purposes are displayed in Table 6.1.

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<sup>87</sup> Information obtained from the survey team at South Yorkshire Polices Business Change Directorate.

<sup>88</sup> This author has been interviewed as part of the review process.

<sup>89</sup>[http://www.ibm.com/smarterplanet/us/en/leadership/memphispd/assets/pdf/IBM\\_MemphisPD.pdf](http://www.ibm.com/smarterplanet/us/en/leadership/memphispd/assets/pdf/IBM_MemphisPD.pdf) (accessed 14/08/2012)

**Table 6.1. SPSS and geographical comparisons**

<b>Research</b>	<b>Memphis P.D.</b>	<b>South Yorkshire Police</b>
<b>Utilised SPSS (v.12 single student licence) for statistical modelling of crime, incident, survey and demographic data.</b>	Utilises SPSS (v.20 multi-user network licence) for on the fly statistical modelling of crime, incident, survey and demographic data.	Has SPSS, version not known, for limited use within the business change directorate. Only used occasionally.
<b>Used ESRI UK products to map statistically modelled data (ARC GIS, single user copy).</b>	Uses the whole suite of ESRI US ARC GIS products and development tools to ally its statistically modelled data to real time maps of crimes, incidents and resource locations.	Has and uses many of the ESRI UK products and development tools having spent almost £750k in 12 years. Much of the ESRI US development originally came from SYPOL and ESRI UK joint development initiatives.
<b>Allying statistical and geographical data in robust modelling arenas can give a whole new dimension as to how law enforcement can serve its neighbourhoods better.</b>	Already realised that data used within a criminological context can reap benefits if applied to the correct business culture.	<b><i>South Yorkshire Police not exploring the possibility of utilising the research and Memphis P.D. model, citing technical issues prevent them from working in this way.</i></b>

Table 6.1 clearly displays that, i) the research model works and has some relevance to assisting South Yorkshire Police's working practices, ii) South Yorkshire Police has the software and development skill to emulate the work completed in the Memphis Police Department, iii) South Yorkshire Police has no desire to automate much of its statistical working practices and therefore cannot maintain the position of manual data production indefinitely.

This position that South Yorkshire Police is starting to find itself in does not bode well for the organisation. It clearly wants to work hard for its neighbourhoods but it needs its data and community information to be posited in a much better fashion. If it is not prepared to embrace the use of robust statistical practice that software such as SPSS can offer, present the data in a way that can direct operations like mapping software can and work with other law enforcement agencies like Memphis Police Department to glean best practice then it will become entrenched and backward looking. If greater demands continue to be placed upon local policing, South Yorkshire Police and similar agencies will have to face the harsh reality that its dotted blue line of resources have not been, and will not be, able to cope with demand from the public. If these agencies continue with existing practices that fail to deploy the most effective statistical and geographical modelling practices available, then the proactive and intelligence-led policing of local

neighbourhoods will decline and the police will merely attend on demand<sup>90</sup> and detach themselves even further from the public they purport to serve.

### **The view from the top of the organisation**

So far this chapter has concentrated on the potential routes of making the data work harder and the discussion has touched upon operational and strategic uses of such analytical outcomes. But there has to be managerial expression of control within law enforcement and in South Yorkshire Police the ultimate managerial control ends with the Chief Constable. During almost all of this research, the Chief Constable was Meredydd Hughes who in 2009 found himself in the middle of a nationally televised debate where he gave an insight into his views about disorder within South Yorkshire.

In December 2009 an ITN news team headed by the reporter Steve Douglas produced a series of news articles which were broadcast nationally about ASB and disorder in local communities across the UK.<sup>91</sup> One area of focus was in Doncaster and the context to the articles was one particular family suffering long term ASB from a family who resided across the road. This persistent ASB had led to the family becoming prisoners in their own homes and to emphasise the fact the ITN team erected a series of covert CCTV cameras at the front of the house which captured further damning evidence that was subsequently presented to the Chief Constable. The interview<sup>92</sup> was damaging in relation to South Yorkshire Police's ASB strategies and reputation. The Chief Constable<sup>93</sup> felt it necessary to convey his feelings to the organisation as a whole.

South Yorkshire Police Chief Constable Meredydd Hughes commented;

'We treat complaints about antisocial behaviour very seriously and understand the effects it can have on people's everyday lives. I want to state my support for colleagues who deal with incidents of anti-social behaviour and neighbourhood problems. The Force has constantly supported the families involved in the case shown on ITN this week with a dedicated officer, repeated arrests of suspected offenders, and a number of other

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<sup>90</sup> Colloquially referred to within the police service as 'fire brigading'.

<sup>91</sup><http://stakeholders.ofcom.org.uk/binaries/enforcement/broadcast-bulletins/obb176/issue176.pdf> this web link refers to an OFCOM decision about the televised article. The footage itself is only available on payment of a fee from the ITN archive.

<sup>92</sup> Transcript has been made available in the appendix to this chapter.

<sup>93</sup>[http://vmintranet02u.syp.southyorks.police.uk/newsletter/2010/january/ccsmessagecolleaguesfollow](http://vmintranet02u.syp.southyorks.police.uk/newsletter/2010/january/ccsmessagecolleaguesfollowingitsantisocialbehaviourfeature)  
[ingitsantisocialbehaviourfeature](http://vmintranet02u.syp.southyorks.police.uk/newsletter/2010/january/ccsmessagecolleaguesfollowingitsantisocialbehaviourfeature)

Accessed 19/10/2010 from an internal SYPOL site.

actions. We've investigated 111 incidents of antisocial behaviour in that area, but it takes more than the law alone to resolve such matters'.

Hughes then comments about the general context of his interview;

'Thankfully we have a free Press in this country and we cannot tell them what to broadcast or what to write. All we can do is give them the facts, which we did. If they choose not to report these then it is they who are letting down their audience. I agreed to ITN's interview because it tackled an important issue. All South Yorkshire Police sought was a fair and balanced report. My interview lasted 40 minutes, which was then heavily edited and didn't capture the spirit of the interview or reflect what was said. I urge people not to judge us on the basis of one short piece of film'.

The local Crown Prosecution Service also made comment about its involvement in this particular case. A CPS spokesperson said;

'CPS specialist ASB prosecutors in England and Wales continue to work with police to address the serious issue of ASB in their communities, and where there is sufficient evidence of a crime they will always consider prosecution. In handling one of a number of cases we have dealt with in respect of the Jewell family we apologised and acknowledge that during a trial in January 2008 we failed to use potentially useful evidence. This was an isolated event and we are satisfied that all other cases involving this family have been handled appropriately. We have proceeded to court on five occasions for incidents related to this family since 2006 and there is currently another case under investigation for a breach of an antisocial behaviour order'.

In both the transcript and the nationally broadcasted transmission, it is apparent that the Chief Constable was clearly worried, but at a local level, the police were actually making strenuous attempts to help the victimised family with a varying degree of support mechanisms including regular visits from local community constables and immediate response alarm facilities. Many police officers and support staff members were unhappy with the responses given by the Chief Constable.

The timing of the debate in which the Chief Constable had become embroiled had relevance to this research as the exchange evidenced how South Yorkshire Police had little in the way of clarity with regard to a corporate ASB or disorder strategy or lacked effective leadership in this field. What senior police managers had immediately to hand, in this case, but failed to realise the benefits of, was the data and information that had been generated by South Yorkshire Police's computer systems. There was a plethora of facts available such as the respective family histories surrounding the dispute, previous

housing based misdemeanours, historic incident records and recorded telephone records to cite some information sources that outlined the intricacies of the dispute that would have helped senior police management explain with greater lucidity the corporate stance in dealing with ASB generally and also in this specific case. This demonstrates that, within the organisation, there was a knowledge gap between what was actually happening with ASB issues and the senior police managers' perspective of the issues. A very timely Her Majesty's Inspectorate of Constabulary (HMIC) ASB inspection took place on a force by force basis which bracketed South Yorkshire in the highest group for ASB per 1000 head of population and the findings were published on the 23<sup>rd</sup> of September 2010.<sup>94</sup> On this occasion the Chief Constable was unavailable for comment but an Assistant Chief Constable provided a response to the media. Once again it was felt necessary to issue a statement to the employees of South Yorkshire Police which crystallised the higher management view. This is reproduced below:

Assistant Chief Constable Andy Holt<sup>95</sup> said: 'South Yorkshire Police take antisocial behaviour [ASB] very seriously and we work very hard with all our partners to reduce the number of incidents in the county. For example, we've set up the 101 number with Sheffield City Council where people in Sheffield can report incidents of ASB and non-emergency issues and receive a multi-agency response'.

'We've also been effective in tackling certain crimes that are linked to ASB, including a 20 per cent reduction in criminal damage incidents between April and July 2010 (compared to the same period in 2009)'.

'As with all HMIC reports we will take on any recommendations that they do have to help us continue to improve on these reductions and our service to the public'.

'Between January and August 2010, SYP saw the following reductions in reported incidents of ASB, in comparison to the same period the previous year:

Doncaster: 10.4 per cent reduction

Barnsley: 7.8 per cent reduction

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<sup>94</sup> <http://www.hmic.gov.uk/media/south-yorkshire-anti-social-behaviour-inspection-20100922.pdf>  
Accessed 19/10/2010

<sup>95</sup> Now Deputy Chief Constable of South Yorkshire Police.

Rotherham 8.9 per cent reduction

Sheffield 11.7 per cent reduction

...that's 9,477 fewer incidents across the whole of the county'.

Once again, the focus was on the raw performance data with no cognisance or understanding of why or how the figures for ASB appeared to be getting better and the HMIC work revealed that SYPOL didn't have a cohesive approach to dealing with ASB. In an executive summary to the HMIC work titled 'Stop the rot'<sup>96</sup> an interesting concluding comment connects to the apparent lack of South Yorkshire Police senior management direction with regards to ASB:

'Out of 43 forces, only 22 have IT systems that help them to identify and prioritise repeat calls, at the time of the report being made, and just 16 forces can effectively identify vulnerability. This falls to only 13 forces that can effectively identify those most at risk, repeat vulnerable callers, at the time the call is made. This leads to uncertainty of just what priority ASB should or could be given by police forces. It takes little imagination to understand the potential impact of limited IT systems and of decisions to 'grade out' calls'. (HMIC, 2011, p 11)

The HMIC's view about how ASB could be managed in a more cohesive manner supports the findings of this research.

### **The winds of change**

Organisations like South Yorkshire Police are in an eternal state of flux, with people joining and leaving on an almost daily basis. This happens at the very highest levels of the service including Chief Constable. In a personal interview with this author<sup>97</sup>, the new Chief Constable David Crompton loosely outlined his plans for the policing of neighbourhoods and suggested that the use of geography, as an example of one important tool, should be developed further within the organisation to help South Yorkshire Police better understand the fabric of its communities. The prominence of geography and the use of associative data to someone like the new Chief Constable is an easy connection to make as he has a degree in Geography from Salford University. He understands the use of geography in a criminal and social context. Crompton wrote

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<sup>96</sup> <http://www.hmic.gov.uk/media/stop-the-rot-20100923.pdf> Accessed 19/10/2010

<sup>97</sup> Meeting held in the Chief Constables office on Friday the 20<sup>th</sup> of July 2012.

to all of the staff of South Yorkshire Police and parts of the letter relative to this work are reproduced verbatim below:<sup>98</sup>

'I see the existing footprint as forming an excellent basis upon which to move forwards into the PCC<sup>99</sup> era and for continuing to deliver our hard won performance improvements. With this in mind I want to preserve the contacts we have with councillors and local authority officials and other locally based agencies, in fact those relationships are likely to become even more important in the future than they are now.'

In this paragraph Crompton sets out his intentions with regard to the continued work that needs to be done with other strategic partners in the light of the forthcoming PCC department which will replace the police authority in November 2012. He then turns his attentions to locally delivered policing;

'We need to deliver at district level the functions which have a significant and distinctive local element to them. Safer Neighbourhood Teams are the obvious example of this. We will retain District management teams but their size/structure will require close scrutiny as we move forward. Other functions which must have a predominantly local/community focus should also be delivered via the same model.'

Crompton describes here the delivering of police functions at a local level by frontline officers, but sounds a warning about the top heavy management structures that currently exist. He expands this point further;

'Nevertheless, we must be willing to adapt in order to make the savings which are required of us. For example, we cannot afford to continue with functions which are replicated 4 times throughout the Districts and which have 4 separate supervisory structures. We should aim to ensure that wherever possible supervisory/management structures are at the minimum suitable level to oversee service delivery; this will generally mean one central spine of command. This does not mean to say the staff involved have to be taken off the district but it might involve them not being managed locally. This is not about centralisation or decentralisation, it is about developing a new model that will require us to change traditional working arrangements between District Command and their support/ specialist services that is still one that is driven by the need to support local operational need but at lower cost. It might not be the best example, but all the major

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<sup>98</sup> Crompton, D. (2012) Letter to South Yorkshire Police Staff, Sheffield, South Yorkshire Police.

<sup>99</sup> The Police and Crime Commissioners office replaced that of the Police Authority on the 15<sup>th</sup> of November 2012. The elected official for South Yorkshire is Shaun Wright (see <http://www.southyorkshire-pcc.gov.uk/Home.aspx>) Accessed 13/01/2013

grocery retailers have stores everywhere, however, their support functions are delivered and managed from a very small number of central locations. They manage an operation with a very local footprint but with minimal 'on costs'. This is what we must work to achieve.'

He therefore intimates that he hopes to streamline management structures across the force that will save money but allow modern frontline community policing to exist. His key message to the force crystallises what form the force will take having been shaped by severe fiscal constraints;

'My view is that we have 3 or 4 core principles which should guide the force in making these change, these are;

- Keep local services local
- Maximise locally based operational staff
- Streamline management responsibility
- Maximise regional working and collaboration

The whole point behind looking to change force structures is that we make savings which avoid taking staff out of public facing roles wherever possible. This does not mean that savings cannot be made from these roles, *it simply means we explore all other options first*. I will be asking the Diamond team<sup>100</sup> to take on a focussed piece of work, designed to establish the blueprint for what has to be managed and delivered locally versus the functions which can be delivered in different ways and I want all District and Departmental Commanders to contribute to this work.'

In his short reign at South Yorkshire (since April 2012) Crompton has not been afraid to send several reviews back for further work or to be restarted altogether. His mandate is clear and simple: provide local frontline policing with a thin client managerial structure that allows simple, basic measures of performance.

## **Summary**

This research has applied South Yorkshire Police's data utilising statistical and geographical methods and attempted to use interim findings with the highest levels of police management in the hope that it might in some small way influence the way that Sheffield could be policed. With a reduced budget and a new chief constable in place,

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<sup>100</sup> This team has been responsible for all the forces recent reviews into the organisations various departments.

South Yorkshire Police is starting to ready itself for a new way of policing. The policing district of Sheffield now relies heavily on statistical and geographical performance-related research to drive its tactical and financial operations. Much of the policing data for Sheffield is seen in the overall force data such as the size of the area it has to police. Therefore it has much influence in South Yorkshire Police's overall statistical structure. Sheffield as a research site for this work has revealed some important findings with regards to crime, ASB and the perceptions of local communities about how these problems affect them and the neighbourhood in which they live. South Yorkshire Police has a mechanism, in the form of the Your Voice Counts survey and the crime and ASB data, to examine how they can potentially change their neighbourhood policing model in the light of dwindling resources and financial constraints.

The desire to work with this data must come from the highest level, and ensure that findings are applied in a consistent and appropriate manner that shape policy across the organisation. If a research-driven policing model is introduced, then the individuals that have to work within it need to understand why they are working in such a fashion and the public must know why policing is conducted in such a manner. The new PCC structure will undoubtedly focus upon operational processes and if the police can at least show that they work in such a way that they consider more than demand and statistical levels of crime and ASB in areas which have always been difficult to police then there should be a joint mandate to work towards neighbourhood policing that is methodically thought through and genuinely considers the views of the public who clearly have a great deal to offer in influencing how their local spaces are controlled.

The PCC structure replaces the police authorities and has been brought about by the current government's Police Reform and Social Responsibility Act<sup>101</sup>. A main responsibility of the elected police commissioner will be to ensure that the relevant information as to how areas are policed are published to the public at large so they can see what is happening. The commissioner also has to publish a police and crime plan together with an annual report. This new transparency should allow the public to question how their neighbourhoods are being policed and for those who want to, have a direct voice to the commissioner and the chief constable. The key thrust of the PCC is to have accountability to the public, something which it could be presently argued does not happen and therefore policing of neighbourhoods may lack synchronicity with what is actually required and desired by the public. Operational policing will not be directly

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<sup>101</sup> See <http://services.parliament.uk/bills/2010-11/policereformandsocialresponsibility.html>

governed by the public, but opening up how the police conduct their daily business could start to reveal most of what they do with small levels of finite resources.

This research within the City of Sheffield has examined other theoretical and empirical post-war work with the starting point being that of Wilson and Kelling's (1982) broken window theory. The salience of their work is that they observed and commented upon the interactions of the police, the local residents of the community, offenders and the physical environment in which they operate.

The broken windows theory led this research to the work of many others (Bowling 1999, Sampson 2001, 2004, 2012 Raudenbush 2001, 2004, Taylor 2001, Harcourt 2002 and St.Jean 2007) but it leant heavily on the consistent research of Sampson who was particularly interested in the social cohesion and collective efficacy of neighbourhoods. As Sampson started to publish his findings it triggered this research to look at Sheffield from a statistical and geographical view point (two-tailed), a factor that Sampson had advocated back in 2001. With the advancement of GIS technology and increased computing power to handle data and detailed background maps this research exposed social and police based data which in turn posited some questions that appeared to buck established empirical trends and statistical relationships between neighbourhood characteristics and crime, ASB and collective efficacy outcomes.

The research could have progressed down the track of examining the complicated methodological routines that were conducted to bring these questions to the fore, a sort of thesis within a thesis. But as well as adding to the general empirical debate, the research, it was felt, had to make a connection to the main organisational body that had provided so much of the data i.e. the police service and in doing this the research had to allude to future practical techniques and policies the service might consider in policing neighbourhoods not only in Sheffield but further afield.

This research therefore condensed its analytical data results into a four point paradigm that suggested;

- Determine levels of social cohesion at a neighbourhood level
- Examine what influences strong or poor social cohesion
- Discover at individual levels how people feel about crime and ASB within their personal environments
- Develop and share good urban governance amongst individuals in neighbourhoods and also within authorities that provide key services

The paradigm and its meanings are explained within chapter four of this research but in completing the work it allowed its author to posit the use of such research for;

- Mapping proxy measures of social cohesion, collective efficacy, rates of ASB and perceptions of ASB at the residual residential neighbourhood level in Sheffield and to analyse the patterns and potential causal factors
- To link the said findings to theory (broken windows etc.)
- To identify the interface between these findings and the rationales of policing and governing ASB in Sheffield
- To identify and explore the implications for policing ASB in a 21<sup>st</sup> century Western post-industrial city
- To identify and explore the implications for national policy and international academic understandings of policing

The analytical work conducted suggested that with the application of the paradigm (as a starting position) there is the potential for the police to think about working towards different approaches to crime and ASB rather than the traditional ones that are currently in use. It would be difficult to construe the features of the paradigm as 'theoretical' but at this time there is a greater need and desire to transfer the mechanics and findings of academic research into tangible policing work that accommodates, in this case, the needs of the public and the achievable practices of policing such as accurately identified neighbourhoods that would benefit from genuine long-term, structured police disorder based work.

The second part of this chapter will now show how the advancement of geographic technology, some of which has been used within this research, and the use of crime and ASB information on a national scale could work towards making the public more aware about policing in their neighbourhood, something which the PCC are mandated to promote and act upon if necessary. It also reveals how the incorrect management of data at any level can paint a misleading picture and consolidates the argument for ensuring that the data is robust and fit for purpose. As will be seen the idea of displaying crime and ASB data is laudable but at this time it is being poorly executed.

### **National implications of this research**

In 2010 there was a politically driven impetus for police forces to make their crime and ASB data available to the public at local levels. The Mayor of London, Boris Johnson, was at the forefront of this campaign which was rapidly seized upon by the government.

This impetus spawned a geographic website application available at [www.police.uk](http://www.police.uk) which, when first released, was a quantum leap forward for data display and also for the forces involved in allowing their data to be displayed.

The importance of publicly displaying police data should not be underestimated because it was the first time that such data, on a national basis, had been available to public access. Some forces, including South Yorkshire, displayed some simple counts of certain crime data on their websites, but there was very little in the way of any context to this information such as location and links to other data or knowledge such as detections. In short, some police forces provided a skeletal outline of data and other forces provided nothing.

With the advent of Police.UK there is the ability for police forces to present standardised data to a central point for display on a series of interactive maps<sup>102</sup> that are searchable by post codes, town or street names. This data is usually approximately a month in arrears and is not real time current data, which as will be explained later, is somewhat of a disappointment.

### **Hitting the target but missing the point**

The concept of this website allows an interested audience to examine from a crime and disorder perspective what is happening in their community, albeit a month or so behind real time. But there are a series of more worrying problems that plague the presentation of the police data in its present form.

In a series of data interrogations conducted by this author and Andrew Costello<sup>103</sup> with data taken from the website, it became apparent that there was and still are some significant data issues. General police force data started to be placed on this site in December 2010 with the British Transport police joining in January 2011. The initial offences included for display were ASB incidents, burglary offences, robbery offences, vehicle crime, violent crime and other crime. These categories ran until September 2011 and then were altered. Before the discussion as to why the category alteration took place it is worth reflecting upon the whole roll out process of this website.

If the government considered the issue of publicly displaying police information as being important, what it should have done is piloted the whole process using for instance data from the Metropolitan police service. All the faults could have been ironed out and the

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<sup>102</sup> Currently GOOGLE maps.

<sup>103</sup> University of Sheffield, Faculty of Law.

product would have been genuinely fit for purpose. There should also have been some debate about the categories themselves and the benefit of sticking to a group of data for a longitudinal, rather than cross-sectional period of time. Within ten months of the website being rolled out for public consumption the categories were expanded but it would appear not back catalogued to take account of how the new data might have looked over the initial preceding months.

The back cataloguing of data within this short space of time would have allowed the software to calculate, and the audience to understand, how the crime and disorder picture looked from the inception of the website but the initial methodology applied in this case did not allow this to happen. The comparison of geographic crime at such an early point in the websites history had to all intents and purposes become redundant.

In September 2011 the categories available were expanded. The new categories within the data were criminal damage and arson, drugs, other theft, shoplifting and public disorder. There were subtle changes made within the data of the original categories. Rape as an example that had originally been seen in the 'other crime' category was now bracketed in the 'violent crime' category. Once again it appears within the extracted data that no back cataloguing has taken place to deliver a constant picture however the single constant in all this is that the British Transport Police's data remained unchanged.

In December 2011, about a year after the start of the website, details of the locations of the incidents and crimes and how they were mapped were changed to 'snap points' but there are many crimes and incidents that don't appear to have a location and there are no attempts to rectify this data each month. The phenomena appears more common in some forces than others.

Clearly data protocols have not been properly laid down and potentially politically rushed through. The site should have been properly piloted to examine how it would be used by the public and to iron out any technical difficulties. To this end, via the feedback facility of the website, questions have been asked of the site's administrators about the issues raised in this part of the chapter. No response has been received to any of the questions asked about the data that underpins the sites visual representations. This is worrying as it is the data that drives the intuitive front end display and if it does not reflect the data in a consistent manner then the crime and incident picture in neighbourhoods across the UK becomes skewed. The data is generally two months<sup>104</sup> in arrears which gives an out

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<sup>104</sup> Many American police forces are able to upload their respective data into their own websites within about a week of a crime or incident taking place.

of sync picture to its audience. If a neighbourhood is suffering from a spike in ASB or crime and needs to work with the police to bring the problem to an end, it will always be playing catch up. The mapping site is therefore rendered almost useless for real time police/neighbourhood collaboration and, it could be argued, is nothing more than a graphic reference tool. This situation becomes problematic in that the viewing public wrongly assumes what they are seeing is an accurate picture of crime and disorder in their neighbourhood. Problems arise for the police as they are working with the current crime and ASB data available at neighbourhood levels which has little relevance to what is seen on the police.uk website. This raises confidence issues between the public and the police as to which data presentation is more accurate and more importantly what is the local situation for crime and ASB and how are the police addressing it.

If national police data could be regularly aggregated into a simple usable form then it might lead to thinking how more complex national data sets that relate to neighbourhoods could be developed. Many neighbourhood statistics within the UK rely on the decennial census. But in 1966<sup>105</sup> a mid-term census was taken. The following Hansard passage shows how the government of the day understood the value of a smaller and potentially more regular census being conducted within the United Kingdom.

### **CENSUS OF POPULATION**

*HC Deb 16 December 1963 vol 686 cc850-3 [850](#)*

#### [§ The Minister of Health \(Mr. Anthony Barber\)](#)

*With your permission, Mr. Speaker, and that of the House, I would like to make a statement.*

*With one exception during the last war, a census of population has been taken every tenth year since 1801. The Government have decided that for the effective implementation of their policies there is a need for another census in 1966, after a period of only five years since the last one. At a time of rapid change and development, the traditional 10 years is too long to wait for the hard figures which only a census gives, and the [Census Act, 1920](#), contains express powers to hold a census every five years, subject to the authority of Parliament.*

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<sup>105</sup> <http://hansard.millbanksystems.com/commons/1963/dec/16/census-of-population> (accessed 06.11.2012)

*The effective use of manpower, and the planning of land use, of housing, and of environmental, health and social services—all these must begin with the latest figures about the population both as it is now and as it will be in the future. A relatively small percentage migration into a populous area or a relatively small change in the make-up of its population may seriously affect the amount of land and the amount of money required for housing, schools, hospitals and other services.*

*The census will also be of value to users outside government—to those engaged in research in the social sciences, economics and medicine and to industry and trade. Account will be taken, as in the past, of these needs in deciding on the topics to be covered.*

*851 The Government have considered whether the census in 1966 need, for the purposes for which it is wanted, involve full coverage of every household in the country. They have concluded that it need not and that, with the exception of certain "special study" areas, a 10 per cent. sample census will suffice, and they have authorised the necessary preparations to be made. As a sample enumeration is novel to the United Kingdom there will be a test of the sampling procedures in the spring of next year. This will involve approaches to a few thousand householders will to co-operate.*

*A draft Order in Council directing that the census be taken and prescribing the particulars to be required from householders will be laid before the House in due course.*

The government recognised the importance of conducting a survey due to the speed of social change within the country and also the benefit to be derived from the data being subjected to academic scrutiny. If data and information about the population have specific relevance when allied to police data for example, there is clearly a very strong argument, using modern computing and survey techniques, to survey smaller samples of the nation on a more regular basis, in effect 'micro-census'. There was concern in the House of Commons at the time that the analysis of the data would be 'sluggish' but Mr. Barber assured the House that the use of an 'electronic computer' would expedite matters far more efficiently than in previous census.

Computer technology has obviously moved on since 1966 and if problems around a decennial census were identified and approached in that time then there is a compelling argument, utilising the large range of data collected by for example the office of national statistics, to carry out small scale census on a more regular basis (every three years subject to fiscal limitations) and to utilise the ability to integrate differing public data sets

like police, health and housing to identify the shifts (or not) in the way that people live in their communities around the country. Streamlined analysis and publication of such census information in a national data observatory would allow the public and local authorities to determine within their own arena of operations what might be relevant to their service provision.

The LASOS data observatory<sup>106</sup> based in Sheffield has been used within the analysis of this research to determine some of the later analytical findings pertinent to this work. Utilising a suite of differing data sets there is the ability to observe what the data indicates and then allow local authorities and agencies to develop an engagement plan. This research has shown the benefits of utilising quantitative and qualitative data across a large English city and then applying a detailed analysis regime to extract new findings that relate specifically to crime and ASB. Using truncated census data, housing data and police data would arguably emulate this research and potentially produce some findings that would help local authorities respond to community changes in a more timely and practical fashion and perhaps, in the police case, alter the way they the function with the needs of the community driving their business rather than the business need of the organisation itself.

The third and final part of this chapter discusses what this research has revealed about the relationships between ASB, collective efficacy and how this is influenced by the demographic content of certain neighbourhoods. The discussion is advanced to consider the implications of the research findings for collective efficacy and broken window theories and the policing of neighbourhoods.

### **Collective efficacy as a concept**

Sampson, Raudenbush and Earls (1997) initially hypothesized that, 'collective efficacy, defined as social cohesion among neighbors combined with their willingness to intervene on behalf of the common good, is linked to reduced violence.' (p.918). Their basic premise was that, 'social and organizational characteristics of neighbourhoods explain variations in crime rates that are not solely attributable to the aggregated demographic characteristics of individuals.' (p.918). More importantly and recognisable certainly in the United Kingdom in today's socioeconomic climate they commented further; 'Informal social control also generalizes to broader issues of import to the well-being of neighbourhoods. In particular, the differential ability of communities to extract resources and respond to cuts in public services (such as police patrols, fire stations, garbage

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<sup>106</sup> See [www.lasos.org.uk](http://www.lasos.org.uk)

collection, and housing code enforcement) looms large when we consider the known link between public signs of disorder (such as vacant housing, burned out buildings, vandalism, and litter) and more serious crime.'

They referred here to some facets of the broken windows theory of Wilson and Kelling (1982) who posited that the physical fabric of a neighbourhood influenced the commission of crime and disorder. They recognised the importance of public sector services engaging with people living in local neighbourhoods to make their lives better or at very least develop a more acceptable status quo. Sampson et. als. work, a continuing, longitudinal research project across Chicago neighbourhoods, through sustained observation and reporting, has increased the empirical knowledge of collective efficacy. But Chicago is only one city and this research work, albeit small in comparison in a large English city, challenged some of the thinking around collective efficacy.

### **Collective efficacy, ASB and crime in the city of Sheffield**

This research indicates that within the 100 constructed and defined neighbourhoods of Sheffield levels of collective efficacy are influenced by ASB, crime and the demographic characteristics of neighbourhoods. The research findings also demonstrate that in some neighbourhoods any permutation of the aforementioned variables can have an effect on each other so demographic characteristics or levels of crime can in some neighbourhoods affect collective efficacy levels. One of the key influencing factors in the early part of this research was the examination of Sheffield's 100 neighbourhoods, a geographic structure now replaced by output areas and lower super output areas which arguably give greater granularity and detail from an analytical point of view. But the manner in which the 100 neighbourhoods of Sheffield were constructed revealed a true 'hands-on' approach by Sheffield City council in finding out how and where people considered their neighbourhood space to actually exist by a series of interviews and questionnaires. The importance of this knowledge of 'locality' by people living in these neighbourhoods should not be underestimated and this research subsequently had the ability to test data from the police and city council within a framework whose importance had been largely overlooked. These uniquely researched neighbourhoods, as a geographic concept, have undoubtedly challenged some of the current empirical collective efficacy knowledge which will now be explained in more detail.

## **The relationship between ASB, collective efficacy and the demographic makeup of neighbourhoods**

The cornerstone of this research commenced with a review of Wilson and Kelling's broken windows concept (1982) which by their account was never meant to be a theory but was largely observational and showed how a neighbourhood and its people and spaces were policed. It seems peculiar some thirty one years later that at a time when policing activities are subject to scrutiny from the quarters of regulatory enquiries conducted by bodies such as the Home Office Select Committee and the Independent Police Complaints Commission and dramatised in a plethora of television programmes and films, that the work of Wilson and Kelling prised open the lid of a policing Pandora's box which has quite rightly remained wide open. The research of Wilson and Kelling triggered a desire within this body of work to determine if within Sheffield relationships were evident between ASB and collective efficacy and whether the demographic content of neighbourhoods influenced such a relationship. The final piece of the jigsaw was to posit, as did Wilson and Kelling, whether the police took cognisance of such factors in policing neighbourhoods and public spaces and how policing policy could be developed to ally itself with the needs of specific neighbourhood challenges.

The unique way in which the city of Sheffield 100 neighbourhoods were utilised as a research site adds to the thinking of how research might be approached in the future. The 100 neighbourhoods as a geographic entity for Sheffield city council purposes have now been abandoned in favour of central government's output area (OA). The shift to the 2011 version of the OA's from the 2001 version, as a result of the 2011 census will hopefully allow authorities to make better use of the information obtained within the census.<sup>107</sup> This reasoning is understandable from the council's perspective as there is a will to view all areas of the United Kingdom in a consistent fashion and a single methodology serves largely that purpose. But as this research revealed, one size doesn't fit all and this work displays the need to have in-depth knowledge about the communities that exist, in this case, within Sheffield. The proxy survey used in this research could have added more localised and parochial knowledge to each of the 100 neighbourhoods which could assist in the provision of better services to the public (including policing) across the city. This research showed that neighbourhoods displaying similar characteristics such as survey response, demographic content or similar levels of crime and ASB did not always show similar levels of collective efficacy. The key element in

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<sup>107</sup> Large tracts of the census data were due for release on the 30<sup>th</sup> of January 2013.

determining how collective efficacy could be gauged in a neighbourhood was to analyse the police crime and ASB data in concert with the survey data.

The analytical approaches adopted in this research were large and complex and with hindsight should have been streamlined to make them more manageable. As the thesis work progressed, more analysis was completed to include the 2010 indices of multiple deprivation data which acted as a confirmatory process to the previously conducted analysis, in short a double-checking of the analysis findings. Broken windows theory and collective efficacy are largely American concepts. Research in each of these areas of interest have been conducted predominantly in the United States and although some of this research reviewed the empirical debates around the theories, this work went down its own track to find out new things. The combined analysis of the crime data, ASB data, neighbourhood survey, IMD data with the Sheffield 100 neighbourhoods acting as the independent variable showed some striking features.

In some neighbourhoods the analysis indicated that collective efficacy when measured against certain crimes could be a significant predictor of crime overall. But some neighbourhoods bucked this trend and showed the limitation of the collective efficacy variable to predict crime and ASB. This showed the value of analysis at a local level to show the unique nature of neighbourhoods even though in some cases they were adjacent to each other. This is an important finding for the advancement of collective efficacy theory and has not gone unnoticed by St.Jean (2007, p.210);

'...this study further supports the need to look at neighbourhoods, and at particular places within them, as units of analysis in their own rights.'

In examining micro areas within neighbourhoods St.Jean sees the value of detailed analysis, within a collective efficacy framework, to determine the subtle nuances involved that show collective efficacy levels. This research has similarly produced valuable findings through the use of neighbourhood based analysis and the allying of differing data sets throughout the analysis. Levels of ASB within neighbourhoods also tended to be a better predictor of survey satisfaction results than crime data levels and this correlation between the two sets of data are important, especially to the police when determining how they adopt their front line patrol strategies.

The 2010 IMD data became a defining feature within the work in that it produced clarity across the whole analysis. The data analysis became more granular by using the lower super output areas (LSOA's) deprivation scores for the 100 neighbourhoods. The analysis revealed areas that had high survey satisfaction rates but very high rates of

crime and ASB. Some mid-range crime and ASB neighbourhoods indicated low levels of satisfaction among residents which was quite surprising.

But the IMD data displayed, particularly in one area<sup>108</sup> a conundrum. This neighbourhood has high crime, high ASB, high deprivation in the living environment but indicated from the survey a high level of satisfaction with the neighbourhood itself. The research had shown similar indications in some Sheffield neighbourhoods with analysis conducted without the use of the IMD data and back checking of the analysis revealed another neighbourhood<sup>109</sup> had displayed similar characteristics in that the predominant demographic feature of each neighbourhood was the declared ethnicity of the survey respondent<sup>110</sup>.

Conversely another area<sup>111</sup> that had a very fragmented demographic content displayed low levels of collective efficacy and it is clear from this research that if an understanding can be gained of how these different residents live in their neighbourhood then the police, as an example of an authoritative body could learn a great deal as to how plan their neighbourhood policing strategies.

Policing in its simplest form is nothing more complicated than dealing with the public at large either as a complainant, a witness, a victim or an offender. These four categories of individuals have to come from somewhere i.e. a neighbourhood or a locality and how the police understand such factors has relevance to policing communities in an effective fashion. Anecdotally speaking, South Yorkshire Police who are responsible for the policing of Sheffield, place great emphasis within their analysis of communities on the levels of crime. This applies not only from a locational perspective but also that of performance.

### **Variations across different neighbourhoods**

All neighbourhoods have diverse and differing characteristics and the residents that live within them are all different. They may have different ethnic backgrounds, differing opinions or political viewpoints, their educational attainments or employment situation will also differ greatly and it is complexities such as these that make the study of social science, within a neighbourhood context, such a fascinating discipline. To obtain a definitive answer to the myriad of socially embedded conundrums will inevitably produce

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<sup>108</sup> Highfield.

<sup>109</sup> Abbeyfield.

<sup>110</sup> Asian.

<sup>111</sup> Lowedges.

a large range of responses, not just a singular ‘this is it’ retort. The 100 neighbourhoods across Sheffield, when subjected to statistical and geographical scrutiny, did just this. Standardised analytical procedures that looked at the Sheffield Neighbourhood survey data in concert with the Indices of Multiple Deprivation data for 2007 and 2010, the demographic data for each neighbourhood and the police ASB and crime revealed findings that potentially hadn’t been seen before. The significant findings from this research are now discussed.

### **The part played by demography within Sheffield’s 100 neighbourhoods**

It became apparent that demography and the levels of people resident in social housing, in some neighbourhoods, influenced whether collective efficacy appeared to be strong or weak. When examining the neighbourhoods of Abbeyfield and Highfield, analysis indicated that where there was a high concentration of people from a particular ethnic group, in these instances Asian, then collective efficacy appeared strong. This challenges Sampson’s argument (2009) that racial composition might increase physical disorder within a neighbourhood. The levels of crime and disorder in both these areas were quite high but the surprising finding was that survey respondents reported a high level of satisfaction with their neighbourhood. The area of Highfield became of particular interest as the analysis was counter checked with both the 2007 and the 2010 IMD data. The analysis revealed despite high crime, high ASB, exceptionally high deprivation within the living environment and relatively strong employment levels<sup>112</sup>, there were still high neighbourhood satisfaction levels. Highfield clearly didn’t fit the generally accepted collective efficacy model of high crime plus high disorder equals low neighbourhood satisfaction.

Neighbourhoods such as Lowedges that have a diverse demographic content displayed low levels of collective efficacy. This particular neighbourhood had three key types of people categorised within it, senior communities, older workers and people in public housing and interestingly the neighbourhood itself was bordered by other neighbourhoods that showed strong signs of collective efficacy. The geographical location of the neighbourhood within the city may also be an influencing factor in that it is positioned at the Southern-most extremity of the city on the border with Derbyshire and there could be a feeling of detachment from Sheffield itself. What is apparent for future research is that analysis conducted within neighbourhoods at a micro level, that utilises demography as a variable, has the potential to reveal much more about collective

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<sup>112</sup> Highfield received a 22.2 percentile rank score within the IMD (2010) employment category when comparing it against the other 100 neighbourhoods within Sheffield.

efficacy. Sampson (2009) suggests that such diversity could reduce levels of crime and disorder. Countering that argument and supporting this research, are the findings of Wikstrom (2009) whose Swedish research indicates that higher levels of differing demography leads to higher levels of crime and disorder within a neighbourhood. There is certainly an argument from this research that demography affects collective efficacy differently in Sheffield than it does in American cities.

### **Collective efficacy predicting crime and disorder**

In the early part of the data analysis, an attempt was made to utilise similar crime categories that had been empirically employed in other research, these being drugs, violence and robbery. But despite having access to some very detailed police data it became apparent that these categories within the research added nothing to the collective efficacy debate and so a wider group of recorded crime categories were employed. This initial 'disappointment in the data' is in itself an interesting finding in that Sheffield neighbourhoods, from a collective efficacy perspective were not influenced by the well-used crime categories of drugs, violence and robbery and has been previously mentioned, the data initially utilised was highly detailed and included a large amount of sub-categories.<sup>113</sup> So this research has uniquely indicated that in Sheffield, a wider range of offence categories has contributed far more to the empirical collective efficacy debate than the traditional non-violent entrepreneurial<sup>114</sup>, predatory<sup>115</sup> and grievance<sup>116</sup> structures of opportunity usually employed in American based research.

This research therefore looked at a wider range of crime categories by a simple assessment of the top ten crime categories that consistently appeared across all of the 100 neighbourhoods. Obviously some neighbourhoods would feature crimes within their top ten that didn't appear in others, but after an examination of the respective step change across the neighbourhoods the top ten became a top eight which gave a consistency across the subsequent analysis. The crime categories that were selected through the statistical process and appeared across the 100 neighbourhoods were in at least 84 of the 100 neighbourhoods with some categories appearing in the top ten of all of the 100 neighbourhoods. Some significant findings were revealed at this early stage

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<sup>113</sup> Theft from person of another (robbery category), permit premises to be used for unlawful purpose (drug category) and racially aggravated put people in fear of violence (violence category).

<sup>114</sup> Drugs.

<sup>115</sup> Robbery.

<sup>116</sup> Violence.

of the analysis which was encouraging after the earlier disappointment of the drugs, violence and robbery work.

Strong correlations in the new data appeared where expected i.e. between theft of motor vehicle and criminal damage to motor vehicle. A strong correlation appeared between ASB and assault which was anticipated but there was also a strong correlation between ASB and criminal damage to dwellings. These strong correlations between seemingly unconnected crime and disorder types are worthy of further investigation but within this research suggested that neighbourhoods with high levels of certain types of crime may also be strongly correlated with other significant crime categories. The selection of crime types for analysis within neighbourhoods is an important collective efficacy issue and this research within Sheffield showed that the crime categories often used in America, drugs, robbery and violence added little to the empirical debate. This research has displayed a methodology for crime category selection which has advanced the theoretical debate in that it is important to consider all crimes that are active within a neighbourhood subject to analysis and examine in detail the correlations that exist within the data and subject them to a rigorous testing regime to identify crimes that impact on levels of collective efficacy. To attempt to expand the knowledge of collective efficacy by using drugs, robbery and violence offences for the sake of research continuity revealed little in Sheffield's research example. The analysis of a broader range of crime categories, although problematic at times, will allow future researchers to consider how and why collective efficacy manifests itself (or not) in neighbourhoods of interest.

In order to examine if levels of collective efficacy within neighbourhoods predicted levels of crime and disorder, a scoring system was developed from the responses of the proxy survey in relation to certain questions that touched upon quality of life issues. This approach was an appropriate methodological technique to apply in the absence of any other available survey data and the research project was not in a position, due to time constraints, to develop a significant questionnaire for distribution to an equivalent sample as the proxy survey had done. It was conclusively shown that by using the collective efficacy variable as the independent variable and the crime and ASB variables as dependent variables, the regression was highly significant. This general view across Sheffield's 100 neighbourhoods showed that where there was strong evidence of collective efficacy, levels of crime and ASB were usually low. However 'general' analytical findings across a city as large as Sheffield within this research are not enough to reflect the local picture within the neighbourhoods. Further investigation therefore took place. Certain neighbourhoods were examined as to why they didn't fit the collective efficacy prediction model when the crime and ASB data was analysed and as has been

previously mentioned the value of 'parochial' styled research in individual neighbourhoods came to the fore.

There were clearly neighbourhoods that were bucking the empirical trend with regard to collective efficacy. The permutations are shown below;

- Neighbourhoods that had high levels of crime and ASB displayed high satisfaction rates
- Other neighbourhoods with low or mid-ranged levels of crime and ASB displayed low satisfaction rates
- Some neighbourhoods displayed low levels of collective efficacy which would indicate high levels of crime and ASB, but instead, the levels were low
- Neighbourhoods that had high collective scores and would suggest low levels of crime and ASB revealed totally the opposite trend, i.e. high levels

Identifying how levels of collective efficacy manifests itself in different neighbourhoods and the distinct variation of results across the 100 neighbourhoods of Sheffield has shown the difficulties in finding answers to this particular research challenge. But it did reveal some new answers that challenge some current empirical and theoretical thinking around collective efficacy. To advance the understanding of collective efficacy and the reciprocally influencing factors such as crime, ASB, demography, housing conditions and deprivation, it becomes clear that pockets of joined up research, utilising standardised analytical routines, rather than large citywide projects will be of greater benefit. This research has shown that when thinking about collective efficacy across Sheffield the data reveals answers that match the general knowledge i.e. strong collective efficacy = low crime and low ASB. But in examining local neighbourhoods, there are some very interesting research findings of which the following crystallise this particular body of research;

- The inclusion of the views of local people living in neighbourhoods subject to research programmes are vital. Their participation, either directly or by proxy, is of paramount importance to understand how they view their particular residential context
- The use of quantitative (statistics) and qualitative (surveys) data, analysed in tandem produce richer results in relation to collective efficacy
- Robustly researched 'neighbourhoods' as opposed to statistically derived geographic areas elicit a greater understanding of what may be orchestrating levels of crime, ASB and collective efficacy

- There is great value in parochially comparing neighbourhood against neighbourhood with regard to collective efficacy issues. This serves research better than a broader city wide approach
- ASB, in some Sheffield neighbourhoods, tended to be a better predictive data set than the crime data. It also indicates that the police's insistence on the unilateral use of crime data for analysis in a social context is wide of limited value. This fact emphasises the argument for more parochial based research that utilises available ASB data
- The current empirical collective efficacy thinking, from a localised neighbourhood perspective, was consistently challenged. The norm of low collective efficacy = high crime and/or high ASB or high collective efficacy = low crime and/or low ASB did not often fit the Sheffield neighbourhoods. Yet again, such findings promote the argument for research at a more granular level
- In the 100 Sheffield neighbourhoods, the demographic content of the residents plays a part in determining levels of collective efficacy. This supports Swedish research, Wikstrom (2009:61) which suggests a European model of collective efficacy different to the American one
- Variations in collective efficacy levels across neighbourhoods are important. The geographic indications for Sheffield as a city indicate that there is a distinct East/West divide. This has ramifications for the way in which Sheffield's neighbourhoods are policed especially when examined on a neighbourhood by neighbourhood basis
- The neighbourhoods of Abbeyfield and Highfield indicated that significant concentrations of a particular ethnic group produced high levels of collective efficacy within a neighbourhood. Where diverse demography existed in this research, levels of crime and ASB were either high or at best, mid-ranged
- The analysis of drug, violence and robbery data within a collective efficacy context for Sheffield revealed little. The expansion of the data categories, after rigorous assessment, revealed the findings currently being described which contributed to theoretical advancement, methodological discussion and policy implications for policing in the United Kingdom
- When looking at the predictive collective efficacy models in the neighbourhoods of Sheffield, unusual data correlations were made between ASB data and criminal damage to dwellings. Although not investigated in more detail, the use of collective efficacy as an independent variable and other data as dependent

variables has the future capacity to search for other correlations and in turn investigation for causation

- Analysis of data across the city of Sheffield revealed findings that complemented current collective efficacy knowledge. Analysis of data at a true neighbourhood level revealed new findings that would have otherwise been missed. The message here for future collective efficacy research appears to be in Henry Ford's words, 'Nothing is particularly hard if you divide it into small jobs'.

### **Contributions made by this research**

The title of Wilson and Kelling's (1982) broken windows theory is widely misquoted. The words 'broken windows', in the original article, are preceded by 'The police and neighbourhood safety' and it is the interaction between the police and the 100 neighbourhoods of Sheffield with which this research has been engaged. The broken windows theory became the catalyst for examining how collective efficacy within Sheffield manifested itself and how the police in the past and in the present policed these neighbourhoods.

The research sometimes revealed little of significance to add to the empirical and theoretical collective efficacy debate, but these failures gave rise to the further testing of the qualitative and quantitative data, in which modern computer technology assisted the methodology of data analysis by using advanced geographic information systems in concert with traditional statistical techniques and led to suggestions for policing policy in the United Kingdom that could assist, at neighbourhood levels, in controlling levels of crime and ASB and, importantly, engaging with residents to increase social cohesion in their locality. These three areas will now be considered in turn.

### **Theoretical implications of this research**

The Sheffield research site results, from a citywide perspective, generally confirmed empirically known factors that where collective efficacy was high, levels of crime and ASB were low. The analytical results also supported the converse view that where collective efficacy was poor, levels of crime and ASB were high. But this research work revealed much more. The use of drugs, violence and robbery data for the Sheffield research was constrictive but exhausted nevertheless. Using crime themes that were consistently prevalent across the 100 neighbourhoods became totally relevant to the research. The idiosyncrasies of neighbourhoods in turn produce unique data and to

advance collective efficacy theory further this research posits the use of parochial, small sample data. Collective efficacy theory will stagnate if there is persistent use of big data.

The use of smaller pockets of data within a neighbourhood context showed new permutations of theory for collective efficacy and bolsters the argument for greater granularity in this field of research. Neighbourhoods that had high levels of crime and ASB displayed high satisfaction rates. Other neighbourhoods with low or mid-ranged levels of crime and ASB displayed low satisfaction rates. Some neighbourhoods displayed low levels of collective efficacy which would indicate high levels of crime and ASB, but instead, the levels were low. Neighbourhoods that had high collective scores and would suggest low levels of crime and ASB revealed totally the opposite trend, i.e. high levels. These findings were obtained through the connecting of qualitative and quantitative data and reveal how the theoretical development of collective efficacy will be held back if future research fails to contemplate the benefits of the use of diverse data sets however onerous the task may initially appear.

This research developed a theoretical paradigm for the policing of neighbourhoods within a collective efficacy context and is repeated here for discussion;

- Determine levels of social cohesion at a neighbourhood level
- Examine what influences strong or poor social cohesion
- Discover at individual levels how people feel about crime and ASB within their personal environments
- Develop and share good urban governance amongst individuals in neighbourhoods and also within the authorities that provide key services

If collective efficacy within neighbourhoods and the part it plays in influencing levels of crime and ASB are to be part of the modern policing mandate, then this research posits for policing and other locally provided services such as social housing that such a paradigm is worth testing and refining for use in individual neighbourhoods. This paradigm gives policing a practical theory to test and the research behind it, i.e. the statistical and geographical analysis indicates that it has solid underpinnings.

Two neighbourhoods contributed significantly in advancing theoretical collective efficacy research. The neighbourhoods of Abbeyfield and Highfield suggested that concentrations of ethnic groups within the overall demographic profile of the respective areas influenced collective efficacy in a positive manner. Viewing this finding in a broader fashion and considering other European research (Wikstrom, 2009), raises the

point as to whether there is a transatlantic divide between the research findings. Ethnicity, as a singular variable and its collective efficacy influence would appear to differ between Europe and America. This research posits after applying different and separate testing of the data, that for certain Sheffield neighbourhoods, ethnicity is a dynamic element in shaping neighbourhoods which has consequences for how policing is conducted in these areas. This research has again posited through theoretical consideration the importance of learning about neighbourhoods at the ground level in a fashion similar to that of Wilson and Kelling which eventually led to the development of this research.

### **Methodological implications of this research**

There has been a distinct methodological route map employed in this research. The methods utilised were not achieved as a result of peer recommendation i.e. pure statistical testing, but were introduced deliberately to test fledgling technology<sup>117</sup> that had been developed in part by this author. The reading of other empirical research, largely in an American context, was key in understanding current collective efficacy thinking, the policing of neighbourhoods, crime and disorder and the roles of individuals living and working in neighbourhoods were critical in the learning of some of the subject matter. A pivotal point in the research reading was gauging an appropriate commencement of the writing about the gathered knowledge within the contextual framework of the research itself. There was never a cessation of reading. Up to and including the completion of this written document, current considerations that had relevance were included and subsequently referenced. There was a shift of emphasis that came when conducting the data analysis and its temporal element was lengthy and very detailed and in turn such effort became worthy of its theoretical findings.

It is accurate to state that the use of fledging GIS techniques within this research, largely unseen before, became the catalyst for the transfer of this project to another academic institution. It is accepted that new techniques, reliant upon modern computing technology should be subjected to rigorous scrutiny but never dismissed on the premise that they are nothing more than pictures. There was a degree of vindication when Sampson (2012, p.70, *ibid*) acknowledged the use of maps as an alternative to tables in order that a wider audience might read and engage with the research findings. The use of mapping in this style of research does not 'dumb down' either applied methods or findings provided that it can be shown that the relevant analysis is consistent and

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<sup>117</sup> The Crime Analyst Toolbox.

transparent. Mapping the statistical data created an interesting dynamic in that it allowed all the data utilised to be displayed singularly or together and also showed the spatial boundaries of each of the 100 neighbourhoods. Often in research a description is given of a locality that has little contextual reference to its reader. The provision of a detailed map with pertinently described data as Sampson has discovered aids the research cause.

The temporal analysis of the drugs, violence and robbery data, although small in representation compared to the more general techniques applied, played an important part in recognising the limitations of these crime categories to help gauge collective efficacy within Sheffield. It was anecdotally accepted that the city centre neighbourhood of Sheffield, which, at the time the analysis was conducted, only had 2673 known residents, had a considerable amount of licensed premises that would skew the data and make the neighbourhood an outlier and therefore exclude it from further analytical inclusion. Statistical testing confirmed this fact and the temporal analysis supported the result by showing that the three crime categories were potentially driven by the night time and weekend licensed premise economy. The consideration of how important temporal analysis is for collective efficacy theory advancement was not continued within this research. However the time element of when crime and ASB occurs within a neighbourhood may influence collective efficacy levels at different times of the day. This research has already shown that neighbourhoods can be idiosyncratic for a whole range of reasons and this small temporal test may add another future variable for research consideration. It would be interesting to determine within neighbourhoods if and why collective efficacy levels rise and fall during hours of the day, days of the week and months of the year.

The use of a proxy survey within the analysis added richness to the research and once again the questions selected from a larger questionnaire attracted criticism due to the fact that some of the selected questions were not directly attributable to the research questions at hand. Some research has the luxury of being able to use purposely designed questions for a specific research task. But the word 'proxy' indicates substitution and in the absence of being able to commission a new survey and the time constraints involved, the overall analysis of the data, albeit lengthy, stood up to rigorous scrutiny with the findings previously described. This research used parts of an independently commissioned survey, police crime and ASB data and a national deprivation indices, an eclectic mix of variables to say the least. This diverse range of data has relevance especially in the current fiscal climate within the United Kingdom because all of it was obtained gratis and demonstrates that freely obtained data can help

with research projects and the advancement of academic knowledge. Survey data, as an example, does not need to be expensive with the development of computer generated survey software freely available for use. Indeed many research projects like this regularly generate survey material that is customised for a very specialised purpose and needs little in the way of expert knowledge either to develop or analyse. This survey ability dovetails with previously mentioned theoretical implications in that more small sample, neighbourhood based research work around collective efficacy could be achieved using modern survey techniques.

### **Implications for policing policy in the United Kingdom**

In addressing the final part of how the results of this research have contributed to the empirical debate around collective efficacy it is timely that the first ever civilian and current Chief Inspector of Her Majesty's Inspectorate of Constabulary, Tom Winsor, in his first major speech<sup>118</sup> since his appointment in October 2012, made specific reference to certain facets discussed within this work. In his desire to advance modern policing, and the accountable inspection of all its facets, he comments as follows;

'...the roots of policing are almost exclusively local, stemming from the mediaeval obligations of the citizen to pursue and apprehend offenders. Police forces were founded in villages, towns and cities, with no national plan, since none, at that time, was necessary.' (p.10)

Winsor has clearly grasped that policing should be delivered locally and he also recognises the fact that technology, as has been demonstrated within this research, has an important part to play within frontline policing and how frontline officers use such technology;

'In too many respects, the technology which officers have to work with is, in my view, quite far behind where it could be'. (p.11) In summarising his first report Winsor remarks;

'...technology is one of the principal areas in which the efficiency of the police can be improved, and its current fragmented state must be improved markedly and urgently'. (p.12)

It becomes apparent that Winsor has a desire, from a technological point of view, to attempt to unify how the police services across the United Kingdom obtain the best

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<sup>118</sup> Delivered at The Royal United Services Institute on the 29<sup>th</sup> of April 2013. See <http://www.hmic.gov.uk/publication/policing-in-the-new-dynamic-environment-speech-20130429/> (Accessed 29/04/2013)

operational use from the data they harvest. We now reflect on what this research, using the Sheffield model may have to offer across a national policing landscape.

Consistent mention has been made within this research of the need for allying quantitative with qualitative data within the policing context and then displaying it in a simple fashion that is easily understood especially in the case of frontline police and community support officers. All police forces collect data and information to nationally agreed standards, but in the South Yorkshire police example and probably many other forces, they fail to connect the important pieces together in a cohesive fashion. South Yorkshire Police could, using the methodologies described within this research, join the crime and ASB data to the results of the Your Voice Counts survey. This survey is conducted by all of the 43 police forces and includes within it specific questions about satisfaction in relation to crime and ASB and should be used to direct neighbourhood policing strategies. Currently in South Yorkshire this survey is only used to effectively report about the responses made by the public to its questions but its importance for South Yorkshire Police and other forces should not be underestimated. A series of questions was asked of South Yorkshire Police<sup>119</sup> around the survey. The questions and responses (italicised) are shown below:

- Is it SYPOL's intention to continue with the survey? *No decision yet made (on hold)*
- Are there any enhancements envisaged? *No decision yet made (on hold), although if it remains at all I think (names deleted) were looking for some changes following consultation*
- In the light of the new PCC, how does SYPOL, statistically speaking, link in with them and will YVC have a part to play (amongst other data of course)? *No decision yet made (on hold) - not sure if the PCC has decided what he wants yet in terms of public consultation.*

Matters relating to this survey would therefore appear to be on hold until the PCC decides what is actually required for the public to view. An important factor to remember about policing is that its functions are driven by demands from the public. It matters not what technical brilliance in the form of analysis, data or hardware is afforded to the police if there aren't enough officers to help the public in the first instance. Police and the other emergency services often have to respond to an immediate demand and on attendance a police officer is required to deal with an extensive array of social difficulties which in

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<sup>119</sup> A personal contact of the author who works in the Business Change Directorate gave the responses.

turn requires a large background support network to bring the original problem to a resolution. A large proportion of policing demands can, in the normal course of events, be concluded swiftly and at the scene, but as the make-up of neighbourhoods becomes increasingly complex, as has been revealed in this research, policing resources become quickly absorbed and stretched.

Modern policing cannot wait, as it has done in the past, for its officers to accrue experience over long periods of time. We already see government wishing to bring in candidates on fast track schemes that facilitate rapid promotion through the policing ranks in exchange for transferable management skills obtained in other work environments. If this is to become the norm rather than the exception for policing, the 'dotted blue line' of front line policing has to have the ability to do the following things;

- Be receptive to the types of people and neighbourhoods it is working in.
- Quickly digest and act upon the data and information that exists within a specific neighbourhood.
- Embrace technology that can provide at street level the appropriate data and information.

This is perhaps a big ask of modern policing with all the other competing demands made of officers, but neighbourhoods cannot continue to be policed without the information that reciprocally benefits them. If policing is to be continued that acknowledges some of its historical context as has been indicated to by the new Chief HMIC, then we should consider the closing words of Wilson and Kelling's broken windows theory (1982, p37-p38) which although being thirty one years old, has significant poignancy for policing in the United Kingdom today;

'But the police forces of America are losing, not gaining, members. Some cities have suffered substantial cuts in the number of officers available for duty. These cuts are not likely to be reversed in the near future. Therefore, each department must assign its existing officers with great care. Some neighbourhoods are so demoralized and crime-ridden as to make foot patrol useless; the best the police can do with limited resources is respond to the enormous number of calls for service. Other neighbourhoods are so stable and serene as to make foot patrol unnecessary. The key is to identify neighbourhoods at the tipping point -- where the public order is deteriorating but not unreclaimable, where the streets are used frequently but by apprehensive people, where

a window is likely to be broken at any time, and must be quickly fixed if all are not to be shattered'.

This quote has described the thread of this whole research and much of what Wilson and Kelling observed anecdotally in Newark was similarly observed albeit through a different lens within the 100 neighbourhoods of Sheffield and found some new elements to add to the empirical debate. But in the final paragraph of their theory they make a far more telling comment which seems a fitting, final reference for this research work;

'Above all, we must return to our long-abandoned view that the police ought to protect communities as well as individuals. Our crime statistics and victimization surveys measure individual losses, but they do not measure communal losses. Just as physicians now recognize the importance of fostering health rather than simply treating illness, so the police – and the rest of us – ought to recognize the importance of maintaining, intact, communities without broken windows'.

There is a saying within police circles and in the wider community that 'What goes around, comes around' and in their final paragraph, Wilson and Kelling reflect policing and community deficiencies in their time and space which in some ways are being experienced in the time and space of this research work. In utilising the broken windows theory as the cornerstone of this research, it allowed an advancement of Wilson and Kelling's thinking within a different city in a different part of the world. This research therefore kept true to its original underpinnings, despite occasionally travelling down some blind alleys, but hopefully allows future researchers to consider this work in a similar vein to that of Wilson and Kelling.

### **Further research opportunities**

Changes to the ways in which policing the neighbourhoods of the United Kingdom are conducted are starting to happen. Winsor (2013) has stated;

'...the prevention of crime is the primary purpose of policing, and that purpose should never be forgotten or diluted'. (p.12)

Policing in the United Kingdom has been over-concerned with the detection levels of crime for far too long. As mentioned in chapter four of this research, police management found itself having to react to prevalent crime categories that were manifesting themselves with the neighbourhoods of Sheffield and saw the way to counter these issues was by using specialised teams of officers or 'squads'. In hindsight, it has become

clear that policing has lost much of its neighbourhood knowledge that was harvested through older, traditional techniques. Policing now has to take back some of this lost ground and this is discussed further within a research context.

The use of ethnographic techniques at neighbourhood level is important in understanding how neighbourhoods and the residents within them live on a daily basis. This is not to be totally intrusive and to 'survey people to death' but subtle, well thought out questioning and observation of people and how they use their neighbourhood space would reap dividends. Such a project would have to be longitudinal and consistent in its methodology because as this research has shown, there are differences in what the American research tells us about neighbourhood activity when we examine the city of Sheffield through a similar research lens. Sheffield based research would have much ground to make up in its study of the use of urban space compared to Chicago, but with the resources of two Universities at its disposal the 100 neighbourhoods undoubtedly has something to add to the wider debate.

Geography and the technological advancements made in geographic information systems (GIS) are an efficient and understandable discipline that connects data together and then gets the message across to an interested audience. GIS, until recently, was a specialist discipline that required strong computing power to accommodate mapping platforms<sup>120</sup>, data handling capabilities and the controlling software itself. Added to this a skilled analyst was required to harness and synchronise all the relevant facets of the process to make sense of what the data was alluding to. With the development of applications in favour of programmed software and the use of mapping platforms such as Bing Maps and Google Maps, GIS is now entering a new era. Software companies such as Mapcite<sup>121</sup> are now able to display complex data on a mobile phone, stream live data from remote sources and connect a myriad of previously untested data which gives a richness and depth never seen before at a local level. Researchers can now effectively position themselves at a location and with a connected GPS use the mobile phone to tell them what useful information surrounds them. This relevant information that can be stored for later retrieval and analysis is very useful for potentially deriving new neighbourhoods that have relevant connections in unknown data contexts.

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<sup>120</sup> Ordnance Survey maps.

<sup>121</sup> See [www.mapcite.com](http://www.mapcite.com)

The work of the police will always provide a rich seam for research. The fundamental ways in which policing is accountable to its public changed in 2012 with the introduction of the police and crime commissioners across the United Kingdom. The HMIC also saw the introduction of its first ever civilian Chief Inspector which again brings a new dynamic in the way that policing is conducted at a national and local level. Research would be valuable that looks at the genuine neighbourhood needs of policing. We have already seen the regionalisation of some services like road traffic and serious crime, but does the present style of general policing work within a neighbourhood context? It could be strongly argued across Sheffield that high visibility policing is only seen on football match days in short-term 'pseudo-neighbourhoods' that are created and then dismantled periodically around the stadia to the north and south of the city. More work has to be done to look at how visible the frontline services can make themselves available to the public and how the public has the ability and facility to influence neighbourhood policing. With this in action, then we have perhaps achieved a truly modern notion of policing by consent.

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## **Appendix to chapter six – interview transcript**

*Steve Douglas: What difficulties does the Force have with enforcing antisocial behaviour laws?*

***CC Hughes: The Force doesn't have difficulty in enforcing the law in respect of antisocial behaviour. Some occasions are sorted by one police visit, others will take longer to sort out. The overwhelming response from the people of Doncaster has been positive. Public confidence is rising across the Force and our ability to deal with antisocial behaviour is improving.***

*Steve Douglas: We've been with some people who have told us they feel like prisoners in their own home?*

***CC Hughes: I'm disappointed to hear people feel like that. People have been encouraged to report matters, particularly around antisocial behaviour. In the case in question we've responded to every single event, taken out ASBOs and taken people to court. Your focus is on one incident, yet all over Doncaster people are sorting these matters out. In the end, people have to get on with each other. Doncaster has a population of 300,000 people. A poll we put together, that the Government uses, says public confidence is rising. People have more confidence not less.***

*Steve Douglas: We've spoken to a number of families in the area and they say that when something's reported, nothing gets done?*

***CC Hughes: I know how hard colleagues have worked with other agencies to deal with these issues. It's a constant battle, not a one-off.***

*Steve Douglas: Could more have been done re the Jewell family?*

***CC Hughes: The Jewell family have had four ASBOs taken out against them, which have rarely been breached so this is a success, not a failing. The ASBOs statistically and genuinely and in every single regard have had an effect in this particular case. I don't think we can solve social problems through ASBOs alone. The people involved have failed to participate in other processes (note: they've been asked to attend mediation). The police service doesn't sort out everything, such as education, social issues and poverty.***

*Steve Douglas: Couldn't this family be evicted?*

***CC Hughes: This family owns their own home.***

*Steve Douglas: But the Home Office is telling us that there could still be an eviction order?*

**CC Hughes: I'm not aware of any powers to permanently evict people in such circumstances. In what kind of fascist police state do you want people to lose their properties for calling names and glaring.**

Steve Douglas: So what's the solution? Do you need more powers?

**CC Hughes: We have powers coming out of our ears. We have officers who are working non-stop. We've investigated 111 offences or matters of antisocial behaviour in that area and dealt with it effectively. It takes more than the law alone to resolve matters. Have you been to the education authority? Thousands of families across the country are having problems resolved. You (ie ITN) tell the truth, but you don't tell the whole truth.**

Steve Douglas: Are ASBOs having the desired effect against the Jewell family?

**CC Hughes: The ASBOs have succeeded. It's when family members have not been the subject of an ASBO that problems have occurred. ASBOs are succeeding in restraining people's activities. They are not failing.**

Steve Douglas: We were in the victims' house when it got egged and we saw the effect it had on them. Police said they would be in touch?

**CC Hughes: We were in touch within just over two hours. I have listened to the original call. Egging is an unpleasant offence. The victims were called by the safer neighbourhood unit (note: just over two hours after the incident was reported to police), then arrangements were made for the officer who has been working closely with the family to get in touch when he was next on duty - not to come and see the footage because it was not possible to identify the offenders. (Note: the PC did actually visit the victims several days later, as part of his usual visits, and view the footage). You're not suggesting we take action against people when there's no evidence to do so. The victims were asked what they would like to happen, they were advised and the matter was given to an officer.**

Steve Douglas: What should police do?

**CC Hughes: I say we should do what the public want police officers to do. We have responded over and over and over again in this case. Regarding the egging, the family agreed an officer would attend when he was next on duty because that was the officer closest to the case. If it was an urgent call, South Yorkshire Police has an excellent record in attending quickly. Neighbourhood policing is a high priority for us and we are committed to delivering the Policing Pledge. I know officers have done a good job in trying to bring peace and harmony on one road and all over Doncaster people are having problems resolved. Sometimes families just don't get on.**

Steve Douglas: *Is antisocial behaviour a big problem for the Force?*

**CC Hughes: SYP gets well over 1 million calls every year into its call centre, Atlas Court. Two thirds are nothing to do with crime so antisocial behaviour is important to us. I would far rather people call us for things like name calling than for instances of children being robbed on their way to school or knocked down. Let's keep it (ie the Doncaster case) in perspective. No-one's being murdered, no-one's being assaulted, no-one's being robbed. In this case, we have neighbours who have to get along and we will do our best to sort it out. However, I understand that antisocial behaviour can get people down.**

CC Hughes also mentioned that he regularly attends Partners And Communities Together (PACT) meetings across the Force. He explained how the meetings helped locals set the policing agenda for their area. He also said he didn't think that any of the families involved in the Doncaster case had attended PACT meetings.