

UNIVERSITY OF SOUTHAMPTON

OFFENCE LOCATION AND OFFENDER

LOCALE

Community vs Travelled Offenders

An Analysis of the Spatial Distribution of Crime

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Abstract

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ABSTRACT

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The objective of this study was to determine the relationship between an offence location and the offender's locale, and to explore the influence of the type of offence and the offender's psycho-social characteristics.

The method used a multi-variate 3-year cohort of 1771 men and women drawn from a Southern County Probation Service. The database contained details relevant to the offender's personal and criminal behaviour. From an analysis of the case records, a profile of the "community based offender" and the "travelling offender" was developed.

The results demonstrated that there was an association between locale and location, with 77% of the sample offending within and against their own community. However, there were no significant differences across the genders. A small random group of offenders were interviewed and over 85% were found to be both offender and a victim of a crime.

The "travelling offender" tended to be the burglar, some violent offenders and extra-familial sex offenders. There was no relationship between distance and offence gravity, which was an unexpected finding.

A "far" travelling group was identified, but it did not significantly differ from the "near" travelling group. There was limited movement of offenders between the urban and rural areas with both offending within their own community. The relationship between location/locale showed how the movement of offenders can influence the importation, exportation and retention of crime in any given postcode area and influence community "harm".

The evidence showed that 77% of offenders do not travel to commit crime, which has relevance for community policing, community support and community solidarity. From the data, an instrument was developed to identify and predict which type of offender was likely to be a traveller and what the potential offence would be.

PREFACE

Introduction

From early biblical times society has been preoccupied with crime, its causation and its effect upon the everyday person. From the late 18th century onwards many researchers have tried to analyse these matters. It will be helpful therefore when examining the literature to take into account earlier research findings in order to progress through to current research which still attempts to find a fuller understanding of the contributory causal links. Much of the new and current research, although more sophisticated than the early evaluations, often only reinforces the earlier findings and is still seeking an elusive cause(s) that is probably too multi-faceted to be identified as the definitive cause of crime.

AIMS OF THE THESIS

This thesis will examine and compare a sample of probation records in order to determine whether there is an interactive association between the location of a known and reported crime, (for whom a person has been arrested, charged and sentenced), and his/her own residence. It will also examine the type of offence, the seriousness of the event, its gravity level and the psycho-social characteristics of the offender. The thesis will attempt to identify what, if any, factor(s) determine an offence location in relation to the offender's characteristics. The study will cover a conterminous cohort of offenders from 1995 to 1997 from a southern county Probation department.

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Chapter 1

Crime, Causal relationships, Typologies

and Crime Locations

Abstract

This chapter examines the definition of a crime. It concentrates on what constitutes a crime and what is held by statute to be a crime, and what is recognised by the general public to be a crime. The difficulties in measuring how much crime occurs shows how official statistics can be misused or flawed during the data collection. It is questionable as to whether the statistics can really ever show the true amount of "reported or unreported" crime.

The causes of crime examined are those reflected in the influential criminological theories developed over the years. The causes are outlined in the work of classical theorists, early sociological theories of crime, and the causes relating to the individual offender. They range from bio-physical and psycho-analytical causes, to the structural influences on crime which include family breakdown, poverty, the increasing use of drugs and alcohol, the effects of unemployment, poor housing, inner city area decay and the influence of peer group pressure.

The chapter then examines "who" actually commits a crime and develops a profile of a "criminal", showing how his/her behaviour is linked to the offender's community. This profile aims to explain the type of offence and its linkage to the residence of the offender. All previous research has attempted to identify a "typical" offender, rather than seeing the offender as an integral part of the community in which he/she resides.

CRIME - An analysis of what constitutes a "Crime"

What does crime mean to the everyday person in the street, the person on the "Clapham omnibus"? Many of us at one time or another have been the victim of a crime, recognised as being as much as 30% of the general population (Evans 1997). The crime may have been serious, eg a burglary or some minor incident involving litter or broken trees. At what level is it seen as "real crime" or just the daily irritation associated with our fellow humans who have little care for others in this modern "self only society". Whichever way a crime is perceived by the individual, it causes, at the very least, frustration and anger. At its extreme it can lead to psychological damage, physical harm, loss of personal and private possessions and a breakdown of the individual's system of being able to cope in a world which is now seen as "dangerous". In the most extreme circumstances death can result. However major or minor the crime, it leaves the victim in some way "damaged".

What is Crime?

The Oxford English Dictionary (2nd edition, Volume 4), defines crime as "an act punishable by law, as forbidden by the state, or injurious to the public", (properly including all offences punishable by law, more generally an evil or injurious act , an offence or a sin especially of a grave character). **Criminality** : those acts of criminality for which they would find no mercy, (Ash 1769) , Blackstone .1.V.

A crime or a misdemeanour is an act admitted or committed in violation of a public law either forbidding the act or commanding it. An offence which is pursued at the discretion of the injured party or his representative is a civil injury. An offence which is pursued by subordinates of the sovereign is a crime (Austin 1832, Jurisprudence).

Therefore it is generally held that a crime is any act or omission prohibited or sanctioned by law and punishable by the state with some form of judicial proceedings. However this is not a satisfactory definition, as by implication this excludes illegal

offences committed by institutions such as the professions, guilds or church members, who can only be tried for these "crimes" within their own Statutory Courts.

Crimes which infringe the law are enforced by the fundamental political institutions and, as all people are members of a political community, the system is aimed at protecting all citizens.

(Felson 1979) stated that there are three key elements which must coincide together for a crime to occur:

1. a motivated offender
2. a suitable victim
3. the absence of a capable guardian

A motivated offender implies that all criminals function in a rational manner, with an element of choice, forethought and possible planning before committing a crime.

A "suitable victim" suggests that the victim must always be a person. The word "victim" denies the existence of the non-tangible victim, eg graffiti or non-specific criminal damage, of which all people are victims.

The absence of a "capable guardian" refers to a person with enforcement rights who leaves the property, person or situation to be in some way violated, to the gain of the offender. Although the absence or inadequacy of the guardian allows the crime to be committed, the question is raised as to how much security should be imposed in order to act as a deterrent to the offender, and how the imposition of obtrusive guardianship could endanger civil liberties.

The absence of a capable guardian may also be manifested as the lack of some form of control on the offender, eg unsupportive parents, acceptance of truancy, lack of a job. In addition, the person may lack personal control or "conscience", an internal non-functioning guardian; eg poor socialisation or self-revulsion (Patterson 1994). The absence of the capable guardian allows, in whatever form, the crime to occur.

These three factors must encompass the fundamental definition of the interacting elements of a crime.

Downes (1997) states that crime is a vast, complex and ill charted array of activities, clumped together on the sole common denominator that they are infractions by the criminal, with no one theory or solution.

Specifically in Roman law there were five necessary theoretical elements in committing a crime (Savitz 1967):

1. the act must involve a conscious, voluntary and external harm (also related to J.S.Mill's "harm principle")
2. the act must have been legally prohibited at the time it was committed (Actus Rheus)
3. the perpetrator must have had criminal intent (mensa rea) when he/she engaged in the crime
4. there must be a causal relationship between the voluntary misconduct and the legally forbidden result
5. there must be some legally prescribed punishment for anyone convicted of the crime

Taking these definitions together a crime must:- harm, be illegal, be intentional, have a punishment and be causally linked.

But what is considered a "crime" may vary from one country or county to another. It could change over time or may even be decriminalised. If any one of the factors is missing, can it be said that a crime has been committed? Must it only be a crime if the person is caught and punished? Has a crime occurred if the person is found "Not Guilty"? The event exists but there is no one to whom the event or crime can be attributed. Crime begins with a law against a piece of behaviour which is reacted to by society, who demand some form of statute leading to protection. Therefore is it the passing of that law which determines the criminal act? The passing of the law confers

on the population a form of social control which in turn regulates the individual's behaviour.

Crime is more than an instance of behaviour. Hartjen (1974) argues that crime exists as a social phenomena following the implication of a law. The police, by affixing a label to a piece of behaviour, determines the existence of a crime. At that time, the crime is given the correct "label" in order to determine its place in the legal process and ultimately to become a "crime statistic". The creation of a crime is very dependent on the complex relationship between society determining the need for control, the individual who breaks that law and the law enforcers who apply the law on behalf of society. But if a crime has occurred but not been detected, it cannot be said to have occurred. Hartjen states that the creation of a crime can only occur if there is a successful interaction between the violators and the enforcers. It could be argued that Hartjen misses the major point, a crime can occur even if there is no interaction between the parties, but if there was intent, then there was the "essence of a crime or criminality". However the definition fails to be sufficiently discriminant within a structured language which cannot fix properly upon the fluid nature of "crime" which is always a culturally and historically constructed phenomenon.

Nettler (1978) defines crime as "wrongs, judged to be deserving of public attention through the application of state power." However this simple definition does not go far enough. It does not differentiate between crimes and civil actions, and the many other regulations that can carry a statutory penalty for breach. In short "there is no essence of criminality". No quality can be found in acts called "criminal"⁽¹⁾ which distinguishes them from non-criminal injuries⁽²⁾, breaches of contract, violations of regulations and other disappointments.

(1) Indictable crimes

(2) Non-indictable crimes

Williams (1955) states all actions that are defined as breachable in law must be "mala in se" (wrong in themselves). But not all "breaches" are crimes. The breach of a Probation Order requirement is not by its action definable as a crime. An action to defend oneself or an action without intention cannot be a crime. A person who maybe under age or duress, or has learning difficulties may not be capable of fulfilling the requirements in order to commit a crime.

The definition of a "crime" can only truly be drawn from the Law of a particular state. Tappan, (1974), argued "a crime is an intentional violation of the criminal law, committed without defence or excuse and penalised by the state". However this definition does not really address the issues as to why certain acts become crime and who perceives the action as a crime.

During 1994 a drunken driver killed a young woman whose father then, in full view of many witnesses, seriously wounded the driver by shooting him. A "prima facie" case of Grievous Bodily Harm. At the trial in spite of a "not guilty" plea and the expectation of his guilt, he was found "not guilty" by the jury (Daily Telegraph).

Here was:

1. a crime defined in law
2. specific intention
3. a violation of a defined statute
4. a clear victim
5. a prescribed penalty
6. motivation
7. the apparent absence of a guardian

yet he was found "not guilty".

The above factors can only be considered as "crime making characteristics". Their presence will make a segment of behaviour criminal. However whilst they are individual to this behaviour, they can only be pronounced as "criminal" when properly situated within the holistic environment of considerations.

A crime in spite of all its definitions must and can only occur if it is perceived as "wrong" by a particular society or its representatives. The wrongdoer is charged and found guilty, after which the enforcer can impose a sentence prescribed by law. Thus society, in the form of its citizens, has to adjudicate that this was a crime in which a penalty can be passed by the court.

Since Grecian times the interaction between the law per se, the offender and society has been the essence of criminal trials, Aristotle (Nicomachean Ethics).

With the ever increasing number of laws, bylaws, national and international laws at many levels of daily life, can any of us go through a day without some form of illegal infringement?

Unfortunately the most common techniques for measuring the various parameters of crime are notorious for their inaccuracies and disagreements; from Nietzel et al (1979) to the various British Crime Surveys from 1992 onwards.

Criminal statistics are based upon "reported crime" but this is only a sample of the total amount of crime occurring. Early statisticians believed that this sample maintained a constant ratio to the total criminality and drew their assumptions on what is now known to be a gross error (Sellin 1971).

The overall amount of crime is heavily distorted by and influenced by:

- (a) accuracy of the records
- (b) underestimation of the crime
- (c) selective underestimation
- (d) often variable local police policies
- (e) the differences between crimes known and crimes detected
- (f) the public attitude towards the value or worth of reporting crime
- (g) media attention - eg a murder a week on television

Unreported Crime

In 1991 the British Crime Survey estimated that a total of 15 million crimes were committed in England and Wales. Due to incomplete reporting and recording only 30% appear on the police records. People fail to report crime for a wide range of reasons. These often include:

1. the crime is perceived as too trivial to warrant reporting
2. too trivial to warrant police action
3. unlikelihood of detection or recovery of property
4. problems with claiming the insurance costs/problems
5. as a victim, fear of reprisal
6. sensitive nature of the offence, eg robbed when kerbcrawling
7. police attitude to cultural/ethnic crimes
8. fear of the police, eg young people and ethnic minorities
9. fear of being involved, eg witness or rape victim
10. the offence may only be known to the person committing it
11. hidden criminal behaviour, eg child abuse
12. ignorance and/or indifference

These reasons will hide the true amount of crime. Nobody really knows the amount of crime excluded by these reasons. Therefore the true incidence of crime will be constantly affected by measurement errors and statistical artefacts, incomplete data and other societal constraints.

Crime causation

Having examined the definition of what is a "crime" and the size of the "problem", it is necessary to examine what brings about this increasing phenomena in society.

1. what are the causal factors that lead to a crime being committed?
2. what other significant factors indirectly impose themselves onto the causes?

These theories can be loosely divided into four specific levels:

1. Those that deal mainly with the inequalities in society and/or the problems associated with social class.(Durkheim 1895, Bonger 1916, Vold 1958,Jaffe 1963, Matz 1964, Dorn 1963, et al).
2. Those theories which deal with the structures of society that enable the individual to function in his/her community: the right to full employment in favourable conditions; adequate housing with full health and welfare support and rights. Basically all those rights contained in the United Nations Universal Declaration of Human Rights 1948 also the research of (Farrington 1990, Rutter and Smith 1998, Cloward and Olin 1960, Picou 1974, Merton 1967, Cohen 1955 et al)
3. Theories that attempt to explain that the individual has some psychological or mental malfunction that predisposes his behaviour towards a propensity for crime, which can include bio-physical or genetic factors. (Piaget 1932, Hirschi 1969, Hogan 1973 Rutter 1974, Sheldon 1949 Gleuck and Glueck 1951 et al)
4. Moral issues, such as greed and its accompanying problems "I want". This does not, of course, deny that Sections 1 to 3 above can also contain many moral issues. .

Causal Factors and Relationships

It is beyond the scope of this study to fully explore and comment on the multiplicity of the various theories related to the causes of crime. However it is important to review some of the more influential criminological theories in order to put the offence location and the offender's locale into context and to show how both are linked to the individual's psycho-social characteristics.

In 1895 Durkheim wrote that "crime has a positive function for society because it provides an occasion for the people to unite against a common enemy, the law violator". He denies that crime is part of the fundamental wickedness of man but is an integral part of a healthy society. By acting towards the offender, society has some form of collective conscience, and by promoting social solidarity the community spirit becomes stronger. Durkheim further stated that in the face of crime, the whole group masses together and although the punishment may not be predetermined the reaction is to unify. He believed that a society without social rules would result in "anomie", a feeling of normless behaviour that precedes suicide and crime. He uses "anomie" as explanation for deviancy rather than criminal behaviour.

Karl Marx believed that it was the structure of capitalism that created a criminogenic quality in social life which was brought about by the exploitation of the working classes and the avarice of the ruling classes. Fredrich Engles (1844) explains the causes of crime as being related to the "brutishness inflicted on the lower classes in all spheres of their lives". Therefore crime was the only response one could expect from those treated in this way.

The Marxist scholar Bonger (1916) argued that criminal attitude is brought about by the misery of the working classes which is reinforced by the greed that occurs when capitalism thrives. This same approach is echoed by Vold (1958).

Within these approaches are the concepts of "powerlessness", Matz (1964), describing this "as being pushed around" and putting the offender into a state of being ineffective and fatalistic, thus creating a sub-culture in which the only response can be to commit crime against the forces that are subjugating the self.

Jaffe (1963) in his study showed that youths who scored high on a "powerlessness" scale showed a high proneness to delinquency. Dom (1968) found delinquents to be more alienated from society than non-delinquents. Much later studies (Farrington 1990, Rutter and Smith 1998) found very similar results.

Cloward and Ohlin (1960) explained the causes of youthful crime as it occurs in a gang or peer context and how many of the offences occur in groups, as did Pritchard (1992), Pritchard (1998, 2000). This context must to some extent be considered an unreal situation because many youths do not necessarily belong to a "gang".

Picou (1974) showed that the job aspirations of lower class youth in both delinquent and non-delinquent youth was high and that some had no chance of achieving their aspirations. Therefore dejection would rationally lead to delinquency. Later studies have shown a similar but weak correlation (Smith 1995, Graham and Bowling 1995).

Merton (1967) asserts that an individual internalises a certain goal which ultimately becomes so overriding that if the legitimate paths to success are blocked, the only alternative is crime, thus Society provokes crime.

Cohen (1955) proposed his structural hypothesis in which social class differences and crime are related. Like Merton he wrongly assumed that when boys from lower classes and middle classes enter school, they come with a pre-set structure of "success goals". Cohen also makes the unwarranted assumption that the lower class boy automatically aspires to middle class ideals.

Kitsuse and Dietrick (1959) state that Cohen's "image of the working class standing alone to face humiliation at the hands of the middle class is difficult to comprehend". However Toby and Toby (1957) showed in a longitudinal study that poor academic performance can precede delinquency, but poor academic performance may be both at lower and middle class levels. Farrington, Tarling, Graham, Milner et al in their research showed similar results. McDonald (1968) showed that social class is correlated with self reported delinquency but it is not totally explained by school failure, although educational under-achievement is a dominant association in any cohort of offenders (Farrington 1990, Rutter & Robins 1990, et al).

There have been many studies on the relationship between the values of the middle and working classes, but the fundamental outcome to these studies is that class differences

in criminogenic values cannot fully explain the greater criminality of the working classes.

Since the early 1960's a number of psychologists have proposed the Control or Containment theories as explanations for the causes of crime. Eminent in this field are Piaget 1932, Eysenck 1964, Reckless 1967, Hirschi 1969, Hogan 1973, Rutter 1994. Eysenck (1964) states that social behaviour is the result of situational learning and the inherited dimensions of personality.

Reckless (1967) declared that crime was caused by the "lack of containment". He rejected all the theories relating to situational causes such as unemployment, poverty and social inequalities, and stressed that there were only two factors:

1. outer containment or social pressure
2. inner containment or self control

Reckless, like Eysenck, is concerned with socialisation but both fail to explain how the differing process of socialisation can or cannot lead to offending.

It could be argued that some forms of socialisation processes are themselves a precursor to the possibility of committing crime. Fagin's teaching of Oliver Twist on how to behave as a member of the gang was clever, deviant socialisation.

From these sociological studies emerged social labelling theory. This examines how the tags or labels one is given by a social audience confers upon the receiver a specific status. Some of the key authors in this field are (Becker 1963, Lemert 1967, Erikson 1962, Schur 1971, Pilgrim and Rogers 1993).

The basic tenet in the labelling theory is that deviancy is created or constructed by the label that society assigns to the individual. Becker et al argues that deviance is not a quality of the act the person commits, but rather a consequence of the application by others of rules and sanctions to an offender. The person is given the role which he/she

acts out and then is successfully labelled. Lemert (1967) emphasises how a stigmatising label may advance and sustain a criminal identity, thus the labelling can become a self-fulfilling prophecy. As a result of its class reducing allegation it raises questions of how, if you are already in the lower class, you can drop further. Wilkins (1971) has described labelling as a "deviance-amplifying system". An initial deviation results in a punitive reaction and labelling: this leads to the development of a deviant self identity and behaviour appropriate to that identity.

Causes relating to the Individual

There are numerous theories on how the role of the individual and various family factors relate to the causes of criminal behaviour, also theories that seek psychological explanations related to the individual's characteristics including personality, impulsivity and intelligence.

Familial causes can include all aspects of parental supervision and discipline, information relating to the effect of peer group pressure, all aspects of the schooling process, leisure and many other situational factors.

There is an overwhelming amount of sociological research on social, economic, demographic, neighbourhood, community and society issues, all purporting to be factors that relate to the causes of crime.

Alongside this multi-faceted set of causation are other theories on bio-physical causes and the psycho-analytical causes.

Still seen as less acceptable is the theory of rational choice. Rational choice theory does not need to state the causes or motives for offending, but allows one to explore the actual criminal event, the role of the offender's personal antecedent and how the criminal decision-making process was constructed, thus linking offender locale to offence location.

The Bio-physical and Psycho-analytical causes of Crime

The earliest reference to the bio-physical causation of crime was work carried out by Lombroso, an 19th century criminologist who described the criminal as a "primitive throwback". Goring (1913) stated that offenders did not display "ape like" characteristics but did show levels of subnormality which made it difficult for them to stay out of trouble. It is interesting that Goring did not totally reject the biogenic cause, just the theory of a "criminal type".

Kretschmer (1925) and Sheldon (1949) investigated types by physique. Sheldon (1949) identified three type of somatotypes. The key type mesomorph, (Kretschmer's athletic), was prone to delinquency. Gleuck and Glueck (1951) also found in their study on delinquent and non-delinquent boys a higher proportion of delinquents with mesomorph physiques.

Wilson and Herrnstein (1985) proposed a psychological theory for the explanation of crime, emphasising the importance of conscience as an internal inhibitor of offending. They suggested that this was built up by a process of classical conditioning according to parental reinforcement or punishment for childhood aggression and that the major determinant of offending was the person's impulsivity. Gottfredeson and Hirschi (1990) proposed in their theory "the concept of low self controls"; they examined the extent to which individuals are vulnerable to temptations of the moment. People with low self control are impulsive, take risks and have low cognitive and academic skills.

Criminals suffering from various mental disorders are heavily represented in prison and on Probation caseloads, Cox and Pritchard (1995) and Gunn (1990), but there is little evidence that their condition/s specifically cause their offending behaviour. Gibbons and Jones (1975) previously found in their survey that the incidence of gross psychological and psychotic disorders was no greater among offenders than among non-offenders.

Structural factors which influence or are related to the causes of Crime

"Rising tide of crime is blamed on sex, drugs and rock'n'roll". So read a headline in the Daily Telegraph on May 30th 1995. This referred to a survey carried out over five years by Professor M Rutter and Professor D Smith and other academics in Europe and America.. The main findings were:

1. crime had increased tenfold in the past 43 years
2. almost all developed countries had seen a rise in psycho-social disorders in the young
3. a massive increase in the use of illicit drugs
4. increasing suicide rates in the young
5. increased divorce rates
6. 1950 to 1973 was a era of economic growth and low unemployment but this coincided with a rise in psychological disorders
7. the poor and unemployed living on depressed housing estates were more likely to be criminal, involved with drugs and suicidal
8. the mass media contribute to negative influences
9. the rising levels of disorders cannot be blamed on declining living conditions because the rise was more marked during the period when conditions had significantly improved

The most significant factors are:

1. family breakdown
2. unemployment
3. poverty
4. drugs and alcohol
5. gangs (this factor has been addressed earlier in this document)

Family Breakdown

It is generally held by the public that a broken home, divorce or loss of a partner can lead children to the possibility of being involved in crime. However there is also some disputed evidence that broken homes are associated with delinquency. As early as 1951 Bowlby popularised his theory about broken homes and delinquency, and Rutter (1981) emphasised the problems related to maternal deprivation as well as separation from father. Recently the factors that might predispose towards offending have been examined by Utting, Bright and Henricsson (1993) and West and Farrington (1993) who found that an examination of similar factors measured by the age of eight could well predict later juvenile convictions. In the now famous Cambridge study on the prediction of crime by children of criminal parents, it was shown that there was no direct evidence that criminal parents directly encouraged or taught their children criminal behaviour. However, the failed environment and family breakdown are seeds that precipitate crime.

It is accepted that family life moulds children's values, beliefs and ultimately their behaviour. Some longitudinal studies have followed a number of children into adulthood. Sutherland and Cressey (1974) examined a number of studies and conclude that six conditions within the family setting are likely to be linked to criminality:

1. other members of the family are delinquent
2. the home has been broken by divorce or other significant absences
3. parental control is lacking
4. there are disruptive family relationships
5. unconventional family arrangements
6. disruptions due to unemployment and or other financial problems

These six factors are commonly emphasised as being related to criminality. Toby (1971) had previously argued that there was no significant relationship between broken homes and male delinquency, stressing that some family homes do give a structure of social control along with moral training and a set of acceptable values.

Unemployment

Cox and Pritchard commented upon Lady Thatcher (1982) who made frequent references to Roger Tarling (1982) quoting "There is no direct proof that unemployment causes crime". She went on to say that the vast majority of the unemployed were not criminal, but she ignored the rest of Tarling's discourse on the causes of crime, who pointed out the association of unemployment with a whole range of psycho-social pathologies.

Unemployment and crime are still seen as being essentially linked because unemployment leads to a dramatic increase in the level of economic deprivation which in turn leads to insecurity and changes in the family unit. The family suffers an economic collapse. This brings about a decline in community and individual spending with an increase in social deprivation, leading to loss of belonging and the potential for crime (Pyle and Deedman 1995, Box 1982, Graham and Bowling 1995).

In 1993 the Association of Chief Probation Officers issued an analysis based on 30,000 reports which indicated that 70% of those individuals on whom a report was prepared by the Probation Service were unemployed. Cox and Pritchard (1994) in a study on Probation clients within a southern county showed that 78% of the caseload were unemployed. The total unemployment for the same region indicated that 7.5% of males were unemployed.

The link between unemployment and crime is subject to much debate. Does being unemployed lead to crime, or does unemployment bring with it all the social deprivations that predispose towards crime?

Hakeem (1982) showed that there was a strong statistical association between the two variables. Tarling (1982) commenting on this said "the association between the two over a thirty year period was strong, but the evidence was not uniform".

At that time unemployment and crime were both on the increase but now crime is increasing and unemployment is falling, can this strong association still be demonstrated.

Box and Hale looked at thirty studies on the possible link between unemployment and crime. Their overall conclusions were that the findings were inconsistent.

Brenner (1976) stated, in a study during 1970, that a 1% rise in unemployment accounted for a 6% rise in robberies and a 9% rise in drug offences. He also stated unemployment has only a partial effect on income losses.

Currie (1985) believed that the relationship between crime and unemployment is ambiguous because:

1. Unemployment can have contradictory effects on crime. Some types of crime increase (property offences) whilst others decline eg situational crime, Clarke (1992);
2. The relationship is affected by a wide range of other intervening variables, both public and community, which do not show up in the quantitative research.

Poverty and Crime

Poverty, like the previous factors, is intrinsically linked to crime, and correlates and coincides with, or contributes to, other factors in the commission of a crime. The gospel of St John stated that "the poor are always amongst you". Townsend (1993) believes that a real distinction can be drawn between absolute and relative poverty. He states that absolute poverty is restricted to the physiological needs of the person, whereas relative poverty can give way to a full consideration of social needs.

Ringen (1997), said in his study that there never was, nor is there such a thing as absolute poverty. However, one must state that a person is entitled to a certain standard of living and some minimum rights to resources.

Resources can and do mean more than money. Rawles (1973) in his theory of "Primary social goods" said there are resources such as wealth, basic rights and duties and deliberations which are "all purpose means" to the attainment of a person's chosen ends. The lower the primary social goods index, the smaller the range of life's opportunities open to the person. Thus any income or supporting resource will to some extent determine behaviour. The way in which the resource is used will affect the social context in which the resource is embedded.

Nettler (1978) states that "social class makes the difference in behaviour which depends on more than money. It is more than money or the lack of it that influences behaviour". Nettler is making it quite clear that poverty per se may influence crime, but does not necessarily cause it. Therefore it seems that neither wealth nor poverty can be a determinant of the level of committed crime. Nettler states "that serious crimes are associated ecologically (in social and physical space within a society) with relative economic deprivation. However such crimes are not associated in time or comparatively (across cultures) with relative impoverishment". Being poor may make it easier to define the person as criminal.

Townsend (1993) shows that resources are needed to meet more than just physical needs. They are also necessary to fulfil a role to one's family and/or society and to be able to participate in social customs and associations. These secondary factors became habituated following the "prosperous times" before lower wages, redundancies and negative equities. These factors have now created a "lower underclass" which with other factors can predispose towards potential criminality.

How much does poverty relate to crime? Cox and Pritchard (1994) in their research show how people in poverty, "those who have not had equal access to fulfil their citizenship", feature disproportionately in care, are unemployed, in debt, experiencing

housing difficulties, subject to addiction abuse, have higher suicide rates and all the manifestations of "deforming poverty". Bagley and Jacobson (1976) examined three ecologically contrasted areas with poor housing characteristics and social disorganisation, which must have contained some or all the above factors relating to poverty produced suicidal type behaviours.

Rawles would consider that poverty situations are indicative of an unjust arrangement of the basic institutions, and in some cases may justify civil disobedience and legitimise criminal behaviour. But poverty cannot cause the crime, it can only be a catalyst.

Stewart (1994) quotes Davis Hunt, the then Employment Secretary, as saying "thieving has nothing to do with poverty. It is the result of greed, no degree of poverty forces people into crime to subsist. We should not confuse rising expectations and demands with poverty".

If a person is committing crime, should the profits from such behaviour be taken into account when assessing poverty? The general conclusions of the various authors seem mixed when attempting to ascertain if poverty causes crime. But in the right circumstances how many would see this as the cause and not just an excuse.

Morgenstern (1963) raises an interesting question that is relative to the 1990's when he said that "there is a time lag between the changing economic conditions and its effect on behaviour and the various welfare programme and benefit changes in order to ease the hardship depressions". Does the time lag become the catalyst, which frees a person from their social controls, allowing them to commit a crime? William Shakespeare's, Romeo and Juliet, Act 5, Scene 1, says "Famine is in thy cheeks, need and oppression starveth in thy eyes, contempt and beggary hangs upon thy back. The world is not thy friend, nor the world's law. The world affords no law to make thee rich. Then be not poor, but break it, and take this."

Drug and Alcohol abuse and Crime Causation

Drugs and alcohol feature in the popular press as the biggest "cause" of crime facing society today. Drug abuse is seen by the public as having a element of choice, and as such, commands little sympathy toward the abuser.

The association of illegal drugs and crime is becoming a "problem" throughout the world. Prins (1982), quoting figures from the Home Office, said that in 1979, 14,000 persons were cautioned or found guilty of drug offences. Lyman (1991) using the U.S. Justice figures, found 53% to 79% of adult males arrested for serious offences tested positive for a recent use of more than one drug.

Pierce-James (1969) found that 76% of offenders in his study had been offenders before their addiction. Plant (1990) found similar findings. Clearly these studies show, over a relatively short period, the dramatic increase in drug related offences. The relationship between the abuser's lifestyle and his/her addiction with the associated criminality is completely inter-twined and any attempt to separate the use of drugs as a cause of crime is a profitless exercise. Stewart et al states that all the social problems that are linked to crime are compounded by the offender whose life is dominated by drugs and alcohol.

Skogan (1990) found a strong relationship (correlation = +.80) between drugs and unemployment. He also commented on the way drugs and the drug culture pervade and become totally intrusive to the individual and his/her community to the ultimate destruction of both.

Pritchard and Clooney (1994) found in their study on the homeless, along with other social problems that included drugs and drink, was the potential exposure to HIV risk behaviour; this being casual sex, prostitution, sharing of needles and other drug equipment. Cox and Pritchard (1994) in a study on Probation clients found that 30% had some form of problem with serious drug abuse.

It is worth quoting Gossop (1987) who said "the drug user is not an evil vicious depraved monster, nor is he/she a perfectly normal person suffering from a metabolic disorder. Abusers are individuals, some are hostile, some are friendly, some commit crime, some do not. There is no such thing as a single cause, lifestyle or type of personality. Many have extensive personal and social problems and were involved in crime before they became abusers." Cox and Pritchard (1994) remind us that drug dependency, whilst not necessarily a specific cause of crime, is symptomatic of social and psycho-social problems which may themselves be linked to the cause.

Anecdotal evidence suggests that the drug abuser accounts for a disproportionate amount of violence and property crime. But the relationship is still only speculative. Crime to finance the "habit", or to purchase enough to create an illusory "escape" from intolerable social conditions, will ensure that the crime will occur and that some crimes will go beyond the possession and supply, eg prostitution and child abuse, violence and theft.

Layman (1988), found that in New York, the incidence of child abuse that was directly related to drug abuse behaviour rose from 2,500 to 8,500 cases. Layman refers to Sutherland's nine basic differential associations that lead to criminal behaviour. The first and major tenet is "that criminal behaviour is learnt". If the crime occurs prior to the drug related crime, then the behaviour is already in situ and the role of the drug is secondary in its action as an originating driver.

Prins et al quotes the work of (Mott and Rathod 1976, Grimes 1977 and Wiepert and D'Orban 1979) who all looked at the effect on criminal behaviour after some form of drug treatment and found that the patients had obtained more convictions and that the treatment had no effect on the overall crime rate. The overwhelming evidence is that drugs may not cause crime but clearly the influence of substance excess (drugs and drink) on the amount and type of crime is indubitable.

Alcohol and crime fall into four main categories:

1. drunkenness with its link to minor criminal offences
2. serious abusers who commit multiple petty crime whilst under the influence, or to obtain drink
3. traffic offences whilst under the influence of drink
4. serious offences due to the disinhibiting effects of drink

Swinson (1978) found that drunkenness as an offence had risen over 70% from 1950, with over 80,000 convictions in England and Wales in 1969. By 1975 this had risen to over 100,000 and was still rising Prins (1982).

Gath and Hensman (1969) looked at men who were termed as short term recidivists and found that they had a number of problems, related to homelessness, were in a lower economic group, had failed relationships, and a family history of crime. All had serious drink problems. Most had already served prison sentences. It is of particular relevance that 17% had drink problems before turning to crime, but 29% were criminal before drink became a problem.

Clearly alcohol abuse and delinquency are interrelated and are part of a deviant lifestyle. A summary of numerous studies concerning alcohol continually highlights three factors related to the nature of violent or serious alcohol related crimes:

1. psychopharmacological - drink itself facilitates the behaviour
2. economically compulsive - the need to have the drink creates the motivation to commit the crime
3. systemic behaviour - resulting from the distribution of the drink within the sub-culture eg drinking gangs on "skid row"

Collins (1989) reported that "in general, drinking was associated with criminal behaviour". These and other texts do suggest a relationship between aggression and alcohol, but Brain (1986) states that the effects are not stable and can produce other behavioural effects on the person's moods and social behaviour.

Bush and Cooper (1990) found in a study of aggression and alcohol, along with the use of placebos, that alcohol did have a facilitating effect, both provoking and restraining behaviour. It is evident that the relationship between alcohol and crime is complex and heavily influenced by one's personality and the social context of the drinking situation.

Summary of a range of influential "literature" on Crime Causation

Much of the literature reviewed is now almost consigned to the realms of history, although it is still very relevant. This brief review has examined the various comments on crime and its causation. It is significant how many of the findings demonstrated by the early theorists and indirectly repeated by the modern researchers with their increased statistical sophistication and improved methodologies are still finding very similar results. These causes that are generally being linked to the causes of crime are :

1. family breakdown and poor socialisation
2. school difficulties, school problems and peer pressure
3. environmental factors, broken homes, poor housing estates
4. poverty and unemployment
5. the combined problems of drugs and alcohol and multiple addictions

However each factor has at some time risen in importance, only to fade when a more relevant cause is evaluated and comes to prominence. It must be stated that some causes become fashionable at a point in time.

Each factor may play a significant part and act as a catalyst. However only when they all or partly interact together can it be said that they are a potential driving factor that makes a person commit crime.

Within philosophical studies is described a form of relationship called "supervenience" (properties inseparable from other properties). This relationship occurs when one property, eg "criminality" is constituted by a configuration of other properties, eg (drugs, poverty, family problems etc). Each factor will then play a minor or a major part in the criminality configuration.

How these factor influence or relate to each other determines the strength of the supervenient relationship, in this case "criminality".

The multiplicity of factors related to crime and its development cover almost every area of human life. Perhaps the most persuasive influence is the longitudinal Cambridge study, Farrington (1995), which demonstrated that if one can divert children from becoming involved in delinquency at critical age ranges, then one is likely to shorten their criminal careers. Other findings by Robins (1976 and 1986), Rutter and Smith (1995) have examined the role of convictions within the family and supported the view that 5% of families account for half of all the convictions of family members. Failures at school, both in learning and relationships, are major factors associated with delinquency (Farrington 1990, Robins and Rutter 1990, and Ferguson 1993).

Bagley (1965) in his study on juvenile offenders took a spatial approach and concludes with a multi-causal relationship between types of crime, delinquency, class and the existence of an established criminal subculture. This interactive relationship is directly related to the main hypothesis within this which is based on the association between offence locale and offender location.

Samson and Laub (1993) went on to examine the attachment to school and poor school performance, arguing that this ultimately led to delinquency. Smith (1995) acknowledges the influence of peer group pressure and youth culture. Rutter (1995) looked at the modern phenomena of stress and how it is associated with adolescence development.

Smith (1995) goes on to argue that delinquency undermines social bonds and weakens other social relationships with a decline in moral, social and behavioural code and a disrespect for the rights of others.

All these findings led to Farrington (1995) examining the individual's social context, which showed how poverty, low intelligence, failure and lack of academic ability lead to poor status jobs and on-going unemployment, which in turn created a vicious circle of deprivation.

The multiplicity of research into drugs, alcohol and situational factors (Pearson 1978, Sournia 1990, Pritchard 1995) has looked at the way in which the addictive factors invariably created or made already fragile situations or relationships worse.

Warr (1987) and Samson and Laub (1993) examined the attachment to work as one of the most significant social bonds, and as quoted by Sigmund Freud "work binds people to reality". Being without work, together with all the other associated factors, compound the unemployed to predispose towards crime. Pritchard (1995) states that the vast majority of unemployed people are not committed to crime or other forms of deviant behaviour such as child neglect, but one needs to examine in detail how we can protect these potentially vulnerable criminals and prevent them from crossing over into further socially depriving behaviour.

Farrington's conclusion was that a crime reduction policy must concentrate on pursuing objectives that are good in themselves. That means trying to improve family functioning and school socialisation, improving the effectiveness of formal social controls, especially in local communities, and reducing the opportunities for crime. These factors were addressing the alleged causes of crime and were seeking methods of control or containment that are essentially structural, but within communities many of these factors are already in place. But why does crime continue to rise?

During early 1995 three major reports were published, each being studies on the causes of crime and social breakdown in Britain.

Dickinson (1995) examined the relationship between crime and unemployment, and suggested that crime is closely connected with the rise of mass unemployment, demonstrating that most criminals are unemployed. He looked at those involved in crime and showed that the rate of offending was correlated with the rise and fall of unemployment. When the jobless figures went up by 1%, burglary rose by 0.4%. Following through this argument, if unemployment were to decrease then crime should decrease.

Boswell (1996) evaluated the background of children who commit serious violent crimes, identifying that 40% of these children had been subjected to sexual or serious physical abuse. Following on the heels of these two reports came the study produced by Rutter and Smith (1995) whose findings were dramatically different. They seem to suggest that abuse and poverty are not causes. The rise in crime is related to the social and psychological disorder caused by post war freedom and individualism. They added that this psychological disorder may also be affected by improved education, which increases expectations that cannot be fulfilled in the real world. They also indicate that individualism, freedom and choice "could" be connected to crime and suicide.

Cohen N (Independent on Sunday 4th June 1995) comments on a view put forward by Professor Reiner of the L.S.E whose views run counter with Rutter and Smith. He insists that permissiveness does not bring about crime, arguing that Scandinavia with its permissive society, does not have a major problem with crime. He further states that although the Scandinavian culture climate is permissive, the economic climate is controlled, whereas Britain has economic and moral laissez-faire.

These three eminent reports highlight the fundamental differences between the many experts who have attempted to explain the cause of crime. Each, in its own way, is right and offers sound explanations, but only for the association of a given factor with crime. None are able to claim that they have defined the "cause(s)".

Within a supervenient relationship, the considerations examined above present crime making characteristics - those that when present tend to be constitutive of criminality.

It seems that the form of criminality is constituted by a combination of the factors, always concentrated in specific circumstances and configured in such a way that criminality emerges as the property. Each factor on its own cannot be causal but each is inseparable from the other. However this denies the existence of "choice", to offend or not. If "choice" is the driving property then these causes must only be the catalysis.

Offender Typology

The previous sections have examined what is crime and have shown how its cause/s cannot be linked in isolation to any one particular factor.

Taking this in to account, "who" does commit crime, and is there a specific individual "profile"?

Blackburn (1994) states that it is only necessary to construct an offender typology for:

1. management decisions in the penal system, to maximise the use of resources
2. to facilitate treatment decisions - matching offender needs to the appropriate settings, supervisions and treatment goals
3. to construct a theoretical understanding, in order to understand the causal theories for particular groups of offender

It is recognised that the world of the offender is not made up of stable social roles and behaviour patterns. In the offender's world his/her typology is only one part of an overall set of behaviour patterns, beliefs and values, often with the criminality changing at different times according to the type of offence being committed and its location. A typology assumes that criminals can be placed into groups that share specific self definitions and attitudes. However most definitions only label the offender with his/her type of crime.

Gibbons (1978) identified fourteen types (see Appendix 1) which shows how they have defined eight of these types into the offences, the self-definition and the attitudes of the

offender. Although this form of classification is useful, it is entirely dependent on the type of offence being committed at a point in time. In no way does it identify any of the psycho-social characteristics of the offender that may indicate reasons why he/she committed this particular crime, and why and where at this point in time. Moreover, it ignores the frequent multiplicity and wide variation of the types of committed crimes. Cox and Pritchard (1997) found that 16% of child sex offenders had been convicted for crimes other than child sex abuse.

Gibbons does acknowledge that the assumptions about this classification may not stand the test of evidence, but some inferential evidence does exist. This classification also makes the assumption that there is a correlation between offence self-definition and certain kinds of attitudes common to an offender. It must be questioned as to whether criminals' patterns of offending can be clustered over time. Are all the crimes on one offender's criminal antecedent history all linked to dishonesty? What happens if there are interjected crimes of violence or sex? Can these fit into a Gibbons typology?

Stewart (1994) looked at offending typology and excluded the actual offence and its location. He identified the following six categories, which are virtually a summation of the causal factors identified earlier in this section.

1. self expression - as a response to frustration, stress or resentment
2. social activity - the role and influence of peer groups
3. social norm - the affect and support of the family/community
4. coping - the reaction to social pressure of finance or poverty
5. life style - the effects of substance abuse or homelessness
6. professionalism - crime as a form of employment

These factors take into account the various influences on the offender and can, to some extent, be related to the type of crime he/she may commit. They are essentially linked to an attempt to explain why a person may offend and how he/she responds to the pressures to commit crime. They fail to acknowledge that some of these values may exist in those who do not commit crime.

Chaiken and Chaiken (1984), like Gibbons and Garrity, created a scheme in which they divided criminal behaviour into eight dimensions. Taking each dimension as being characterised by a yes/no response, they were able to fit 59% of their respondents into one of these eight dimensions. Again the dimensions are based on the labelled crime and again may not fit the behavioural, psycho-social characteristics or locale of the offender. There are other significant dimensions of a crime:

1. its gravity - based on a scoring of 1 (lowest gravity) to 5 (highest gravity)
2. its seriousness - using the Magistrates' Association Serious matrix
3. frequency - the number of times the offender commits an offence
4. value - the monetary value of the property or damage incurred
5. the victim - the victim, male or female or both
6. property or person - theft only or violence or both
7. the location of the crime - within or outside the offender's community

All these other factors must, to some extent, be taken into account when building an offender typology. The actual offence is one field that must be added to the cluster.

Many of the other factors that should be taken into consideration can only be applicable if associated with a particular theory or proposal. These are usually concerned with:

1. personality disorders and psychopathies
2. interpersonal maturities
3. psychiatric or mental disorder classifications. Examining the strengths and weakness of personal deficits

Taking these types of internal factors into account when attempting to assess an offender typology raises questions of the generalisability of the offender picture. Unless they form a part of the whole social or cultural picture of the person, does it, or can it, really explain who or what the offender is?

The value of a particular classification, involving the various parts of an offender profile, depends on the purpose of its use. The use of any one form of classification must at some time overlap or compete for definition and can only be used at a point in time.

Warren (1971) looked at sixteen classification systems and found the following six types of offender:

Type of Offender

1. asocial, passive to aggressive
2. conformist, immature to inadequate
3. anti-social manipulator
4. neurotic
5. subcultural identifier, socialised delinquency
6. situational

each of which could correspond to Stewart's classification, except these are drawn from an analysis of the offender's response to some form of personality measure.

Each dimension within the offender profile has been examined, measured and related to a particular theory or scale. No specific set of reliable measurements or calculable scores has been established. A set of simple facts has emerged from the literature associated with this project, identifying a typical offender:

Typical Offender

1. male
2. is aged between 15 and 29 years
3. appears at a Magistrates Court
4. the offence is one of dishonesty
5. he pleads guilty as charged
6. is unemployed

7. is from a low socio-economic group
8. has underachieved at school with a history of truancy
9. lives in a deprived area
10. has had some family disruption
11. normally has offended in or against his own community

This set of simple factors may in their own way predispose the person to offend, and will fit him into a specific and identifiable group. However within his/her own area there will be those with the same profile that do not offend. It is this discrepancy in behaviour that requires an explanation beyond the usually cited typological factors. Thus the profile becomes a simplistic measuring tool by which to characterise the "typical offender". To some extent, it denies the existence of the effect of the environment and the social deprivation on the offender's psycho-social characteristics.

Physical disease and mental disorders are substantially higher in lower social-economic groups and ethnic groups. (Bagley 1973) showed that areas with lowered social stability and with a disorganised inter-community structure had evidence of higher levels of physical and mental illnesses, Taylor (1974), Pyle and Reeves 1971 et al.

Later evidence within this study will show that physical and mental conditions will be reflected in offending behaviour and will be related to certain types of offence alongside the movement within and outside the offender's own community.

Bagley's (1965) study related certain types of crime to a lowered social class within a structure of disorganisation which when beset by the physical and mental illness (as demonstrated in his 1973 study) is clear evidence that locale, location and the offender's own psycho-social characteristics cannot be evaluated in isolation. They must form part of a supervent relationship, "criminality".

However in the various profiles of the typical "offender" there is little or no evidence relating to the offender's "choice" to offend or not. All the "causes" must be catalysts and, only when interacting together to effect choice, have a causal influence.

Ecological Conditions and Areal Distribution of Crime

The earliest evidence of the relationship between geographical areas and crime was given by the Chicago School of Sociology (Morris 1957). He tried to give an explanation for deviance based on delinquent city areas, defining what became known as "zones of transitions". There were areas where the community was disorganised and fragmented, these being areas of multiple deprivation, often in decay, with various gangs holding territorial rights. There was high unemployment, debt, crime and multiple health problems, including high infant mortality and mental disorders. Almost twenty years later similar findings were being reported by Bagley (1973,1975) et al. Within these areas were high levels of transient populations, with a strong ethnic mix. Since that time England and Scotland have developed estates that were to be "showcases" only to see such estates decline and present a picture reminiscent of those days in Chicago. Often surrounding these areas were those deemed to be "desirable" to live in.

Those living in desirable areas became concerned about the overall urban decay, increasing crime rates and drug abuse. Rainwater (1976) states that this reinforced in the person a "feeling of poverty, rejection and being trapped by a system". "All the "trash" of the slum confirming their inability to control their situation and their failures as autonomous individuals". Mays (1954) argues that high density and overcrowding prevents the normality of life. It reduces privacy for leisure, sexual relationships and increases the pressures by the close old/young mix. The only real space is out on the street. However Harvey (1975) states that "space clearly plays an important role in spatial processes" and is related to the spatial segregations of different social groups. Sayer (1978) et al point out that spatial organisation cannot be divorced from social processes and neither exist without the other.

In England Rex and Moore (1967) looked at housing estates where there had been a planned allocation for known problem families. This showed that the new residents were already stigmatised as problems or deviants prior to their arrival onto the estate.

Box et al also found people from these estates had less chance of acquiring material goods, personal status, training and education. Leisure facilities were limited.

Gold (1963) makes an interesting comment about leisure on such estates, "excitement has to be made, not queued up for". Therefore crime becomes the means to the ends. Radzinowicz and Wolfgang (1971) state that "the existence of a powerful system of criminal values and relationships in a low income urban area is the product of a cumulative process, developed by a community who have long occupied a position of disadvantage". Within these communities is clear evidence of disorder and obvious criminal action.

But is all this disorder the cause of crime or merely the public face of those who live there. Wilson and Kelling (1982) state that disorder undermines the processes by which a community maintains social control. When disorder occurs no one takes responsibility and this toleration invites the outsider and the unruly element in. Therefore surveillance is low and the criminal will not be identified. This leads to a savage impact upon the community by:

1. increased perception of the crime problems
2. greater fear of crime
3. real potential risk of being a victim
4. perceived stigmatisation by areas bordering the estate/s

Reynolds (1986) defined a problem estate as "one that causes problems for the authorities", where on occasions all officials, including the police, were sometimes reluctant to venture, leading to residents' complaints of ineffective services and policing. The evidence shows that these estates contain criminals but does living on such estates cause crime? How much crime is committed by the residents on other estate members and how much occurs outside the estate? This study will later explore the importation, exportation and retention of crime in specific postcode areas.

Reynolds writing about the Omega Estate showed that 51% of its residents had been a victim of crime, indicating that residents are frequently the prey of their neighbours. Studies have been made on the relationship between crime and density. Roncek (1975) examined a number of such studies and subjected them to a regression analysis and consistently found a positive relationship. Cox and Legg (1999), in a study on crime distribution, found no significant correlations with population density and crime per se.

Shaw and Mckay (1969) in their study demonstrated that mobility in and out of the area was a significant feature. They argued that the neighbourhood requires an informal control structure to prevent social disorganisation. Mobile and uncommitted residents do not feel involved. They also comment that children brought up in this environment become tolerant of delinquent behaviour, but concede that this factor might be related to apathy.

It must be accepted that the causes of crime on problem estates is multi-faceted and although the variables may be inter-linked, they are symptomatic of the widespread social deprivation of the estate. However it must be recognised that not all on such an estate will be subject to the various deprivations.

Intervention to change the estates in order to reduce crime must be fraught with danger. Changing one variable alone would not be productive. It must also be remembered that each problem estate has its own identity and structure, making it unique from its neighbour. Each estate is operating as an organic social complex which over time has evolved its unique set of practices and hierarchies at a sub-cultural level.

Crime Locations - the spatial distribution of Crime

Crime, its possible causes, the profile of a typical offender. The next vital question must be where does the offending occur. Inside or outside their own communities?

Taylor (1995) refers to the dearth of evidence about crime in the English suburbs, commenting that it rarely featured in studies carried out in the early 1960s. There is no mention concerning the problems of crime in literature produced by the town planners or architects of that same period. Even where there is discussion on the analysis of an area by class and status, crime does not even command a mention. Yet Home Office and police statistics for that period confirm the levels of crime.

Research into offending behaviour has been concerned with the factors that produce an "offender", the structure of his/her locale rather than those factors that linked his/her locale to the offence location. Areal analyses have shown (Herbert 1976, Murray and Boal 1979) that offenders are clustered in specific problem areas and crime occurs in those areas. Theories have been explored on the interaction between the offender and his/her environment, alongside the increased urbanisation, the growth of cities and the increasing crime rates, Scott (1972). But these theories seem to show little interest in the local environment as a point of reference, Herbert (1977)

From earlier comments in this study, to be identified as such, a crime requires:

1. a law
2. an offender
3. a victim or a target
4. absence of a capable guardian
5. a location within a community for the crime to occur

It is at the "offence location" that these and other components must come together and interact in order for the offence to occur.

What brings all these factors together at that specific moment in time and why at that specific location? Are there any psycho-social characteristics within the offender that are enabling him/her to be able or need to carry out this particular offence against this particular community? The event must depend on whether it occurs within and against their own community, or against and in another community? Thus it becomes impossible to separate the offender's behavioural factors from the social environment.

Before being able to answer these question it is necessary to define what a Community is and how a community is harmed.

Community and Offence Location

A community must by implication be a nebulous concept. What is it? How does it exist? What is its internal structure? At its best it can be defined as an area

1. with some acceptable recognised boundaries
2. with common ties
3. with a set of formal or informal social interactions

Within these three statements are potentially the three factors that define a community. It is a prescribed area ie postcode, a village, a town or a part of a town. Within it there are common ties, people are generally of the same social level eg "working class", possibly of similar education attending the local school, men working at firms within the near area eg shipyards, social interaction - the residents use shops in the immediate area and may know each other from school, clubs, or other social aspects within the community. However these key points are too vague to decide what is the offender's own community, what is it that ties him/her to that community, and how does one define a "social interaction"?

Further enquiry regarding the concept of community does not lead in any fruitful way forward in explaining the relationship between the offender's own location and the locale of the crime. Should the definition examine neighbourhood? Again this raises

serious questions about the boundaries of the area, size, population, type of housing, and all the other physical structures that make up a neighbourhood.

It also raises the problems of community ties and community interactions and the methodological difficulties of measurement.

A further difficulty is the public assumption that there are criminals areas and they always travel to commit a crime. Capone and Nichols (1976) suggest that offenders are more likely to commit crime nearer their own home, rather than travel far. But they can offer no clear reason for this.

Crime is largely an urban phenomena, Bottoms (1976). This bold statement is clearly untrue. More crime occurs in the urban areas because there are more people, property and opportunity. Crime does occur in rural areas and Capone's theory indicates that this crime is being committed by the "locals" rather than people travelling from the town. However, it would appear that Capone's theory has been severely eroded by the increased use of the motor car and improved roadways. This makes it easier for people to travel with offender movement from local area to other areas for the commission of crime. The difference between rural and urban crime is explored later in this study.

Mckay and Shaw (1969) looked at the concepts of spatial distribution of crime, producing eight factors:

1. rates of crime differ widely across neighbourhoods
2. highest rates occur in low rent areas nearer the centre of a town
3. crime rates remain high even if the population changes its composition
4. if an area has high rates of school truancy, there is a high rate of crime
5. the rates reflect the physical state of the area
6. the area has a high rate of those from the same ethnic background
7. the area has a high level of delinquency
8. if the area is disorganised with a deteriorating physical structure high crime concentrations will occur

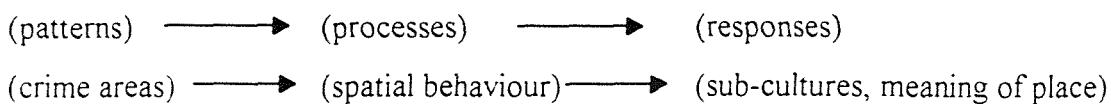
When examining a deprived area with all its problems, there is the danger that one assumes that the deprivation is evenly distributed. Within that area there may be collective deprivation but a number of the families may have satisfactory jobs, homes and be law-abiding D.O.E (1977).

Shaw et al demonstrates that within the spatial environment the production of crime is multi-causal. This opinion is reinforced by Bagley (1965) when researching the spatial approach to the social class and the nature of juvenile delinquency. Shaw et al tend to evaluate the areal approach to offending within a narrow and specific location and not specifically link offence location to the offender locale.

When attempting to map out the relationship between offence location and offender locale, each position, the offender's psycho-social characteristics and the type of crime become important. Brantingham (1984 and 1991) examined these and other social factors but did not look at the relevance of the actual offence, concentrating more on the spatial patterns rather than linking the whole data set together.

Historically it is important, in relation to Shaw and Mckay's work, to examine whether the theory is affected by changes in the overall social improvement in an area, and whether crime rates change as an area becomes more stable with an ageing or changing population. Is there any influence on the crime within an area subject to gentrification. Does an offender then come into or go out of his/her community to offend?

Herbert (1982) defines that within the space there is a pattern related to consumption, this being:



Within this structure is the offender's response and action to a crime and the effect upon the event.

Ebbe (1989) looked at whether Shaw's theory was exportable to non-western countries, in particular Nigeria. He confirmed that the effect of social disorganisation in the cities "spawned" crime, but again he failed to examine the type of crime and on whom it was being committed.

Herbert comments further on some of the problems when looking at geography of crime. He stressed that known offender rates never approach 100% of the population at risk, and offenders rarely constitute a majority. An often quoted figure from an unpublished longitudinal study states "that 75% of crime is committed by 5% of the offending population". If this is true then a small number of offenders are the prime culprits (Audit Commission 1996). However the figure (5%) is dynamic and because of many factors is constantly changing. If at an instant one was able to remove that 5%, it does not mean that 75% of the crime would not occur.

Adapted from Carter (1994) the following dimensional image of factor space:

Own Community

Familiar

Easy

Friendly

Exciting

Unsafe Environment

Bad

Risky

Poor

High crime

Dishonest

Violent

Easy

Cheap

Undesirable

Weak police

Safe Environment

Good

Safe

Rich

Low crime

Honest

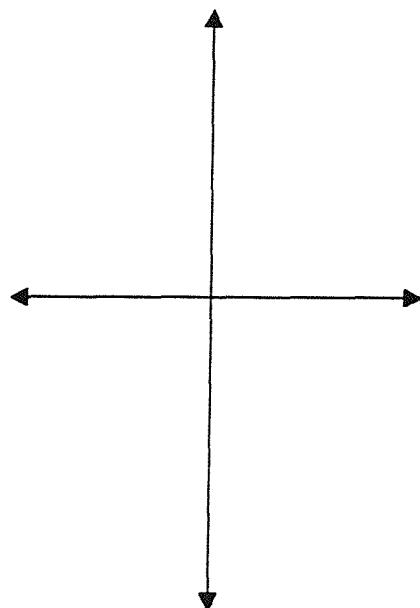
Calm

Expensive

Liveable

Desirable

Strong police



Outside own Community

Unfamiliar

Difficult

Hostile

Dull

Within this set of dimensions it becomes possible to identify where an offender may prefer to commit crime and where he/she actually does offend. The major difficulty is the problem of definition and what actually constitutes the ends of the poles? What if the offender lives in the desirable and offends in the undesirable? When looking at the relationship between location and locale, the role of the police appears to have been largely ignored which raise the following questions:

1. Do the police concentrate on known crime areas?

2. Do the police only concentrate on known offenders' locale irrespective of the offence location?
3. The police do have discretionary powers over the space and time - are these handled equitably across a neighbourhood?

The way in which these factors are handled will influence the pattern of crime distribution.

How far will an offender travel to commit an offence? This question must be supplemented by the type of offence. Turner (1969) mapped the location of offence and offender residence and by using a shortest route method found, "the offender resides close to the location of his/her crime. This remains true in spite of the presence or absence of co-defendants, but there does seem to be a decrease for certain types of offences (property thefts)".

Bersani (1966), using 19,327 offenders in Seattle found that offenders tend to move out of their area for property offences, to a greater extent than for crimes against the person. With such a large sample his findings have considerable substance.

Amir (1971), found that in 82% of cases, offenders and victims lived in the same area, but he does not really define what is the "same" area. He raises an interesting point on offences against the person, showing that both may come from the same area, but the crime occurs outside their area.

Unfortunately much of the work on the spatial distribution of crime has been done in America and it must be questioned as to whether these findings are exportable to the U.K. because of the cultural differences within counties or individual states.

As shown in this chapter, the various research on offending clearly indicates that the role of location and its relationship to the offending event is intrinsically linked to:

1. the offender's own psycho-social characteristics
2. the actual type and nature of the offence
3. the specific definition of area, neighbourhood, or community
4. the actual location of the crime and the time of occurrence

If these four factors are not researched as multiple variables the relationship between location and locale cannot be proved. This section has examined the offender's locale and the possible location for his/her offending behaviour, as being inside or outside his/her own "community" or "area".

Areas of Committed Crime and Community Harm

It is also necessary to examine how much harm is caused to the community by the offender, recognising that those harmed, in spite of the large number of crimes, are often the same persons or premises being revictimised. The British Crime Survey 1992, and Home Office Statistics 1993 indicated that half of those victimised were repeat victims and suffered 81% of all recorded crime. Some 40% of victims experienced four or more crimes a year and accounted for nearly half of recorded crimes. These victims were amongst the most vulnerable and disadvantaged members of the community, indicating that the victim and offender are occupants of the same community. Winkel (1991) found that 64% of burglars will return to the same neighbourhood to carry out repeat burglaries, and 30% will return to the same address.

Polvi (1990/91) showed the reasons for returning were possibly:

1. recognition of missed opportunities for further gain
2. reinstatement of the stolen property following insurance claims
3. offender tells others of what is available
4. the potential for gain with low risk of detection

Field (1990) found that there was an increasing pattern of inequality in the number of crimes between communities, with some areas being extremely crime free and others being constantly predicated.

Spelman (1995) states that at any given time, crime is concentrated among a few people and places, and at those high risk places people stay at risk in the absence of any specific interventions.

The British Crime Study (1998) shows how the more deprived communities suffered at the hands of their neighbours, indicating that those who live in "high risk" areas suffer a high level of "abnormal victimisation" and 23.5% of repeat victimisation

1. 27% of all the burglaries
2. 23% of violent crime
3. 23% of all thefts vehicle related

It must be noted that the crimes commented on relate to property and dishonesty, and not to the more hidden crimes of child abuse, domestic violence or racial attacks which may or may not be reported to the police or even to the British Crime Study.

It is clear that a specific area will host the criminal events. Drinking bars accommodate violence, shops and industrial estates with theft and car parks with car related crime. Each venue identifies its own particular attractiveness to the offender. So why offend against one's own community and victimise one's neighbours? If the offender lives in an area which has a high crime concentration and victimisation, can he/she be both victim and offender?

The evidence of the British Crime Survey, Bersani, Amir, Spelman et al show that an offender preys on his/her neighbours and lives and offends within his/her own community. But what are the key factors that will determine the actual crime which will lead to the decision as to where the crime will actually occur?

Professor Andrews (Carleton University, Ottawa) at a conference at Salford University September 1994, stated that in his model of human behaviour, the factors which influence the decision to commit a crime are:

1. the immediate situation
2. cognition's specifically favourable to crime
3. behavioural history (anti-social)
4. social support for crime
5. level of development is limited
6. lack of self-regulatory/problem-solving skills

He added to his composite risk scales of:

1. being male
2. being young
3. having a record
4. mixing with criminals

Professor Andrews, like many theorist and researchers commented on within this study, has examined, researched and indicated the "reasons" that lead to criminal behaviour because the elusive cause/s is still unobtainable or indefinable. It is noticeable in this description on the decision factors leading to offending behaviour, Professor Andrews has omitted " offence location" and "offender locale", but does acknowledge the influence of pyscho-social issues.

Summary of offender typology and the relevant ecological issues.

This chapter demonstrates that the four core factors: offence location, offender locale, type of offence and the offender's own psycho-social characteristics can only function in a supervient relationship. These four factors are influenced or acted upon by the other "causes" of crime which act as catalysts, but each core factor is essentially linked to the three and cannot function in isolation. Only in the relationship can "criminality" occur.

Studies on offender typology by Stewart (1994) identified six categories which explain or influence why he/she offends. The categories are almost a summation of all the

"causal factors", but Stewart omitted the offence and its location. Chaiken (1984) had previously created eight dimensions of criminal behaviour but did not include the offence location. Warren (1971) identified six types of offenders by using personality measures. These and other studies produce a "typical offender" profile which is constructed to fit the offender into a definable and identifiable group. However the research into offending typology appears to have been more concerned with identifying the offender's characteristics and the causes of his/her crime and to some extent ignored the environment as a point of reference in the equation.

Early evidence of the relationship between the geographical area and crime was produced by Morris (1957) who highlighted the extent and the effects of social disorganisation on the community and its influence on offending behaviour. Later the work of Shaw and Mckay (1969) on the spatial distribution of crime produced eight factors which showed how social disorganisation permeated the community and how it was reflected in the rising crime rates. The deprivation and crime on American problem estates was confirmed by Rainwater (1976) who described the inhabitants as being trapped by poverty, rejection and failure. In England, Bagley (1965, 1974) found similar results in those areas with disorganised inter-community structures resulting in a delinquent sub-culture. Later Brantingham (1991) explored the spatial distribution of crime, the relevance of the social issues and the offence location, but not the relevance of the actual offence.

Later studies by Herbert (1976), Murray (1979) et al, showed how offenders are clustered into specific areas with crime occurring in those areas, with those same offenders offending within and against their own community and themselves being victims, and the area having high levels of revictimisation. Amir (1971) Roneck (1975) Reynolds (1986) British Crime Survey (1992).

The typology of the offender will identify his/her inter-personal and social characteristics. The residential location of the offender will identify the community where he/she may offend or travel to offend. The locale will be influenced by the way in which the offender reacts to the environment as shown in the adapted diagram

produced by Carter (1994) on community and environment. To complete the equation requires the "offence type".

Unless or until the four components come together in a interactive supervient relationship the offence will not occur. Part of this study will be proving the positive association of these four bonds.

Chapter 2

The Commission of a Crime as Rational Choice

Abstract

This chapter specifically examines "rational choice" as a causal factor and argues that certain factors which are normally defined as causal factors are not causal, but are catalytic. These are features which can accelerate or contribute to the offending behaviour, but a "rational choice" takes place when the offender decides to commit or not to commit the offence. A decision occurs. As Aristotle states: "a decision is apparently voluntary, the continent person acts on decision not appetite".

Recognition of choice in the offender's decision making process is becoming more acceptable. Whilst still allowing for the other catalytic factors which enable the choice to take place, it could be argued that certain factors, such as drugs or alcohol, ease the conscience and make the decision to offend easier.

A modified diagram (Table 1) showing the occurrence of a criminal act, was developed by Clark (1977) and indicates showing how the alleged causes come together. This diagram was then extended to show the influences that come into being and affect "the choice" to offend. The chapter examines how such a choice can be calculated using Bayes's theorem, thus allowing a statistical probability factor to occur.

All the previous alleged causes of crime fail to acknowledge or to give the offender the opportunity of being a rational human being with rational choices. The offender chooses to commit a crime in a specific place against a specific victim or setting. His/her behaviour may be influenced by their environment, their upbringing and any of the various psycho-social factors that may influence him/her as a person, but the choice to actually offend is still made by the offender.

Treating the offender as rational cannot be denied providing that "rational" is understood as the ability to pursue ends effectively; then it could be argued his/her social matrix (in this case we are presented with criminal behaviour) forms the favourability of ends from the agent's perspective. Thus the agent is rational and criminal. If rational is considered to include the ability to form one's own ends, then the argument becomes more plausible. However it seems clear that agents do not just construct ends partly by themselves, but ends are selected from the range available. It could be argued that there is both a weak and a strong argument to support the theory that the criminal is "rational".

Weaker Argument

A criminal is often embedded within a criminal social environment. Therefore he/she will be exposed to more illicit ends and practices which will be approved of in that social milieu. Whilst he/she is also exposed to non-criminal ends or practices, these are far less prevalent than in the non-criminal. Thus whilst the criminal is not determined to commit crime (as it is frequently suggested) his/her exposure to these forms as approved will provide a criminal tendency. Thus, the criminal will require a stronger will to resist criminal activity and could be considered less culpable than a person presented with predominately non-criminal ends or practices.

Stronger Argument

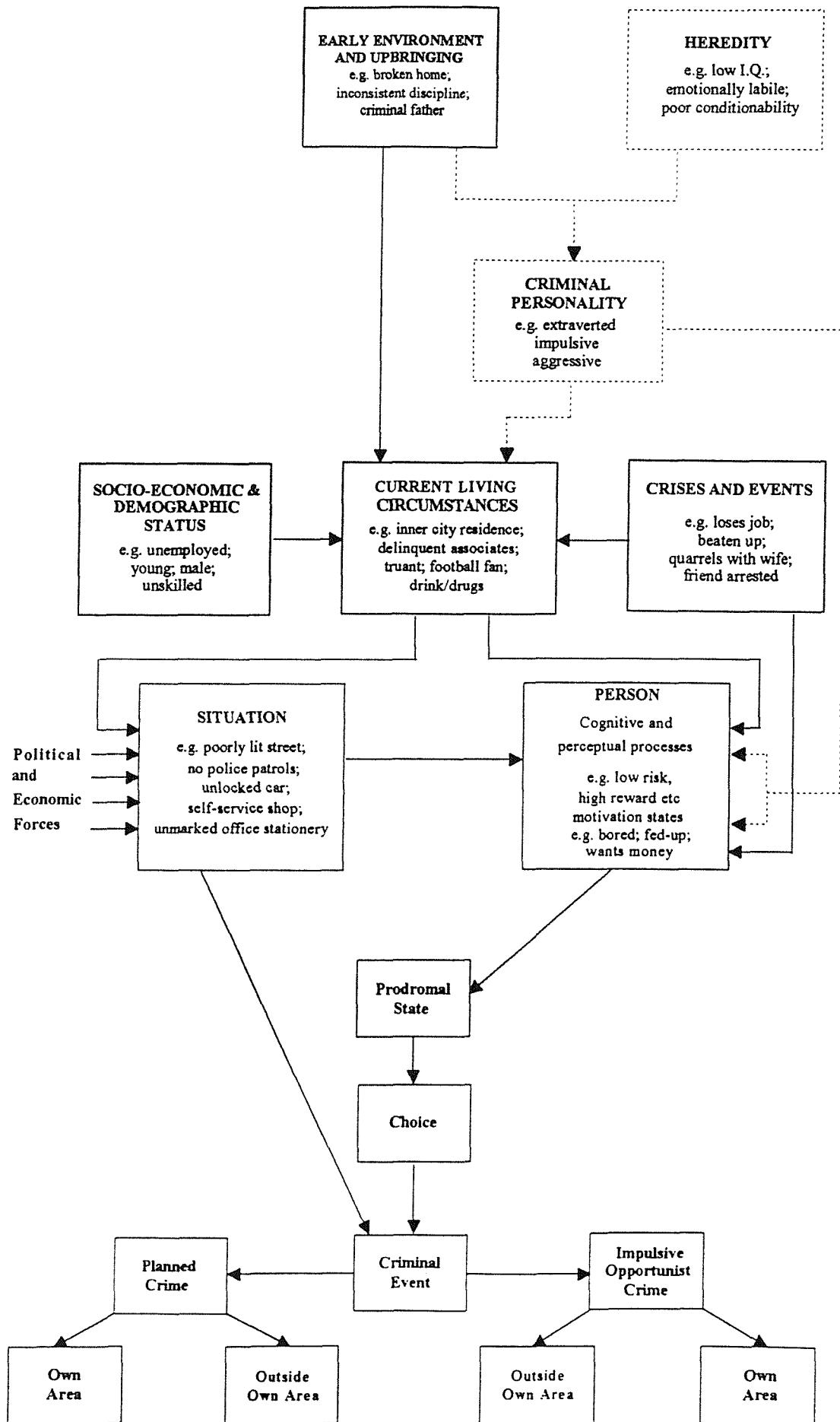
In being criminal the criminal is entirely rational, with the ends presented throughout society, and generated by social meaning that have evolved through tradition.

Typically, society demands that agents should possess or consume objects and a way of life that requires economic and social resources. Through being socialised in such an environment these ends are set, whilst the environment does not offer the appropriate resources to satisfy the ends, causing economic and social deprivation. Thus in order to rationalise or realise his/her ends, framed by a society, an enormous gap must be closed between the available and the resources required leading to utilising the employment of illegal means. All the offender's internal psycho-social factors may influence or act as a catalytic factor in the commission of the crime, but the final decision must be rational, to commit or not to commit the offence.

Aristotle, on "decision" said "decision is apparently voluntary and is not shared with nonrationals (animals), the continent person acts on decision not appetite".

The following adapted Table 1 originally produced by Clarke R.V.G (1977) shows the interaction between described causes and the rational choice and the offence occurrence. The relationship between choice and other factors are assisted or compounded by the attitude of society to the actual offence. A very similar diagram has been produced by the Audit Commission document "Misspent Youth" (1996).

TABLE 1



Elements contributing to the occurrence of a criminal event, Clarke, R V G (1977), Psychology and crime. Bulletin of the British Psychological Society, Vol 30 (with amendments to reflect choice and event occurrence)

When examining "rational choice" as a possible causal factor for the commission of crime, one should comment on Sutherland (1974) who proposed the theory of Differential Association. This states that people acquire definitions of legitimising crime through contact with other offenders who communicate attitudes and motives that condone criminal or deviant acts. Association with other criminals alongside a society that accepts certain levels of crime, reinforces the ability to decide to offend.

Warr and Stafford (1991) and Warr (1993) interpreted Sutherland's theory using a less restrictive approach. They showed that exposure to others, as a criminal learning experience, was of minimal importance. McCarthy (1996) suggested that attitudes, drives, or motives described by Warr et al (described as "symbolic elements") are key factors but he uses the word "skills". Matsueda and Heimer (1987/1988) in a study on juvenile delinquency showed that definition and learning techniques are an important component in specifying the process of committing a criminal offence. An offender learns "how" to commit a crime. This has some elements of "behaviourism" in its actions. This learning of skills from others, via gestures, association and reinforcement by motive becomes the method by which one learns to offend. At this stage the pre-offender has all the necessary components in order to commit his/her crime:

- a) the catalytic factors, eg poor family background, drugs, etc
- b) the learnt techniques of crime
- c) the opportunity
- d) the need
- e) an awareness of the risk factors or the public acceptability of the potential offence

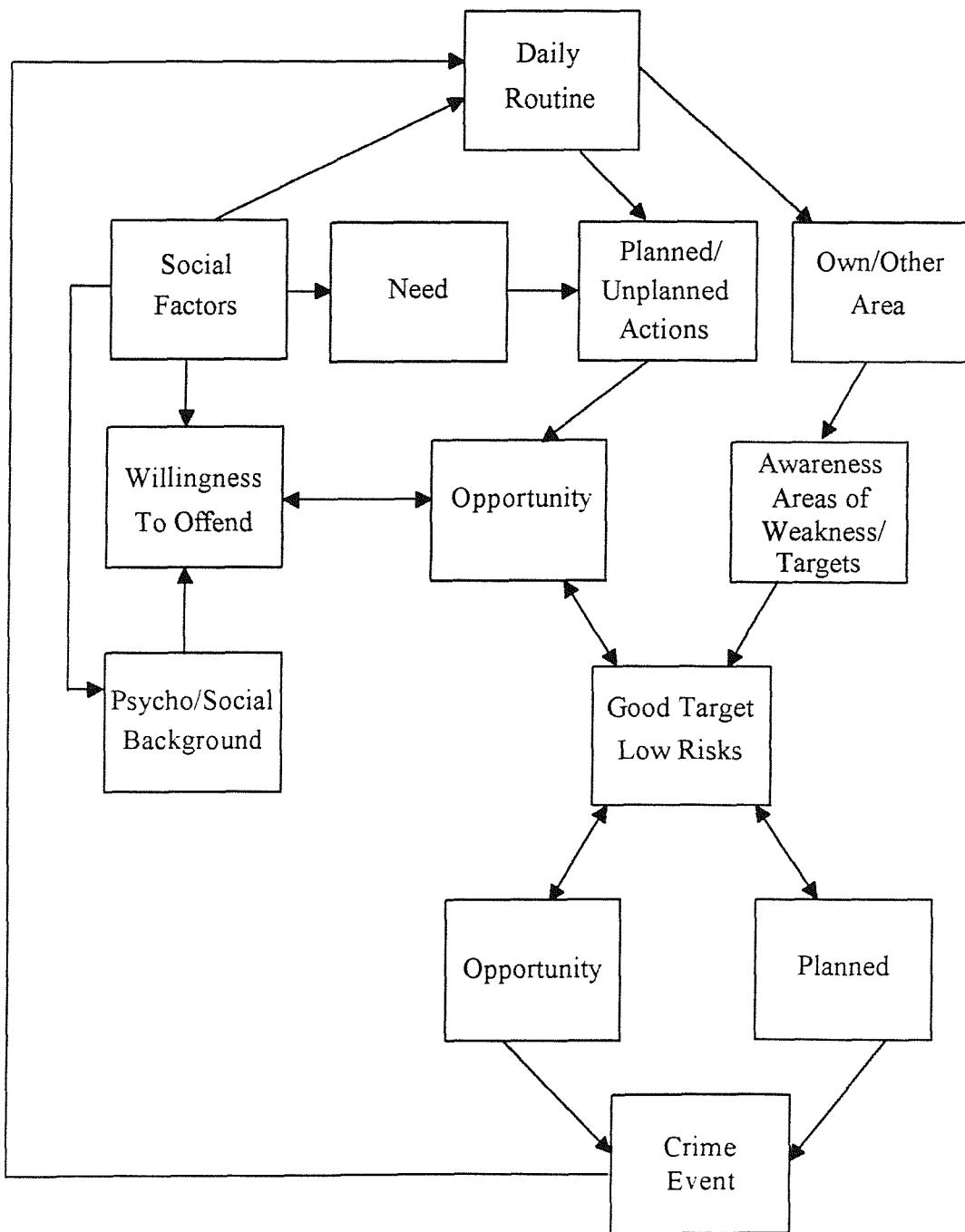
With all these factors for or against the commission of the offence, the person now has to make a **rational decision** to commit or not commit this particular crime.

It is accepted that the commission may have within it some elements of irrationality but in the final analysis the decision must be a "yes" or "no". Table 2 shows the

relationship between all the factors that link together in order for a rational decision to occur.

Linkage between the Criminal Event and Rational Choice.

TABLE 2



Rational decisions and Crime

A person's whole daily life is based on rational choices. Without this freedom of choice, (free will), is it possible to exist? To act or not to act, even in the most severe of contained situations, allows the element of choice to function. Very simply Hindness (1988) states "that the rational choice approach proposes to analyse human behaviour on the assumption that actors are rational in just that sense. Much of social life is then to be explained as the outcome of the rational choices of the actors".

Rational choices in criminal decision making arose out of a number of approaches that emerged via a number of other disciplines:

1. the sociology of deviance
2. environmental criminology and crime pattern analysis
3. cognitive psychology and information processing
4. ethnographic studies
5. economic rational choice theory driving from utilitarianism

Out of these areas arose the awareness of rational choice in offending behaviour.

Cornish and Clarke (1985) showed that crime was purposive behaviour, linked to the offender's commonplace needs and was constrained by time and ability rather than the other multi-faceted causes of crime. As crime must serve many commonplace needs, each will require, or be influenced by, a differing decision making process, but it will still be rational. Table 2 showed the linkages between all aspects of the offender's daily life. Clarke and Felson (1993) explains how this routine fits in with rational choice:

Table 3

Routine activity and rational choice

Action	Routine	Rational
	Activity	Choice
Organising perspective	yes	yes
Explanatory focus:		
a) Criminal events	yes	yes
b) Criminal disposition	no	yes
Level of explanation	macro	micro
Causal theory	yes	no
Situational specific	yes	yes
Crime specific	yes	yes
Rational offender	implicit	explicit
Policy orientation	implicit	explicit
Disciplinary parentage	geography deviancy	psychology

The above table highlights differences between routine activity and the rational choice of offending.

Although the commission of an offence is based on a loose structure of coherent decision making, it will have within it a high level of decision making uncertainty. This primarily is linked to the element of risk, and a lack of "all" available information about the action outcome. However, one could accept this statement for many routine daily choices. For the criminal it is basically a very simple but rigorous process:

1. to get caught with all its ramifications
2. not to get caught and reap the rewards

Cornish comments that on such little information, an offence will be committed. However the resulting choice will be based on all the available information with the individual setting up an internal decision making tree and will calculate or predict the probable outcome. This process can be expressed mathematically using a variety of techniques, eg Bayes's Theorem:

Bayes's Theorem

(log odds form)

$$\text{Log of prior odds} + \text{log of likelihood ratio} = \text{log of } ** \text{ odds}$$

This formula allows the choice to be calculated mathematically and as such allows a statistical prediction of the choice to be calculated. Although the basic rational choice theory was primarily developed by economists, Trasler (1964), a psychologist, argued that the rational choice theory needs to be supplemented by a "dispositional" theory which examines the connection between conscience and choice, (bounded rationality). Rational choice is to satisfy needs. Dispositional theory is related to mechanistic cause. Trasler stated that these are in competition, but Cornish and Clarke et al argue that they are part and parcel of the same simultaneous processing model. Surely for the criminal, the rational choice for action is part of a tactical decision to offend. Criminals do not believe they will be caught.

Trasler raised the question of "conscience" or "gut feeling" of what is right or wrong, and that this is the basis of a dispositional theory. It could be argued that, prior to the commission of an offence, the offender effectively makes a choice and "blocks" these factors out and that all the other alleged causes of crime eg drugs, etc assists in this blocking mechanism and frees him/her to offend (Pritchard 1993). The "conscience" is only reactivated after the offence, especially if the offender is caught. If not caught, this reinforces or makes the offending choice easier. A degree of entrapment or slippage into further offending will occur, but this will indirectly be making any future choice easier. The choice to offend will still be rational "conscience rules all of us".

Cook (1990) asks if rational choice is a version of Utilitarian philosophy or is it a theory meant to produce testable hypotheses? She goes on to state that the normative tradition of rational choice posits criteria by which to adjudge whether or not individual behaviour is rational. All rational theorists would argue that rational behaviour or choice allows the individual to achieve his/her goals. It is argued that by committing an offence, the offender is achieving a personal goal or set of needs. The decision to offend is rational but the actual action or behaviour only becomes irrational when viewed as deviant by the community upon which it has been perpetrated.

If the offender is freed of the other offence causes (conscience) and makes a decision to act, he/she will:

1. look for a potential target
2. examine the hazards and the target's vulnerability
3. assess the potential gain
4. commit the offence

There will always be the likelihood that the action will be aborted if failure is possible. At each stage a rational choice is being made. If offending is based on rational choice decision making, little can be done. Out of this depressing scenario came "situational crime prevention" - a change in the environment in order to reduce the access to be able to steal or offend, eg security cameras. Some changes may be taking place in order to improve the offender's personal situation and reduce these offending opportunities. By improving the environment and the community, it is possible to favourably alter the choice structure. Hirschi (1986) states that we should not underestimate the rationality and the level of sophistication even in our less effective criminals. Offenders constantly try things; they drop the ones that fail and repeat their successful moves. They avoid the risky, the difficult and those crimes that are the least profitable. Although Hirschi is making a broad coverage of all criminals, each is basing his/her actions on a rational choice to offend.

Does crime pay? A more radical approach to crime has been to suggest the offender takes a rational approach to crime and weighs up the costs and benefits of his/her actions. This ignores all the previous theories and treats the offender as if crime is a job by which he/she earns their living. Nettler's cost benefit table (Appendix 2) summarises the value of this approach. But this table does not assign weights to the advantages and disadvantages of any offender working to this model.

A number of models have attempted to calculate the benefits but the final answer is "it depends on what you want". With these vague answers Lipman (1973) states that crime does not pay unless you plan to steal large amounts, without conscience or partners.

Summary

Rational choice theory does not need to state the motives for offending eg whether they are financial or instrumental, or the fundamental causes. It allows one to explore the actual criminal event, the role of the offender's personal antecedent and how the criminal decision making process was constructed. However, the offender's choices, which to some extent will be based on previous knowledge and his/her reasoning ability, associated with the calculation of the possibility of gaining a successful outcome, may dictate the first choice. However circumstances may force this whole process into a second or third choice which can only be influenced by the first choice.

This study embraces the rational choice theory as the central theoretical tool within which it is possible to interpret and analyse criminal behaviour, thus establishing it as the core building block in the understanding of crime.

Chapter 3

Hypothesis and Methodology

Abstract

This chapter specifies the primary null hypotheses to be tested, which is "there will be no direct association between the offender's locale and the distance travelled to the location of the type of offence by the type and nature of the crime and/or the offender's psycho-social characteristics." Alongside the primary hypotheses are six secondary null hypotheses which take the individual characteristics of the primary hypotheses in order to show significance at differing levels.

This chapter sets out the methodology for testing the hypotheses. It examines a statistical criminal data base, built over several years, which is user friendly for practitioners, having been developed by a past practitioner. The data base contains an information set on each offender, based on his/her personal indigenous data, with elements relating to his/her offending behaviour, criminal history and the nature and type of offences. This is set alongside significant details relating to his/her psycho-social characteristics. The data base will take each factor and shows its description as an historical development of the person's offending behaviour over time.

The development of the data base over a number of years is explored and shows how its accuracy and quasi-legal status gives the data base a reliability, which ensures its use by other criminal agencies. Practical issues are discussed showing how the data base is supported by security controls with high level password access to certain data levels. The data base conforms to the Data Protection Act and the agencies relevant ethical controls and expectations.

The chapter then demonstrates how recoded anonymous post codes are used to define the offence location and offender locale.

The chapter concludes with a recognition and an evaluation of how quantitative factors can be used to prove or disprove the null hypotheses. However, it recognises the value of the qualitative influence on an offender's perception of his/her crime. To show the influence of the "qualitative", a small sample of offenders were interviewed in order to obtain a "consumer view" of how the offender views his/her offending behaviour and the way in which they respond to being both offender and victim.

"Singularity is almost invariably a clue. The more featureless and commonplace a crime is, the more difficult is it to bring home". (The Boscombe Valley Mystery - Sir A Conan Doyle).

Introduction

From the review of the literature, a theoretical model emerges that suggests alongside "choice" are four inter-related factors; namely the interaction between the offender's locale, the location of the offence, the type of offence and the influence of the psycho-social characteristics of the offender.

Primary null hypothesis

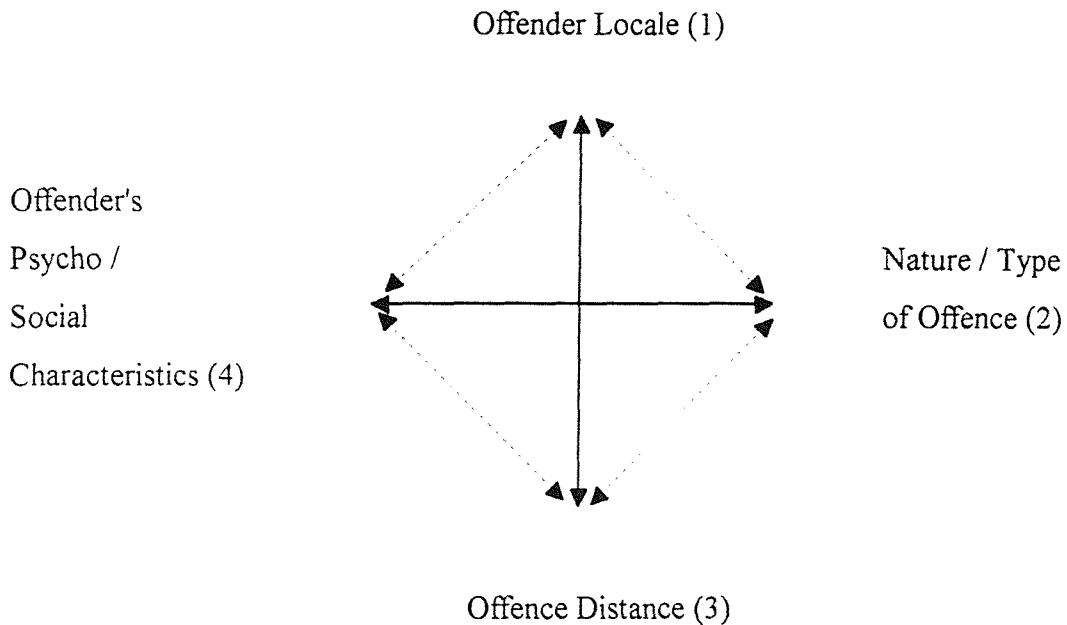
The primary null hypotheses to be tested is that there will be no direct association between the offender's locale and the distance travelled to the location of the offence by the type and nature of the crime and the offender's psycho-social characteristics.

Specific null hypotheses

1. there is no association between the type of offence and the offender's locale
2. there is no association between the type of offence and the distance of the offence location
3. there is no association between the psycho-social profile of the offender and the type of committed crime
4. there is no association between the psycho-social profile of the offender and distance of the offence
5. there is no association between the type of offence, the offence location and the offender's psycho-social profile

6. there is no association between the locality of the offence and its gravity (Home Office) levels

The following diagram shows how the four interactive factors may influence each other and how each might be dependant on the other for the outcome of the criminal event.



As each factor is closely and intrinsically linked to the other three factors, changing or altering any one of the bonds may influence the actual outcome of the criminal event. This thesis aims to test the existence of these direct relationships and to test, if at all, how each factor is closely correlated and influenced by one or more of the major factors.

METHODOLOGY

Procedure

In order to test how these associations occur, it is proposed to take two different but complementary approaches to the problem:

1. The main data gathering system is based upon a quantitative approach using an established database. This contains various factors relating to the type of offence, the location and the offender's psycho-social characteristics all drawn from a consecutive 3 year cohort of Probation Officer records. The database contains all the various factors relating to the crime and the offender.

The data will be analysed using a variety of statistical techniques to include correlations, regression analysis and discriminate analysis to accept or reject the various null hypotheses. The statistical programme to be used to explore the data is the Unistat statistical programme Version 4.0.

2. The second procedure adopts a qualitative approach to illuminate, contrast and support any of the associations identified by a statistical analysis of the quantitative data. This uses a semi-structured questionnaire (with qualitative and quantitative data) with a sample of offenders who have themselves been an offender and/or a victim of an offence and uses their personal experiences of crime.

It has been strongly argued (Bagley and Thurston 1997, Pritchard and Warr 1974) that the quantitative and qualitative approaches are complementary to each other and not necessarily in opposition, hence avoiding the sterile argument of which is better whilst recognising the value of each approach, providing it is appropriate to the question under review. The quantitative approach establishes the dimension of the problem or the association, whereas a qualitative approach can be used to some extent to animate the dimensional

data. The two approaches interact with each other, with the qualitative data illustrating how the quantitative data actually exist in a functional world.

Criminal Database Problems

It is generally accepted that some criminal statistics are notoriously unreliable, and that they are heavily influenced by the nature of the crime committed, when it is committed, by whom it is committed and how it is actually recorded, detected and acted on. Many books on criminology frequently open with a discussion on the problems of "criminal statistics"; then aim to present the data, the nature and the extent of the criminal behaviour and then show the various characteristics of those who are alleged to have committed these offences, whilst making allowances for the statistical unreliability or limitations.

The databases are also influenced at the inputting stage when the potential for inaccuracies is extremely high. During an examination of criminal statistics one must also be aware of the potential for the skewness of the data which can occur when the police concentrate on "clearing up" a particular type of crime, or the type and nature of the crime may become down graded or up graded and these factors can also skew the data into unrealistic levels (Farrington 1995).

However, in spite of these defects, the data are readily used, manipulated, and some would argue, mis-interpreted in order to serve particular professional or political interest (Bottomley and Pease 1986). Bottomley goes on further to argue that many of the criminal statistics cannot be accurate in any "absolute ways", they are only usable for a purpose or a set of purposes and that the way in which the data are collected and organised depends upon what the "user" wishes to do with those data.

From the previous comments it should not be inferred that all criminal statistics are completely flawed. It should be recognised that they are informative in a wide variety of ways and if one is to accept their fundamental value, one must also accept the data limitations.

The development of a practitioner friendly Database

Pre 1984 the key information about individual offenders was recorded manually, usually on an offender's own personal record which included information mainly concerned his/her age, date of birth, offence and court outcome. This was often only used to measure the size of the caseload and any key factors that might contribute to the decision about setting resource levels.

In October 1984 the Probation Service started to use a systematic and computerised database in order to collect information about offenders appearing at the courts. It was developed by the Home Office and placed in individual counties with the opportunity for those counties to develop the system according to their own specific needs. This was eagerly taken up in the relevant county with the enthusiastic encouragement of the Chief Probation Officer who, as a previous academic recognised the potential of an on-going broader information based system. It consisted, at its simplest level, of a number of key questions coded accordingly in respect of the offender's name, address, date of birth, age, the type of court he or she had appeared at, the type of offence, dates of hearing and outcomes. These would have been the main factors that had been collected on the manual database, only then front line staff were encouraged to see the benefits of systematic information gathering using information technology.

However, in spite of being an extremely simple database, it yielded significant information about which and what type of offenders were appearing at the various courts within the county. It was dependent on staff completing a simple inputting form and then another member of the administrative staff incorporating the information onto the database. As it was known that there would be regular accuracy checks which were to be made against the manual records, the accuracy rate quickly improved and gradually increased to 90%. Since 1994, with officers becoming familiar with the system and its benefit to them, the on-going accuracy checks indicate that 90% has been exceeded. However, it is doubtful if the accuracy will ever arrive at 100%, this being mainly due to errors at the various reporting, inputting and outputting stages.

Nonetheless, such a system when looked at across the whole service, is clearly superior to the often idiosyncratic "asystematic" recording of individual officers of yesteryear.

The limitations of the database became increasingly acute with both practitioners and managers needing to know more about the offender and his/her personal psycho-social characteristics (Cox 1996 unpublished audit on database use). Following this audit, the author proposed and developed the database. It is important to state that the database was a "user friendly" system designed for practitioners by a former practitioner.

Over the period 1994 - 1996, a number of other factors were added to the database including the offender's criminal history, the type of orders which the court had imposed and the outcome of those orders over time. The same accuracy rates were found to be valid. The database was being used extensively to look at the distribution of crime patterns across the Probation Service within this county, the various caseload characteristics and the success or otherwise of the actual work being done with the offender. Of particular importance was how individual Probation Officers found "re-enforcing" occasions, when they saw the value to their practice of a reliable information base, not just for research potential but primarily for a continuing understanding of their caseload and its characteristics, at caseload and individual level.

The database was being used increasingly to monitor:

1. changes in sentencing patterns
2. to identify certain groups of offenders and the significant factors within their psycho-social makeup
3. the re-conviction rates
4. significant breaches of orders or licences
5. the effectiveness on the varying types of offenders and their offences in relation to the treatment programmes that they were being subjected to

6. the monitoring of the increased use of additional requirements in respect of attendance for drug or alcohol treatments or attendances at specialist centres for gambling or anger management control
7. to assess the need for additional resources according to a changing caseload

At the same time, there were further requests from national and other bodies to use the data alongside other data bases to make inter-county comparisons on the use or effectiveness of various treatment programmes. At that stage a number of factors were added to the database and a full list of these factors are contained in the Offender Data Collection Sheet (Appendix 3). These extra factors were added into the database in order to collect further information on the offender's criminal history and significant personal and social factors that contribute to his/her offending behaviour. Alongside this was the development of offending behaviour programmes that required this information in order to construct a profile of attendees and the various success or failure according to the type offender being treated or worked with.

The database was now extremely extensive, covering all the offenders' personal characteristics, their criminal history, the nature and characteristics of the offence and the outcomes including any proposals for sentence and type of sentence. By now the database was considerably enlarged and required extensive inputting resources. The appropriate officers would complete the relevant data sheets which were then passed to key inputters who would put the data onto the database. The database's own internal validation checks would identify any significant errors if relevant, with these errors being passed back to the officer for correction. The strength of the system which contributed to its accuracy was the significant number of validation checks that the system was programmed to check. The validation facility allowed the checking of core information that could be directly supported or related to input information, eg it is not possible for an offender who has committed an offence that receives a sentence in excess of one year to be sentenced at a Magistrates Court. If the sentence in excess of one year was input on to the system it would automatically reject the inputting data and issue a warning. The inputter would have to check then whether the length of the sentence was correct; if the length of the sentence was correct, was the sentencing

court correct? Only after correction would the data be accepted. These validation checks ensured an increasing level of accuracy.

The database was set up to be as user friendly as possible. Staff were encouraged to interrogate the system by following a series of routine questions. This allowed the interrogator to specify the parameters of their interrogation and to obtain immediately from the system, current or historical feedback on individual cases, groups of cases or significant parts of the whole database. The initial query could then be further interrogated down to examining the characteristics or patterns of offending of one individual named offender. Hence it can confidently accepted that the data to be examined are as reliable as current methods allow.

Offence gravity scoring scales of Seriousness Levels

During mid 1992 a scoring system for measuring the seriousness of the offence and the gravity of the offence was proposed and set up by the Home Office. These two factors were based upon the scoring system produced by the National Magistrates Association and the Hampshire Seriousness Matrix Scale, both factors being key indicators of the gravity and nature of the offence. Unfortunately the way in which these calculations were made was heavily influenced by the subjective way in which the officer used the scoring scale or interpreted the seriousness levels. The seriousness levels were further compounded by the way in which the Magistrate has a right to comment on how they "perceived" the seriousness levels. In spite of many audits and training sessions, seriousness scorings have remained somewhat suspect in terms of accuracy.

Other significant Offender Data

Other factors relating to the criminal's status in the community with respect to employment, accommodation, marital status and financial status are only indicators at a specific point in time ie, when the offender is sentenced for his/her crime or at the end of any order or licence. These factors are extremely reliable as they are supported by other evidence that would have been contained in any pre-sentence report for the

court. Each factor - employment, accommodation, marital status and financial status was coded according to a set of specific definitions:

Employment (coded for)

1. currently employed
2. currently unemployed - registered with the Department of Employment and only in receipt of unemployment benefit or other additional benefits
3. self employed - registered as self-employed and not drawing any other benefits
4. houseperson - not signed on for any statutory unemployment benefits and deemed by the person to be classified as a houseperson
5. student attending any form of educational course up to degree level
6. formally retired - in receipt of retirement benefit or retirement pension
7. Government training course - registered with a formal course or enterprise course or job seeking course or New Deal
8. other - this can be coded when the person does not fit into any of the other categories eg long term sick
9. serving prisoner

Accommodation

1. residing in local authority housing or housing association property
2. owner occupier
3. residing with parents
4. residing in a voluntary hostel
5. residing in a statutory hostel
6. living in lodgings/bed and breakfast
7. in local authority care or local authority home
8. bed and breakfast accommodation
9. private flat or rooms
10. no fixed abode
11. "other" accommodation to include squats, caravans/mobile homes, tents etc

Marital Status

1. single and childless
2. single with children
3. married and childless
4. married with children
5. co-habiting and childless
6. co-habiting with children

The coding stated that if the children were residing with the parties then they were counted. If the children were adult (18+) or had left home for any reason then they would be deemed to be childless.

Financial Status (related to outstanding debts)

1. no debts
2. debts up to £250
3. debts up to £500
4. debts up to £1000
5. debts up to £1,500
6. debts over £2000
7. debts not known

All debts were to be counted with the exclusion of mortgages repayments.

Psycho-social Characteristics

A number of other factors relating to the offender's psycho-social characteristics were recorded. These being:

1. alcohol problems
2. drug problems

3. relationship problems
4. health problems
5. psychological problems
6. literacy problems
7. gambling problems

These problems are influenced by a specific definition that predetermined how they should be recorded in the coding frame. The "problem" was only acknowledged as a problem within a very tight definition that asked "did this problem contribute, influence or play any part in the commission of this particular offence." Hence, such a definition provides practice validity. For example, "if a person was known to smoke cannabis but its use was in no way related to or contributed to the offence, then it should not be recorded as a problem."

Data Protection Act and Ethical Issues

The database is subject to the rules and regulations of the Data Protection Act 1998, with the offender having free access to the data as and when required, and with data being destroyed when required under the principles of the Data Protection Act. With the exception of any third party data, this ensured that the database had to be accurate and to conform with the information supplied by the offender or other sources prior to inputting. To ensure that the codings were accurate, data was taken from the pre-sentence report and was based on statements made by the offender at the time the report was prepared, or at the time the order or licence was commenced.

The system contained a Data Protection printout which ensured that the numerical codings within the system, when printed out for the offender, were interpreted into text, eg if employed, when input would be coded as 1, when printed out for the offender it would be shown as 1 = employed. If the offender, on having access to the database, found any inaccuracy the data would be immediately corrected and the offender given a new print-out of the data in order to show that the service conformed with the regulations of the Data Protection Act.

During the preparation of the pre-sentence reports the existence and identification of any psycho-social problems and their influence on the offender's criminal behaviour is discussed and analysed. These factors have relevance to the final sentence that could be proposed by the Probation Officer. In the final report that is submitted to the Court, comments about the problems and their significance would be drawn to the attention of the Magistrates or Judges. Therefore, these problems were clearly in the open arena and accepted by the offender as having some relevance to his/her offending behaviour. As the offender would have free access to the database, it was accepted that these ethical issues were satisfactorily covered.

By 1996 the database was fully established, operational and contained in excess of 30,000 cases. It still contained some minor inaccuracies, usually relating to the way in which some of the boxes were completed. A number of audits were used to cross-reference samples of the computer data with the manual data and any corrections were made to the database accordingly.

However, it must be acknowledged that even in carrying out these audits, the data contained within the manual record may not exclude some errors. La-Mendola and Glastonbury (1989).

One minor problem was in obtaining the accurately completed coding sheet from staff within a time dimension. The coding sheet was initially set up at the time the case was adjourned for a pre-sentence report. The core personal data was inserted onto the sheet and passed for inputting. When the case was then allocated for the report, the Officer would complete the next stage which contained all the relevant information required on the form that had been elicited during the preparation of the report and would contain the proposal that the Officer was making to the Court. The case would then pass to the Court and, when the offender was duly sentenced, this data would be placed onto the coding sheet. The completed coding sheet would then be sent back for inputting. Unfortunately there was often a delay at the three stages of completing the form but it was expected that at each stage the form would be completed the same day

and passed on with the relevant papers to the Court or back to the Officer. As this coding sheet was separate from all the other documentation, it was often delayed.

This problem was solved by making the coding sheet part of an the "integrated casework record", within which the different sections that needed inputting into the computer became an essential part of that record. Staff completed the boxes which was now a part of their actual casework record. If the case was made subject to a Community Service Order, the same record would be sent to that department but with secondary changes ie hours of work rather than length of order. The form completion rates were further enhanced by a management decision indicating that disciplinary proceedings would be taken against staff if the data sheet was not completed. This was further reinforced by an indication from the Home Office that certain case data (not case identifiable) was needed in order to plan and provide the County's resource allocation.

Although the database still has some minor weaknesses, it is powerful and reliable and it is encouraging that the police have on occasions used the database for information purposes. Indeed, in the latter part of 1996 the police and the Probation database were sharing data and both agencies were collecting certain items of data within mutually agreed coding parameters but conforming to the Data Protection Act based upon the author's system. The non case identifiable data was also being used in a joint funded project with the Police, Probation and the University on offender careers and sexual offending behaviour Pritchard and Bagley (1999, pending publication) Within this joint project the superior accuracy and quality of the data was recognised by the University researchers.

Crucially related to the database accuracy was its design and development which was led by a researcher/practitioner from its instigation, and then with regular and active efforts to obtain feedback from all levels of staff in its professional use. Alongside the development was active support from the management who also recognised the database's use in planning workload strategies and resource allocation.

Data Sources

The preceding details about the database which will be the prime data source has been complimented by information obtained from other agencies:

1) Offence Charge Sheet (source - Police)

This document is normally obtained from the police and contains all the details about the actual offender, his/her name, age, address, date of birth and the offence for which he or she has been charged. It normally sets out the date of the offence, the nature of the offence, the amount and value of property involved and the specific law or statute under which the offender has been charged. This is a particularly important document as it gives full details of the actual offence. As it is the basis of evidence against the accused, the greatest care is taken in its completion as any challenge in court is greatly damaging to the prosecution. Indigenous offender information and the offence data are incorporated into this database which gives a very firm foundation of corroborated information.

2) Previous Criminal History (source Crown Prosecution Service)

This document is normally submitted to the Probation Service as part of the Crown Prosecution pack which gives further details about the case and statements relating to that particular case. This is a sub part of the addition to the database. This particular document gives core details of the offender's current position within the community, his or her employment status, financial status and some personal details about the offender. Its prime importance is the list of the offender's previous criminal history, the dates on which he or she was sentenced, the nature of the offence and the actual sentence. Again it is de facto validated because it could be challenged in the court.

Hence the availability of (1) and (2) mean that the Probation Officer's records contain de facto independently validated information from sources with the parameters confirmed by the judicial procedure.

3) The Probation Record (see Appendix 4)

As stated earlier the data collection sheet has now been incorporated into the case record and will contain all those items as shown (Appendix 3- Data Offending Collection Sheet). The record will also include all casework details relating to any work that the officer has carried out with the offender. The probation record starts at the time the offender appears at court and is completed by the officer at the court. Various parts of the form which are essentially related to the coding frames are completed and then input by the officer's secretary/inputter, or directly into the system with the officer now having greater access to a computer.

As the case then moves from court officer to supervising officer, other data is added to the record ie date of sentence, type of sentence, commencement of any specific order or licence. These changes are then added to the system by the inputting secretary. The case will then continue for the duration of the licence and/or order and any significant changes made to the record as and when they occur. Then the final details relating to the reasons for termination of the order or licences are added into the system and the case is formally closed.

The data will remain on the computer, but like the manual record, unless the offender is deemed to be a "high risk", can be destroyed after five years. At the five year period, (providing the offender has not committed any further offences in that time), the record within the computer can be anonymised and subsequently transferred into an archive file for historical or research use as and when necessary (Data Protection Act 1998). However, it may be brought forward into a new current situation if the data is deemed to have any relevance

or historical value for monitoring the trends within that particular individual's criminal career.

4) Data Access

Arrangements for data collection and access to the County database has been agreed with the relevant Probation Service providing that the use of the data conforms with the regulations set down within the Data Protection Act 1998 and that the offender's anonymity is totally protected at all times. It is also expected that the researcher will respect the rights of all persons involved with the research and that the data will only be made available at such times to appropriately authorised persons.

5) Timescale and Data Sample

With the database having a core accuracy of 90% and the opportunity to check and insert missing data if relevant and available, a cohort sample will be drawn from all those cases who appeared at court from 1st January 1995 to 31st December 1997, on whom a pre-sentence report was prepared for the court and a final sentence that involved the Probation Service was passed for the offence committed by that particular offender. It is necessary to ensure that a pre-sentence report was prepared and that the case was subject to some form of supervision or licence by the Probation Officer in order to ensure that a complete data set on that particular offender was available. Excluded will be those cases who appear at court with whom there will be no further probation involvement and where minimal data would be available.

The data collection sheet (offender) shows the information that will be used for this particular study. From this sample each case will be drawn and examined for any empty boxes or missing data. Where there is missing data, if this can be obtained from any manual record, the data will be added to ensure the completeness of each individual offender's data collection sheet. Those cases

where there is a large amount of missing or unobtainable data, will be excluded from the sample. From the final sample, all cases with a complete set of data will form the basic working sample. Essentially the sample will be a cohort of offenders involved with a County Probation Service. The sample will then be stratified according to the following offence categories (Home Office):

1. violence
2. sexual offences
3. burglary
4. theft and handling
5. criminal damage
6. drugs
7. indictable motoring offences

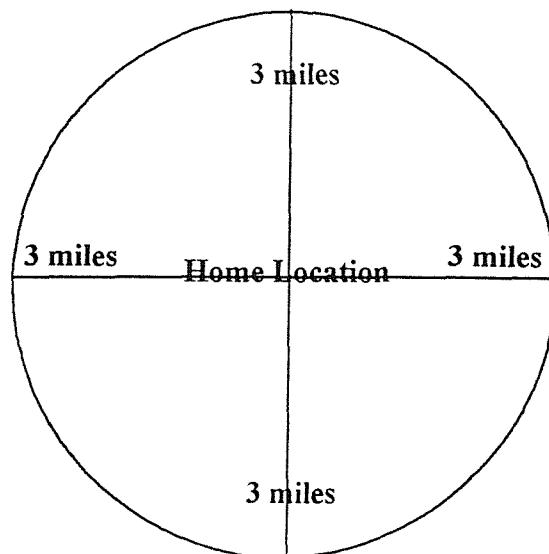
6) The Offender's Own Community

The question of what is an offender's "own" community is extremely difficult to answer. Earlier investigations contained within the literature study (Chapter 1) highlighted that many researchers cannot agree an acceptable definition of "community". For the purpose of this study the offender's "own community" will be defined "geographically" by the author as an area of a three mile radius around his/her own home address. This definition has been developed by:

The Offender's Community Area

- a) it takes approximately 30 minutes to walk three miles
- b) in most urban/rural areas the shops, buses, immediate needs and other facilities, means passing through "your" own area to access them

- c) by passing frequently through the three mile area the person will be aware of neighbours, friends and the general area layout, road names and road layouts



Postcode Definitions

1. Postcode of offence location will be the first four digits recoded to preserve offender anonymity.
2. Distances from offender locale to offence location will be based on correlating the relevant postcodes. See Appendix (6) giving distances between each and all postcodes.
3. Offences within the offender's own postcode eg address XXX, offence YYY will require specific measurement using postcode mapping. This will give some slight distance distortion as the exact path the offender took from offence location to own home or vice versa will not be known. However, this method will give an element of constancy for all offenders by using a linear path between

Home Location A \longleftrightarrow B Offence Location

Summary of the Quantitative approach, the Database and the Offender data

Collection sheet

This chapter has highlighted the development and the uniqueness of this database, throughout its developmental period. It has explained how practitioner requirements have lead to its current use, and the nature and accuracy of the data contained within it. It is essentially designed for and by practitioners with a researcher who was originally a practitioner.

The data collection sheets have highlighted data that is available and the way in which it can be collected and used. Access to the database poses no significant problems.

The confidentiality of the data has been covered by the reduction of any significant information that could identify a specific offender through a specific address.

Acknowledgement has been made of the reliability and validity of the data to be used. It is believed that any skewness that could arise from the way in which the police data have been obtained will be counterbalanced by the size of the sample and the length over which the sample period is fixed.

It must be recognised that when drawing data from the database, one is only "capturing" a partial historical record of what actually took place when that "offence" was committed. However, it is believed that because data which is based on the "known", and with the supporting data drawn from other parts of the system, this gives the database a very high reliability. The validity of this data has been supported by:

1. checking for representativeness across the whole sample
2. obtaining from the informants ie, the manual record, confirmation of the accuracy of the data
3. recognising that there may be some skewness but that in itself should be weakened by the time factor and the sample size

One of the unique factors relating to the use of this database as the source of information is the increasing stability of the observations recorded over time, described

by Kirk and Miller (1968) as diachronic reliability (development through time) and the factor they describe as synchronic reliability (events at a particular time), thus enforcing stability within the same time frame. Both these factors are highlighted in the database. The data has now almost achieved a "quasi-legal" reliability reinforcing the importance of its own internal accuracy. Moreover, in respect to offences, whilst the database does not include all the offender's activity, there can be no false positives. The data therefore is a fully comprehensive co-active cohort with an accepted respectability for accuracy. The database is now a very powerful tool. It is subject to regular internal checks and high level password controls.

For the purpose of completeness within this particular research project, the major weakness must be that the research study is only examining those cases for whom the Probation Service has had contact and the availability of data in respect to those offenders. There are, of course, a considerable number of offenders with whom the Probation Service is not involved within the Courts and for whom information is not available in such detail as to be analysable in the way stated in this document. Also excluded are non-detected crimes, or crimes where action has resulted in a "non guilty" outcome.

The Qualitative Approach

In this study it is important to recognise that when measuring crime and criminality, the research should not only reflect the quantitative changes in time and space but also the qualitative factors which allow the offender to illustrate what he/she personally feels or believes is actually happening in the world in which he/she lives. There is a significant value in self-reporting and it has considerable complementary value within this particular study.

Using qualitative methods poses a different set of problems and a completely different set of expectations from the quantitative method. Some believe that qualitative and quantitative methodology inhabit polarised ends of a continuum. Silverman (1985) states that the popularity of quantitative methods started to decline within the

discipline of sociology in parallel to the decline in survey research after 1965. He stated that psychologists, economists and clinicians were inclined to discount research not based on "counting" whereas sociologists felt awkward about being seen to be dealing with statistical analysis. However, Silverman goes on to say "counting helps to avoid the temptation to use merely supportive gobbits of information to support the researchers interpretation", and then gradually states that quantitative methods can be a useful tool "even in constitutive ethnography".

This scathing criticism to some extent highlights the perceptual differences between the quantitative and the qualitative analysers. Miles and Huberman (1994) start their book with the quote "How can we draw valid meaning from qualitative data and can we get knowledge that we and others can rely on?" This suggests some implicit (hidden) discounting of the use of the qualitative method. They go on to state that "the most serious and central difficulty in the use of qualitative data is that the methods of analysis are not well formulated. For quantitative data there are clear conventions the researcher can use".

It is generally accepted that qualitative data have usually been in the form of words rather than numbers. The findings are often a descriptive explanation of processes with an identifiable local context where it is possible to preserve a chronological flow of events and consequences over time. If the words are organised into incidents or stories they can convey a more concrete, vivid and meaningful flavour that maybe more understandable than a data table with its tests of statistical significance, probability and rigour.

The purpose of this approach within this study is to animate or illustrate the world of the offender and to give supporting evidence to the series of statistical analysis that will have proved or disproved the null hypothesis.

The quantitative approach has its importance primarily in producing numerical frequencies and complex statistical analysis: it is of a major importance in giving insight into the quantitative strength of the tendency towards crime in any given area

May (1988). This statement by May is essentially linked to the primary hypothesis. Rejection of the null hypothesis could allow measurements of the quantitative strength of the criminal behaviour and the offender's characteristics within or outside the offender's location.

The Offender as Victim sample

The strength of the qualitative approach is emphasised by recognising that offenders reside and commit offences in and against their community. By using this approach the researcher can explore the offender's perception of being an offender and both how they see their own crime and the effect of crime, when they are the victim, particularly how they are dealt with when a victim. The relationship between their own community and the crime committed by them and others within it can also be examined.

It is proposed to draw a sample of twenty five random cases from the current Probation caseload, but stratified across the county in order to get a sample representative of both urban and rural offending population. This sample size was selected because it was envisaged that each interview would take approximately one to one and a half hours. The sample would be county wide and would involve considerable travelling to visit the sites in order to carry out the relevant interviews. The logistical arrangement in order to ensure that the interviewee attended for the appointment would be considerable and there was an expectation that a number would fail to attend. Therefore further cases would have to be selected in order to reach the projected sample of twenty five. These cases were to be selected using a random number method from the total caseload. These offenders would be within one of three categories. The way in which the data set was constructed allows the sample to be identified, but the database does not in any way indicate whether the offender has themselves been a victim or not. This means that the sample within each of the three categories will be approximate. However, previous evidence (Chapter 1) suggests that as many offenders offend against or within their own community, the sample will undoubtedly contain those who have themselves been a victim of a crime.

The three categories are :

1. an offender who committed crimes and then became a victim of a crime perpetrated against him/herself
2. an offender who has first been a victim of a crime and then he/she proceeds to become an offender themselves
3. an offender who has never experienced being a victim of a crime

A semi-structured questionnaire was designed to enable an in-depth interview to be carried out so as to complement and animate the quantitative approach by highlighting over a sustained period the offender's "lived experiences" (Miles and Huberman 1994), with their behaviour located in how they structure their criminality within the community. Within this setting it must be recognised that one is attempting to capture from the offender "data from the inside". The task is to assist the offender, without bias, to account for and explain how they perceived their offending behaviour and being offended against. This approach raises questions about the skills of the interviewer and the way in which the text is recorded. For this study the researcher will carry out all interviews in order to reduce the researcher effect or bias. To provide a degree of conformity and uniformity in the questionnaire administration, the open ended questions were tested for inter-rater reliability.

Offender as Perpetrator and Victim schedule (Appendix 5)

The Questionnaire

The questionnaire has been designed to examine the perception of being offender and/or victim. It was to be administered in a semi-structured interview situation with the selected interviewee being told that he/she is part of a research project on offending and offence location. The rules of confidentiality would be explained and his/her agreement sought to take part in the interview. The purpose of the interview was to obtain from the offender qualitative data about his/her perception of their own offending and how they saw the nature of the offences perpetrated against them if relevant. Later sections would aim to elicit a more general opinion on how they see

their own neighbourhood as a criminal focus and the type of offences they may be prepared to commit in or outside their community.

This interview schedule was piloted on a very small number of respondents. The layout was found to be satisfactory and the interviewees clearly understood the purpose and the instructions for their co-operation. There was little difficulty in getting the responses, although they all indicated that they thought there was "no justice" when they were the victims. Ramsey (1995) states that offenders become disillusioned with and even defiant of a law which chastises and criminalises them but will not protect them as equal citizens when they become a victim. This small pilot group felt that once labelled an offender they are more likely to be offended against because as victims "others" know they are less likely to report the offence.

Procedure

The data is to be collected in a semi-formal setting. The interviewer aims to carry out the interview at a Probation Office ideally on the same day the offender is due to see his/her Probation Officer. This mutual arrangement aims to reduce the possibility of the offender failing to keep the appointment. At the start of the interview the interviewer will ask permission to address the respondent only by his or her first name in order to maintain his/her anonymity. Following an introduction the purpose of the research will be explained to the offender and at the same time his/her rights concerning confidentiality will be carefully outlined and the offender's preparedness to co-operate in the research will be solicited. The structure of the questionnaire and the interview will be outlined and again the issue of "non-identification" will be stressed. Each interviewee will be asked if they have objections to the data being recorded on tape whilst at the same time the interviewer will complete the questionnaire manually.

Questionnaire Completion

The interviewee will be prompted (for Sections 1 to 5) for the offence he/she has committed, when, where, how, whom against, knowledge of the victim, its location, their own location, how they believe they were apprehended and the effect of any sentence. These prompts will be repeated for any previous offences they had committed.

Section 6 will examine the number of times they have themselves been offended against. Offenders will be prompted for the type of offence, time, place, value, the knowledge of the offender and their views of being a victim and the offender's sentence.

Sections 8 to 14 will examine their perceptions of their own social area, the nature of the deprivation in their own area and then prompted for the explanation of why they think people commit crime and the sort of crimes they would commit within or outside their own area.

Finally, perceptions will be sought to elicit any views or opinions of whether they felt they were treated differently when they were a victim, having themselves been an offender. Pilot interviewing for the purpose of testing the questionnaire highlighted that these offenders felt that when reporting their offence to the police, the police view was that "they got all they deserved" and now they know what it is like to be offended against. Each offender did not feel that they were treated fairly with the justice and care that a victim should receive.

Analysis of Qualitative Data

Following transcription, the analysis of this data will be by Content Analysis with the data being clustered or broken down into question segments in order for the researcher to analyse any specific patterns within the interview setting.

The analysis of qualitative data was described by Dilthey (1977) in his thesis on human discourse, "human activity was seen as text - as a collection of symbols expressing layers of meaning". This led towards the theory of social interactionism where the interpretation was the understanding of group actions and interactions and on to a wide range of qualitative research into semiotics, deconstructivism, ethnomethodology and hermeneutics. The analysis evolved more and more towards the descriptive, and the use of multiple anecdotal sources such as diaries, historical events and in-depth interviewing. In spite of all these approaches Yin (1991) states that we are now gravitating towards the use of more fully codified research perceived questions, with standardised data collection procedures and with more systematic devices for analysis. This indicates how Silverman's criticism chronicled the decline of the quantitative method and the rise of the qualitative method, which Yin is now suggesting is a subtle move back towards a more systematic and almost numerical method of analysis.

The qualitative approach is supported by Atkinson (1992) who states that fieldwork interviewing and experiences are basically text constructed by the fieldworker through use of his/her observation and participation. When the data is transcribed it is possible to produce a different text which may be heavily influenced by the interviewer. The data production, by the process of selecting, focusing and transforming, could move the researcher to make further interpretations, thus subsuming the analysis into a totally different set of meanings or interpretations. Although this could be argued as a criticism of the qualitative method, a similar situation occurs within the quantitative methodology with the transformation of the statistics and the table presentation.

However the key factor that must support the use of the qualitative data in this particular study is that it will be focusing on a naturally occurring event within the offender's own setting. This study will explore and illustrate the offender's perceptions of offending and offending behaviour which could not be obtained from a purely quantitative approach.

Chapter 4

Data Results and Analysis

Abstract

This chapter examines a cohort of 1771 cases collected over a three year period from 1995 to 1997. All the relevant variables appertaining to the offender's own locale and the offence location, alongside the individual's personal psycho-social characteristics, were cross-tabulated with each offender's post code and offence post code. From this data set, the core characteristics and the offence factors were built, and a picture emerged that enabled the identification of the offender's residence and the movement of the offender between locale and location. The use of postcodes enabled mapping exercises to take place.

From this analysis of the postcode areas, it was possible to show how each area can "import" or "export" crime and how these factors contribute to the amount of harm suffered by individual postcode communities. These results were then plotted onto a community map in order to show the harm level distributions.

Preliminary analysis indicated that it was safe to treat the sample as a total cohort and not divide the sample into male and female sub-categories. To prove this an analysis of gender predominance identified that it was safe to accept this decision, and throughout the remaining analysis the cohort will be treated as an homogenous group.

A series of graphs was constructed from this data set showing the movement of offenders, not only within their own community (up to three miles), but also the emergence of the "near" traveller (up to six miles) and the "far" traveller who moves in excess of six miles from his/her community to offend. The difference between the three types of travellers are explored. Further analysis identified the movements across rural and urban areas. It found there was very little difference between the near and far traveller but significant differences between the person who offends within his/her community and the offender who travels outside his/her community.

Conclusions

This approach employs a semi-structured questionnaire on twenty five offenders. The data will be analysed using Content Analysis. This approach will essentially complement and support the quantitative approach and one without the other will not satisfactorily support or deny the links between the four major factors:

1. offence location
2. offender locale
3. the nature/type of crime
4. the psycho-social characteristics of the offender

The two approaches will identify the strengths or weaknesses of the four interlinking bonds.

Proposals for statistical analysis of the Data

All numerically coded data was stored and analysed on a statistical (Unistat V.4.0) database. It will analyse the data by using a variety of statistical techniques to measure the levels of association and other correlation's to explore the null hypotheses.

Proposed statistical tests to be employed:

1. correlation analysis
2. Chi sq
3. G.I.S. mapping using an interactive computerised mapping package
4. discriminate analysis (canonical)

Introduction

The data was collected over a three year period from 1995 to 1997 and represent all the commencements made to the relevant Probation Service during that period. A small number of cases were excluded where the system did not include all the data or the offender resided outside the county area. Each individual case was selected three months after the commencement date in order to allow for the relevant data to be collected, put into the system and checked for accuracy.

The data set consists of 1771 cases with the relevant variables appertaining to the offender's psycho-social characteristics, the offence, the offence location and the postcode of the offender. When this data is put alongside the county postcode areas, it produces a data base of infinite complexity and the potential for multiple analysis in many directions. The potential for such an enormous analytical task led to a preliminary analysis of the data from which emerged the following seven key areas:

1. the social characteristics of the offender and the offence by individual post codes
2. movement of the offenders across, and between, the postcode areas
3. gender
4. gender predominance
5. offence characteristics
6. distance travelled
7. county and local crime importation, exportation and retention

1. Social characteristics and offence details by individual postcodes
(Please note : all postcodes are now anonymous, because of the sensitivity of the data).

This section takes the county and divides it into the individual post codes. The total data base, along with the relevant variables and the offender characteristics, is then set in context with each of the individual postcodes.

2. Movement of offenders across and between Postcode Areas

The key core hypothesis is to examine the relationship between offender and the distance travelled to offend. Therefore, it becomes necessary to plot the pattern of movement across the county. Within this section, the county is divided into significant postal regions and the movement of the offender is examined in relation to their own locale and offences committed in other locations.

3. Gender Analysis

This section aims to answer the question, "is it feasible to treat the sample as an homogenous group, regardless of gender or are there significant factors that would lead the analysis into treating the total sample as two sub-sets, male and female"?

4. Gender Predominance

If the sample, when analysed, clearly indicates that it is feasible to treat it as a whole, then it must be accepted that within the sample there will be certain lesser factors in which there will be gender predominance. This section will examine the difference between the observed response and the expected response and, by using the "expected" response, construct a profile to demonstrate whether there are any specific sub-variables that are gender predominant.

5. Offence Characteristics

The type of offence and its relationship to the offender, his/her psycho-social characteristics and the distance travelled are part of the core hypothesis. The offence gravity score will be calculated. The effect of the offence and how it harms the community will be linked to show how offending is retained, imported or exported from the offender's own location.

6. Distance travelled between location and Locale

This is part of the main hypothesis. The relationship between the distance and all the previous sections commented on in this chapter will come together. The distance and the nature of the offence and the psycho-social variables, if proved and the null hypotheses is rejected, will lead to the final section of the whole thesis. The intention will then be to set up a predictor/instrument that will identify, by using a range of the variables, the potential for the next offence and whether it is committed in or outside the offender's own community.

7. Harm in the Community

This section will move back from the total sample to the individual postcodes and will demonstrate, within each individual postcode, the retention, importation or exportation of crime, showing the levels of community harm upon that individual postcode.

Social characteristics and Offence attributes by postcode Areas

The following tables are an analysis of the total sample by the postcode areas and treat the sample as if all offences were committed within the offender's own postcode area. They are designed to give a broad picture of the multiplicity of problems and the psycho-social characteristics set within each specific postcode area.

Tables 4 to 11 show the county postcode details with the various attributes and problems as percentages of the total sample within each of the postcode areas. Within these tables are a number of calculated data fields.

Percentage of Gender distribution by Postcode Area

This table shows the percentage distribution of male and female offenders across the postcodes. Throughout the table it is predominantly 90% male and 10% female,

although it is significant that in some areas the number of females is extremely high. Y18 shows 42% females and Q6 29% females. Y18 is urban whereas Q6 is semi-rural and are areas that could be described as mainly middle class. However, this is not a realistic explanation for the high female offender component.

Table 4

Postcode	N = 1600	N = 171
	Percentage male	Percentage female
Z1	91.5	8.5
Z2	91.6	8.4
Z3	95.1	4.9
Z4	90.6	9.4
Z5	85.2	14.8
Z6	87.4	12.6
Z7	94.1	5.9
Z8	85.1	14.9
Z9	92.1	7.9
Z10	86.6	13.4
Z11	89.1	10.9
Y12	89.2	10.8
Y13	81.8	18.2
Y14	91.5	8.5
Y15	92.4	7.6
Y16	82.2	17.8
Y17	91.2	8.8
Y18	57.1	42.9
W19	95.5	4.5
W20	88.1	11.9
W21	79.5	20.5
W22	90.4	9.6
V23	86.7	13.3
V24	100	-
V25	100	-
U1	94.9	5.1
U2	89.3	10.7

U3	85.9	14.1
U4	93.4	6.6
U5	86	14
Q6	70.9	29.1
Q7	77.7	22.3
Q8	100	-
Q9	94.1	5.9
T10	86.7	13.3
T11	92.3	6.7

Percentage of Employment status by Postcode Area

This table shows the average unemployment status per postcode area with Y13 having the highest level with an unemployment rate of nearly 24%. This is an area that could loosely be described as "inner city", - an area of multi-occupied properties with a drifting population and a high homeless component.

Table 5

Postcode	Unemployment status
Z1	3.9
Z2	9.8
Z3	5.4
Z4	7
Z5	11.3
Z6	3.9
Z7	5
Z8	3
Z9	2.3
Z10	4.9
Z11	3
Y12	2.2
Y13	23.5
Y14	2.9
Y15	2.2
Y16	4.1

Postcode	Unemployment status
Y17	2.1
Y18	6.7
W19	8
W20	2.6
W21	0.9
W22	2.5
V23	1.4
V24	1.4
V25	7.3
U1	5.2
U2	1.9
U3	2.8
U4	2.2
U5	2.3
Q6	5.2
Q7	2.7
Q8	4.4
Q9	2.8
T10	4
T11	6.3

Percentage Age range of the Offender by Postcode Area

This table shows the percentage of ages across the postcodes. The age ranges are not normally distributed and clearly reflect the nature and characteristics of the areas in which the offender resides. However, it is clear that the younger age ranges predominate in the offending group regardless of the area, with the exception of V24. The younger age range is heavily represented in the U-T areas which are predominantly rural areas and later tables on the movement of offenders will show that some of these offenders move from the rural area into the urban areas to offend.

Table 6

Postcode	N = 1771					
	Age					
	< 20	21 - 30	31 - 40	41 - 50	51 - 60	> 60
Z1	13.2	47.8	25	10.9	2.5	0.5
Z2	8.4	38.3	31.8	15.9	4.7	0.9
Z3	24.4	46.4	-	24.3	2.4	2.4
Z4	17.2	56.2	15.6	6.2	1.6	3.1
Z5	21	38.3	27.3	10.9	1.2	0.8
Z6	16.8	46.9	14.2	15.8	5.3	1.1
Z7	22.6	45.3	21.4	8.3	2.4	-
Z8	29.3	41.9	18.8	5.5	4.4	-
Z9	23.2	38.4	28.4	7.4	2.1	0.5
Z10	29.2	39.6	22.6	5.5	2.4	0.6
Z11	26	41	17.1	13.2	2.7	-
Y12	24.7	48.6	18.5	6.1	1.5	0.4
Y13	22.7	9	13.6	36.4	18.2	-
Y14	14.7	44.9	18.6	13.9	6.9	0.8
Y15	22.7	35.2	25.8	15.6	3.8	-
Y16	21.2	47.4	22	6.8	0.8	1.7
Y17	15.8	42.9	28.1	13.2	-	-
Y18	42.9	-	42.8	14.3	-	-
W19	20.6	45.5	20.5	11.4	2.3	-
W20	32.2	33.9	22	8.5	-	3.4
W21	24.1	37.4	19.3	12	7.2	-
W22	49.6	39.8	15.1	5.5	2.7	-
V23	17.8	40.4	27.2	7.6	6.9	-
V24	-	54.6	9.1	22.3	9.1	-
V25	62.5	25	12.5	-	-	-
U1	30.7	50.1	16.7	1.3	1.3	-
U2	7.1	46.4	14.3	14.3	14.3	3.6
U3	20.4	37.5	28.1	6.3	3.1	4.7
U4	26	45	19.9	8.5	0.5	-
U5	28	36	22	10	2	2
Q6	54.5	42	1.4	-	-	2.7
Q7	50	35.1	-	12.5	-	2.3

Postcode	N = 1771					
	Age					
	< 20	21 - 30	31 - 40	41 - 50	51 - 60	> 60
Q8	48.5	32.5	14.2	-	-	4.8
Q9	48.5	36.4	3	6	3	3
T10	51.4	28.6	4.8	12.3	-	3
T11	57.6	33.8	3.9	0.9	-	3.8

Percentage of Offence type by Postcode Area

This table examines the offence type by postcode area. W21 and T10 have a high rate for motoring offences, whereas W20 and U3, which are in a more rural area, a high level for violence. The rural U-T codes have high ranges for dishonesty as do most of the other postcodes, but as this is the most common type of offence the findings are expected. Levels for sex offences are low, except in V24, and it is important to recognise that the numbers for sex offences are generally extremely small. The high figures for drug offences are primarily in W19, W20 and V23 (urban), with "hot spots" in U-T postcodes (rural).

Table 7

Postcode	N = 1771					
	Motoring	Violence	Dishonesty	Sex	Drugs	Other
Z1	25.8	11	41.7	1.9	9.1	10.4
Z2	21.5	14	38.3	2.8	10.3	13.1
Z3	31.7	7.3	43.9	2.4	4.9	9.7
Z4	21.9	7.8	50	-	3.1	17.2
Z5	27.3	12.5	46.1	0.8	3.9	9.4
Z6	34.7	8.4	43.7	1	7.4	4.7
Z7	30.9	8.3	414	1.2	7.1	8.3
Z8	24.9	10.5	48	0.5	7.7	8.3
Z9	43.7	13.7	27.4	1.1	4.7	9.5
Z10	34.7	11.6	36.6	1.8	4.9	10.4
Z11	36.8	6.6	34.1	0.4	7.7	14.3
Y12	32.4	12.3	41.3	2.3	3.1	8.5
Y13	33.3	4.5	45.4	-	4.5	9.1
Y14	32.5	10.8	37.2	4.6	4.6	10.1

Postcode	N = 1771					
	Motoring	Violence	Dishonesty	Sex	Drugs	Other
Y15	40.2	12.6	31.4	-	5.7	10.1
Y16	24.6	11	46.6	0.8	4.2	12.7
Y17	27.2	8.8	44.7	0.9	6.1	12.3
Y18	14.3	-	42.9	-	-	42.8
W19	29.5	15.9	34.1	-	11.3	9.1
W20	23.7	23.7	32.2	1.7	13.5	5.1
W21	47	8.4	32.5	-	6	6
W22	35.6	13.7	39.8	1.4	1.6	8.2
V23	31.6	13.3	34.2	1.9	13.3	5.7
V24	36.3	18.1	27.2	9.1	9.1	-
V25	-	-	62.5	-	-	37.5
U1	9	16.6	57.7	1.3	7.7	7.7
U2	14.3	17.8	50	3.6	3.6	10.7
U3	25	23.4	34.4	-	9.4	7.8
U4	17.5	16.6	45.5	4.7	2.4	13.3
U5	28	16	34	4	12	6
Q6	19.1	22.1	42.6	-	11.8	4.4-
Q7	23.1	7.7	61.5	-	-	7.7
Q8	21.4	21.4	42.8	-	7.2	7.2
Q9	17.1	22.9	48.6	-	8.6	2.8
T10	46.7	14.3	30	-	6.7	-
T11	19.2	31.7	28.8	2.9	9.6	7.7

Percentage of Offence seriousness and community harm by Postcode Area

This table indicates the effect of offence gravity and links to measuring seriousness and community harm. The seriousness per event is calculated by the number of units of crime per offence committed in a particular area, measured by the gravity of the offence. Seriousness per offender indicates the number of serious units (of crime) per Probation case, per offender in a particular code area. This allows the calculation on community harm. This indicates the average number of units of crime inflicted on a thousand members of a particular postcode area. It is probably the most effective indicator of assessing the degree of social damage inflicted by the offender population

upon members of the local community. The highest amount of community harm is indicated in Z1, Z2, Z4 and Z5 (described loosely as inner city). However, it should be remembered that at this stage the data is looking at the offender as if he/she has committed the offences in his/her own particular area. In order to prove the hypotheses the data will subsequently examine specifically where the offender resides and where the crime was committed. Then a true figure for the amount of community harm will be calculated.

Table 8

Postcode	Seriousness per event	Seriousness per offender	Community harm
Z1	3	2.9	128.8
Z2	3.1	3.1	98.2
Z3	3.2	3.2	18.1
Z4	2.8	2.7	49.5
Z5	2.9	2.8	80.2
Z6	3.1	3	55.7
Z7	3.2	3.1	41.1
Z8	2.9	2.9	39.2
Z9	2.9	2.7	32.2
Z10	3	3	47.4
Z11	3	3	65.7
Y12	3	3	39.6
Y13	3.3	3.4	27.4
Y14	3.2	3.2	35.1
Y15	3.2	3.2	30
Y16	3	2.9	36.7
Y17	3	2.9	22.3
Y18	2.7	2.7	3
W19	3	2.8	21.5
W20	2.9	2.8	13.9
W21	3.1	3	9.9
W22	2.9	3	16.1
V23	3.4	3.3	21.3
V24	3.1	3.1	2.7

Postcode	Seriousness per event	Seriousness per offender	Community harm
V25	3.4	3.4	2.6
U1	3	3	25.2
U2	3.2	2.9	6.3
U3	3.1	3	14.7
U4	3.1	3.1	31
U5	2.8	2.8	16.4
Q6	2.8	19.1	0.3
Q7	2.9	8.9	1.2
Q8	2.7	13	-
Q9	3.3	10.3	0.5
T10	3.4	13.6	1
T11	2.9	20.1	0.9

Percentage of Psycho-social problems by Postcode Area

Tables 9-11 indicate the percentage of the various addictions and health problems of those offenders living in the postcode area. Many of the offenders will have more than one problem area. The problem is defined as being relevant when the particular problem has in some way specifically influenced, affected or contributed to the offending behaviour. It is not proposed to comment in detail on these specific tables until later in the study when their influence on the hypotheses will be tested.

Table 9

Postcode	Alcohol	Drugs	Gambling	Physical health	Psychiatric / psychological
Z1	20.7	10.7	2.9	7.3	11.5
Z2	23.3	16.5	1.9	5.8	17.5
Z3	25	19.4	-	8.3	8.3
Z4	14.4	32.5	2.4	3.6	7.2
Z5	21.1	20.3	1.6	3.9	11.7
Z6	16.9	9.3	4.4	4.9	14.7
Z7	19.3	19.3	2.3	2.3	14.8
Z8	16.6	12.7	2.8	5.5	13.8
Z9	26.4	9.7	2.1	2.1	12.5
Z10	28.8	18.8	2	5.4	12.7
Z11	21.8	12.2	3.8	7.1	9.7
Y12	29.4	11.7	3	2.5	7.6
Y13	21.2	9.1	6.1	6.1	18.2
Y14	17.3	7.1	-	8.2	16.3
Y15	32.4	13.4	2.1	6.3	8.4
Y16	24.1	7.2	4.8	6	7.2
Y17	18.7	16.7	4.2	4.2	20.8
Y18	-	-	-	-	-
W19	17.2	20.7	-	-	13.8
W20	24.1	6.9	3.4	5.2	17.2
W21	21.2	10.6	3.5	5.9	15.3
W22	23.7	17.1	5.3	3.9	10.5
V23	23.5	5.4	0.7	7.4	18.8
V24	25	-	12.5	-	25
V25	45.4	45.4	-	-	-
U1	15.4	20.3	1.6	8.1	11.4
U2	11.6	6.9	2.3	2.3	53.5
U3	15.7	12.3	3.4	7.9	13.5
U4	19.3	14	2	8.3	12.3
U5	13.6	4.5	9.1	4.5	-
Q6	18.5	18.5	1.5	20	9.2
Q7	15	10	-	10	15
Q8	30.8	23.1	-	7.7	-

Postcode	Alcohol	Drugs	Gambling	Physical health	Psychiatric / psychological
Q9	18.2	9.1	-	6.8	9.1
T10	36.8	5.3	-	-	10.5
T11	21.2	13.6	1.5	7.6	10.6

Table 10

Postcode	Problem sex	Offender physically abused	Offender sexually abused	Offender sexually and physically abused
Z1	4.7	2.1	1.3	0.8
Z2	1.9	0.9	-	-
Z3	5.5	5.5	-	-
Z4	2.4	2.4	-	-
Z5	3.9	1.6	0.8	0.8
Z6	5.3	1.8	0.9	0.4
Z7	2.3	2.3	1.1	1.1
Z8	1.1	2.2	2.2	2.2
Z9	3.5	1.4	-	-
Z10	3.3	1.3	-	-
Z11	2.1	0.4	0.8	-
Y12	1	1	1	0.5
Y13	-	-	-	-
Y14	3.1	1	-	-
Y15	2.8	0.7	0.7	0.7
Y16	3.6	1.2	2.4	1.2
Y17	-	-	-	-
Y18	-	-	-	-
W19	1.7	3.4	3.4	3.4
W20	5.2	3.4	-	-
W21	8.2	2.3	-	-
W22	3.9	-	-	-
V23	6	2	0.7	-
V24	-	-	-	-
V25	-	-	-	-
U1	2.4	0.8	0.8	-
U2	-	2.3	2.3	2.3

U3	-	3.4	2.2	2.2
U4	5	4	2	1
U5	4.5	-	-	-
Q6	-	1.5	-	-
Q7	-	-	-	-
Q8	-	-	-	-
Q9	2.3	2.3	-	-
T10	5.3	5.3	-	-
T11	-	4.5	1.5	1.5

Table 11

Postcode	Relationships	High risk offender	Driving	Literacy
Z1	18.3	5.5	8.9	5.2
Z2	15.5	6.8	5.8	3.9
Z3	8.3	5.6	11.1	2.8
Z4	14.4	8.4	6	6
Z5	14.8	6.3	9.4	3.9
Z6	17.3	7.1	13.8	3.1
Z7	15.9	9.1	4.5	5.7
Z8	19	4.9	9.9	6.1
Z9	20.8	9.7	9	2.8
Z10	14.1	6	-	7.4
Z11	16.4	6.7	12.6	6.3
Y12	18.8	7.6	10.7	5.1
Y13	15.2	-	18.2	6.1
Y14	21.4	14.3	8.2	3.1
Y15	14.1	4.2	9.2	4.9
Y16	20.5	2.4	13.3	6
Y17	16.7	4.1	10.4	4.2
Y18	100	-	-	-
W19	17.2	3.4	6.9	8.6
W20	18.9	1.7	8.6	5.2
W21	17.6	4.7	7.1	3.5
W22	13.2	3.9	13.2	5.3
V23	16.8	2.7	10.1	6

Postcode	Relationships	High risk offender	Driving	Literacy
V24	37.5	-	-	-
V25	9.1	-	-	-
U1	17.9	4.1	8.9	8.1
U2	11.6	2.3	2.3	-
U3	19.1	3.7	8.9	4.5
U4	17.7	8.9	2.7	2.7
U5	22.7	22.7	13.6	4.5
Q6	16.9	3.1	6.2	4.5
Q7	20	20	5	5
Q8	23.1	-	15.4	-
Q9	22.7	15.9	11.4	2.3
T10	21.1	-	15.8	-
T11	22.7	6.1	4.5	6.1

Postcode rankings by Social attributes and Offender Characteristics

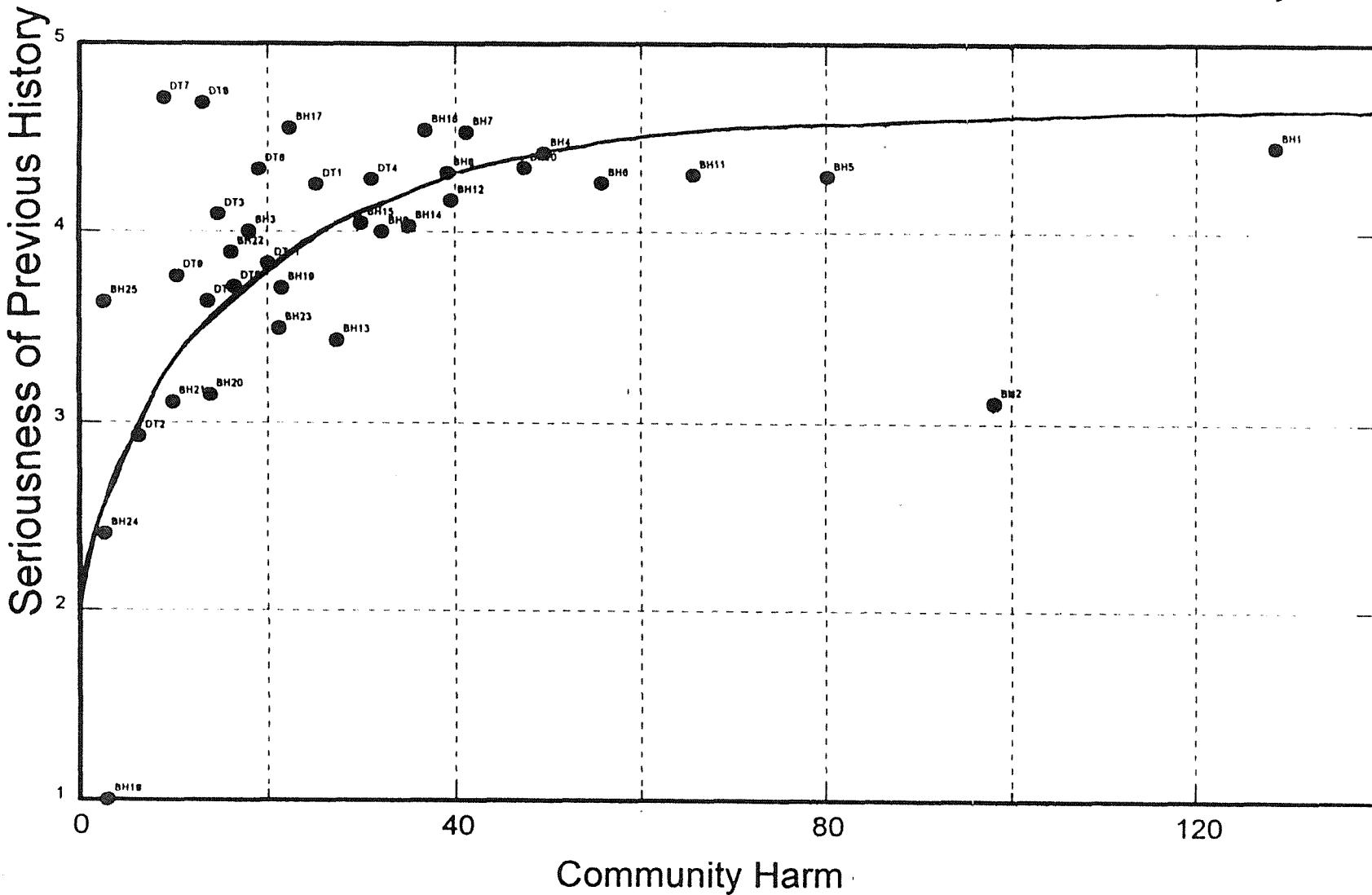
Tables 7 to 11 have ranked the percentage of each offender characteristic or problem according to its place in the postcode table. Each offence or problem area was cross-tabulated by each postcode. The data clearly showed which areas have the highest level in the crime/problem rankings. Those areas which have the highest rankings for social problems, include most or all of the following:

1. the number of offenders
2. problems relating to addictions, literacy, physical, psychiatric and social health
3. the offender him/herself being sexually or physically abused
4. the highest levels of offences from violence, dishonesty, sex, drugs and motoring

As a result of these rankings, the following graph shows how seriousness of the offender's previous criminal history is reflected into community harm. Community harm is calculated by the average number of units of crime inflicted on a thousand members of a particular postcode area. If the graph was repeated for the other attributes or factors, the rankings would clearly demonstrate the same line postcode

distribution within the graph would be portrayed. These potential findings are confirmed later in the study within the tables on crime importation and exportation.

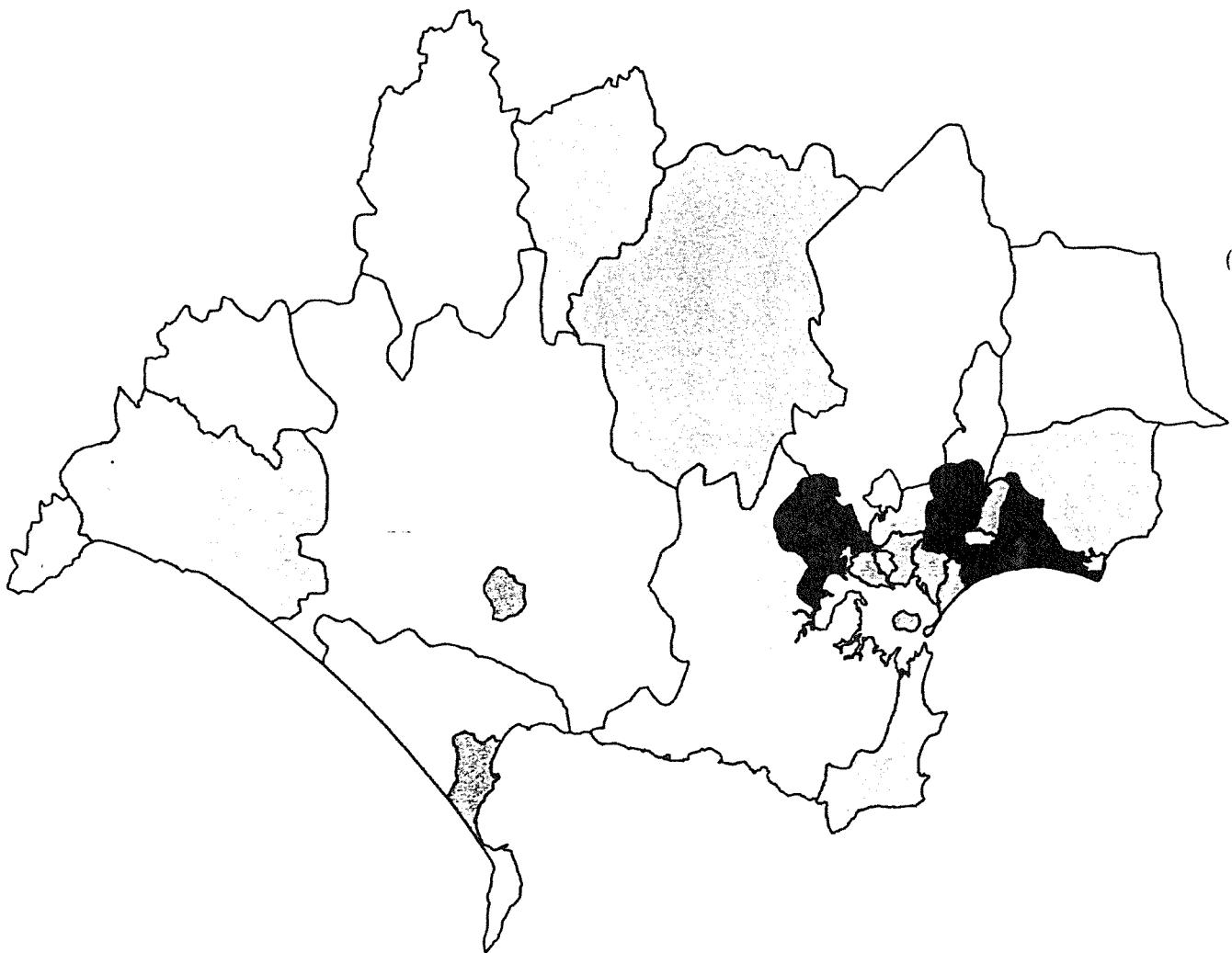
Community Harm vs Seriousness of Previous History



Map of South Coast County Community Harm Levels

This map shows the level of community harm (number of offences weighted by seriousness) that has been inflicted upon a thousand members of the postcode areas. The darker the hatching the higher the level of community harm. This map is particularly useful in identifying those areas that are more prone to being harmed by the offender population and can provide assistance in those decisions involving the allocation of resources orientated towards the short time prevention of offending. However, as earlier stated, it presumes that the offenders in the sample have offended in their resident postcode area. Later analysis will confirm that 77% will offend within their own locale which could alter the harm distribution map but not dramatically.

South Coast County Community Harm Levels



Community Harm Level per 1000 Population

White	2.70 to 13.04
Light Gray	13.04 to 18.08
Medium Gray	18.08 to 25.18
Dark Gray	25.18 to 36.75
Black	36.75 to 55.75
Very Black	55.75 to 128.80

Community Harm indicates the level of crime that has been inflicted upon 1000 members of the population.

Community Harm is calculated (Sellin & Wolfgang 1964; Pg. 307) such :

Community Harm = Crime Seriousness Summed over events / Total Population

Population Source : 1991 Census Data

- 15 Year olds counted as residents in households

Movement of Offenders across and between Postcode Areas

The following tables (12-14) show the location of the offenders in relation to the area in which they live. Each of the main postcode areas was divided into the specific regions within the county, based on the way in which the postcode boundaries are allocated within the town/township boundaries. These tables demonstrate how offenders travel towards the urban areas to offend, whilst those who already live within the urban area also offend within that area. Movement across the lesser (rural) populated areas is extremely small. The area has a very unusual population distribution with 75% of the county population living along the coastal strip and with only two major pockets of population beyond that area, the rest of the county is sparsely populated. The movement of offenders, from their own home area to the offence location calculated by distance, becomes a very significant part of the later analysis and is a major part of the main hypothesis.

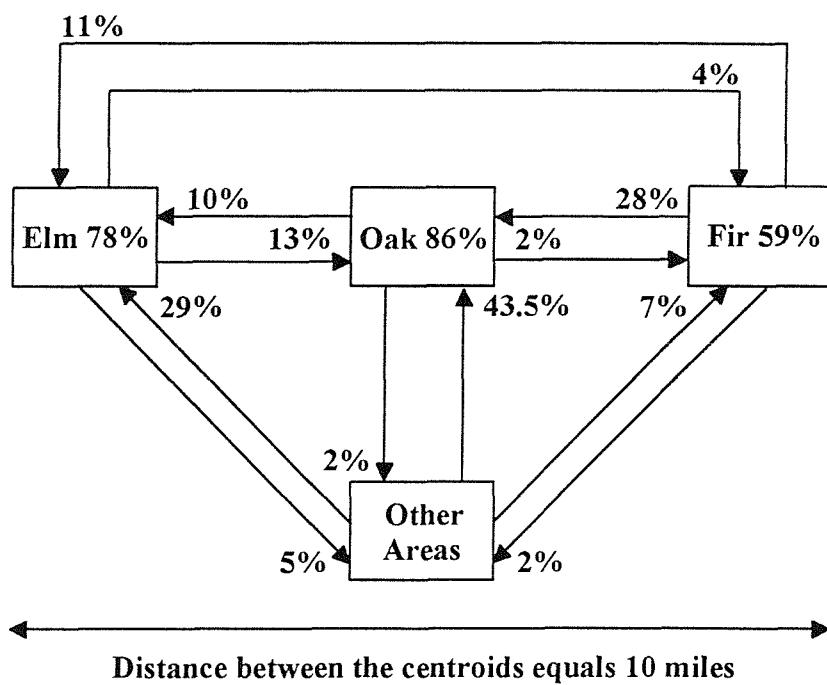
These tables are extremely significant as they demonstrate how offenders move around the area in order to commit offences and have significance for policing or crime prevention. If it is accepted that within the rural areas the amount of crime committed or imported to the area is extremely small then this could influence resource implications.

Table 12

Offender Movements between Urban and Rural Areas

How to Read this Table

Percentages within the boxes eg Elm 78% indicates that 78% of offenders live within Elm and offend within Elm. The arrows indicate the movement of offenders who live within one region and offend in another region e.g. 13% live in Elm but offend in Oak.



Elm)
Oak) Urban areas
Fir)

Other Rural areas

How to read the following tables

The shaded areas indicate the following examples:

- 456 = the total of persons who offended within the region of Elm
- 480 = the total number of offenders who were living within the region of Elm
- 353 = number of offenders living with the region Elm who offended within the region of Elm
- 59 = number of offenders from region of Oak who offended in the region of Elm
- 100 = number of offenders from region of Elm who offended in region of Oak

- 78 = is the percentage of offenders who offended in region Elm lived within the region Elm

Offence Location by Offender Locale using Postcode Regions - (n= 1771)

Table 13

Postcode area	Oak	Fir	Bay	Elm	Ash	Fig	Box	Yew	Total
Oak	859	29	1	59	3	1	1	30	983
Fir	20	60	1	18	1	1	-	2	103
Bay	-	1	13	5	1	1	-	-	21
Elm	100	11	1	353	9	1	1	4	480
Ash	-	-	-	5	38	1	1	-	45
Fig	-	-	-	6	2	6	1	1	16
Box	-	-	-	5	1	1	31	-	38
Yew	20	1	-	5	-	-	-	59	85
Total	999	102	16	456	55	12	35	96	1771

104

% Offence Location by Offender Locale using Postcode Regions - (n= 1771)

Table 14
Offender Movements across their Rural Regions and the Urban Regions

	Bay	Ash	Fig	Box	Yew
Oak	0	0	0	0	2
Elm	1	1	1	1	1
Fir	1	0	0	0	1

This table shows the % of offenders who live in the urban areas but travel to offend to the rural areas. The percentages show the movement of these offenders from the urban areas to and across the rural areas and indicate that very limited movement is occurring. The following data shows that the movement is across the rural areas.

From	Bay to other rural Areas	= 1.5%
"	Ash " "	= 8%
"	Fig " "	= 12%
"	Box " "	= 6%
"	Yew " "	= 1%

This highlights that the main trend is still to offend within one's own community.

Gender Analysis

This section will examine the sample and the significant differences between the genders. For many years the "rule of thumb" has been that 10% of offenders are female but uncorroborated evidence from a wide range of sources indicate that this has changed slightly to almost 11%, but for the purposes of this study it is necessary to ascertain whether there is any difference between the genders, where they reside and where they offend. Table 14 indicates the social characteristics of the total sample.

Gender and social characteristics of the Sample

This table shows the social characteristics of the sample by gender, ethnic, marital and employment status, accommodation and debts.

Table 15

% Social Characteristics by Gender (number = 1771)

	Male (1600)	Female (171)
<i>Gender</i>	100%	100%
<i>Age Range</i>		
16 - 20	27.1	18.1
21 - 25	24.6	24
26 - 30	20	18.7
31 - 40	19	25.7
41 - 50	5.7	9.9
50 -60	3	3.5
60+	0.6	-
<i>Ethnic Status</i>		
Black	0.8% (N = 14)	1.1% (N = 2)
Other	0.5% (N = 8)	-
Total	22	2
Total (number) as % of the whole sample = 1.4%		
<i>Marital Status</i>		
Single / childless	53.8	31.2
Single with children	18.6	37.4
Married / childless	2.6	4.5
Married with children	10.7	13.2
Cohabiting / childless	5	5.6

Cohabiting with children	8.8	7.6
Not known	0.5	0.5
Total	100	100
<i>Employment Status</i>		
Employed	27.5	18.5
Unemployed	67.8	64.2
Self employed	2.4	0.3
Houseperson	-	14.7
Student	1.4	1.5
Retired	0.4	-
Training course	-	0.8
Serving prisoner	0.4	-
Total	100	100
<i>Accommodation</i>		
Local authority / housing association	13.7	26.3
Private (bedsit, flat)	38.4	45.7
Owner / occupier	9.1	9.2
Parental home	20.8	9.2
Hostel	5.4	3.4
No fixed address	5.6	0.8
Lodgings	3.6	1.4
Other	5.4	3.9
Total	100	100
<i>Debts</i>		
None	26	19.8
Less than £100	7.6	9.2
Up to £250	7.1	8.1
Up to £500	6.1	5
Up to £1000	5	4.5
Over £1000	11.1	16.2
Not known	37.1	37.2
Total	100	100

Age Ranges

As expected the main age range is within 16 - 30 years (71.7% males, 60.8% females), with the expected highest figure in the lower age range 16 - 20 when many young offenders may be starting on their criminal career. There is a small drop in the 26 - 30 age range for males. In the following age ranges, as expected, the number of offenders decreases. The slight peak in the 31 - 40 age range for women is difficult to explain; it may be gender specific or, within this study, a statistical artefact.

Ethnic Status

In this predominantly white area, the total ethnic population is extremely small (0.01%) (Population Statistics 1998).

Marital Status

It is difficult to assess the significance of this part of the table with the increasing change in patterns of marital relationships. However, it is of concern to note the high number of single parents (male 18.6%, female 37.4%) with children. The male figures must imply that they have children, but may not necessarily be living with the child/ren; whereas the females are more likely to be actually living and caring for the children.

Employment Status

There is a large number of unemployed males (67.8%) and females (64.2%). During late 1999, employment rates (National Employment Statistics) have increased but this does not appear to have had a very significant effect on those who have an offending record. The increased pressure by the Government to use training/skills courses is not reflected in the offender population as only 0.8% are on such courses (National Data).

Accommodation

The accommodation data clearly reflect the social deprivation level of the offenders being supervised, which shows that both males and females are in accommodation that could be described as deprived - lodgings, no fixed address, hostel, private bedsit, flat, with a higher percentage of females (26.3%) are in local authority housing. This particular county has a very high density of single type accommodation with a transient population working in the service industries during the summer months.

Debts

27.3% of the sample have debts in excess of £1,000. The debts would exclude fixed commitments for which allowances are made eg mortgage, poll tax or other allowances that may be taken into account under the Social Security Act. A debt of £1,000 or excess was considered as being debts above and beyond the normal expected running costs for a home and/or family. In a third of the sample the level of debt is not known. Where the debt was not recorded, two factors were implied - either the officer was not aware of, or had not made any investigations into the possibility of, any outstanding debts or that the offender had not disclosed such information. The embarrassment of debts may not be expressed until there is a firm relationship between offender and officer. If the "not knowns" are apportioned across the sample and added to the 27.3% then over 36% could possibly have a severe debt problem.

Gender by Offence Type

In the sample the percentage for violence by women is almost at the male level, although violent offences have traditionally been male dominated. As expected, there are no sexual offences committed by women and the incidents of burglary are extremely low. However, the incidents of theft by males is proportionately less than half of those committed by females and the expected increase for motoring by males is predicted. The relationship between male and female for drugs show that there is less than 1% difference, implying that the significance of drug offending does not respect gender.

Comparison with the National Criminal Statistics 1997 show wide variation between the national statistics and the sample for burglary, drugs and motoring. As the national statistics include the metropolitan areas, overall comparisons cannot be deemed as comparing "like with like".

Table 16

Gender by Offence Type (%)				
	Sample		National Statistics	
	Male	Female	Male	Female
N = 1752 (19 missing codes)	1,582	170	-	-
Offence Type				
Violence / Damage	9.6	7.6	14.7	11.1
Sexual	1.5	-	1.5	0.1
Burglary	22.6	3.5	9.3	2.1
Theft	30.2	64.1	35.5	59.3
Motoring	24.7	10	7.7	9
Drugs	5.6	6.5	20.5	11.8
Other	5.9	8.2	10.8	6.6

χ^2 : df = 6. Significance = 98.7. 1% level

(Source National Statistics, Home Office Statistical Bulletin 18/1998)

Gender by Offence Gravity

There is a significant difference between the level of the offence gravity committed by the different genders, although it is relevant that in the sample, 34.4% of females committed high gravity offences but were also predominantly found among the low gravity offences. However, generally males were the more serious offender.

Table 17

Gender by Offence Gravity (%)		
	Gender	
	Male	Female
N = 1678 (93 missing codes)	1,515	163
Offence Gravity		
Low Gravity	28.9	38.6
Medium gravity	42.4	27
High Gravity	28.7	34.4

X^2 : df = 2. Significance = 14.87. 1% level



Gender by Previous Criminal History

The distribution of previous criminal history is based on using the most "serious" previous disposal. It is important to note that for both males and females, by the time they had appeared at court for these current offences, almost 35% of males and 10% of females had already served a previous custodial sentence. Therefore almost a third had committed offences serious enough to warrant custody or the courts had considered the offence or persistence of the offender serious enough to impose custody. It is also important to note the very large percentage who have no previous convictions. Within this table is the continuum of a pattern of a criminal career from a first timer to a serious offender.

Table 18

Gender by Previous Criminal History (%) (using the most serious previous disposal)		
	Gender	
	Male	Female
N = 1731 (40 missing codes)	1,562	169
Offender History		
Custodial	34.5	9.5
Supervisory	8.2	15.4
CSO	8.5	8.9
Fine	12.9	16.6
Other Sentence	2.6	6.5
Precons (N/K)	16.7	12.4
Susp Sentence	1	3
No Previous	15.7	27.8

χ^2 : df = 8. Significance = 68.07. 1% level

Gender by Psycho-social Problems

This table shows the relationship between the genders for the various psycho-social problem areas, with alcohol and literacy being the problems which are significant across the genders. However, it is important to state that the figures for literacy problems were extremely low.

Table 19

Gender by Psycho-Social Problems showing the % of the responding sample Total Sample = 1771 (males = 1600 females = 171)			
Problem	Males	Females	Sig/Level
Drugs	15.9	22.8	N.S.
Alcohol	15.9	8.8	Sig. 1df .22.5 . 1% level
Gambling	0.8	0.6	N.S.
Literacy	3.1	2.3	Sig. 1df. 3.35. 10% level
Physical health	8.1	13.5	N.S.
Mental health	8.8	14.6	N.S.
Driving	6.7	8.2	N.S.
Sexual	1.8	1.8	N.S.
Offender sexually abused	0.4	2.3	N.S.
Offender physically abused	0.6	2.3	N.S.
Relationships	11.9	22.2	N.S.
High risk offender	8.8	11.7	N.S.

Gender by variable Cross Tabulation

The following table provides a summary of results between (*a-b*) with respect to gender (*variable b*).

The following table shows a summary of the significant differences between the genders. At this stage the tables were re-calculated in order to assess the gender dominance across the sample. The purpose of this exercise was to ascertain whether it was feasible to treat the sample as a "whole" regardless of gender differences or to sub-divide the sample and continue the analysis using gender as the main division. However, it should be remembered that within Marital Status, there was a difference between males and females (single with children). In that category the following data was found:

Males	31.2	53.8
Female	37.4	18.6

After taking all these factors into account, there did not appear to be a powerful argument against treating the genders as two specific sub-samples. To support this decision, further analysis examining gender predominance was explored.

Table 20

Gender by Variable Cross Tabulation					
Analysis Variable (<i>a</i>)	All responses	Chi-Sq	Degree of freedom	a and b related	% of significance
Alcohol problems	521	22.5	1	Yes	1
Offence	1,752	98.77	6	Yes	1
Offence gravity	1,678	16.03	4	Yes	1
Previous history	1,731	68.07	7	Yes	1
Age	1,771	15.11	7	Yes	5

Gender Predominance

The following tables 21-26 show the various dominant factors and, apart from those expected differences, the closeness of the gender to the indifferent dominant score of 1 gave strong evidence to treat the sample as a whole.

Gender Predominance by Age

The unexplained blip for the upper age range of age for women was accepted as there was no clear rational explanation for this anomaly.

Table 21

Gender Predominance by Age					
Age	n	Gender Predominance	Predominance Score ⁽²⁾	Index (Male)	Index (Female)
< 20	464	Male	1.2	203	170
21 - 25	435	Neither ⁽²⁾	1.02	100	98
26 - 30	352	Neither	1.07	101	94
31 - 40	348	Female	1.35	97	131
41 - 50	108	Females	1.75	93	-163
51 - 60	54	Female	1.17	98	115
60+	10	Male	No females	-	-

(2) A "Neither value is attributed when the predominance score is close to 1<10)

Index Score. This calculates the proportion of the expected value to the absolute value. If the expected and absolute values are equal, this would be represented by the base figure of (100).

1 = This value represents the magnitude to which the age range of the offender is dominated by a particular gender. A score of 1 would indicate that the age range is indifferent to gender type e.g. in age range of 31 - 40 years, *by virtue of being a female offender*, an offender would be 1.35 times more likely to be a female offender (assuming that they are both offenders)

Predominance Score = Index (Predominant Gender) / (non Predominant Gender)

Gender Predominance by Offence Type

The following table examines gender predominance by offence. Within the offence type burglary, violence and sex are predominantly a male dominated offence type, but Table 16 shows that violence is becoming a much less male (9.6%) (female 7.6%) dominated offence. Burglary still remains male dominated - male 22.6%, female 3.5%.

Table 22

Gender Predominance by Offence Type N = 1752 (18 missing codes)					
Offence Type (1)	N	Gender Predominance	Predominance Score (1)	Index Male	Index Female
Violence	165	Male	1.26	102	81
Sex	23	Male	No females	-	-
Burglary	364	Male	6.41	109	17
Theft	586	Female	2.13	90	192
Motoring	407	Male	2.47	106	43
Drugs	100	Female	1.14	99	113
Other	107	Female	1.41	96	135

Index Score. This calculates the proportion of the expected value to the absolute value. If the expected and absolute values are equal, this would be represented by the base figure of (100).

1 = This value represents the magnitude to which the type of the offender history is dominated by a particular gender. A score of 1 would indicate that the offence is indifferent to gender type eg in burglary, *by virtue of being a male offender*, an offender would be 6.41 times more likely to commit a burglary than a female offender (assuming that they are both to commit an offence).

Predominance Score = Index (Predominant Gender) / (non Predominant Gender)

Gender Predominance by Previous Criminal History

The following table shows the dominant score for previous history which had a very high figure for custodial sentences for males and a 2.9 dominant score for females on suspended sentences. Before a suspended sentence can be imposed, the magistrate has to consider that he/she was going to impose a prison sentence and had found reasons to suspend it. If this explanation is followed through, then the dominant score for custody is very close between male and female.

Table 23

Gender Predominance by Previous Criminal History (using most "serious" previous disposal) Base n = 1731 (missing codes = 40)					
Offender history ⁽¹⁾	N	Gender predominance	Predominance score ⁽²⁾	Index male	Index female
Custody	555	Male	3.6	108	30
Supervision	154	Female	1.88	92	173
CSO	147	Neither	1.05	100	105
Fine	229	Female	1.29	97	125
Other	51	Female	2.54	87	221
Not known	282	Male	1.36	103	76
Suspended sentence	21	Female	2.9	84	244
No previous	292	Female	1.77	93	165

1 = Most serious previous disposal

Index Score. This calculates the proportion of the expected value to the absolute value. If the expected and absolute values are equal, this would be represented by the base figure of (100).

2 = This value represents the magnitude to which the type of the offender history is dominated by a particular gender. A score of 1 would indicate that the offender history is indifferent to gender type eg custody, *by virtue of being a male offender*, an offender would be 3.6 times more likely to have a custodial history than a female offender (assuming that they are both to commit an offence).

Predominance Score = Index (Predominant Gender) / (non Predominant Gender)

Gender Predominance by Offence Gravity

The table shows the scores for offence gravity which are very close to the indifferent score of 1, but females predominate at the poles of the continuum.

Table 24

Gender Predominance by Offence Gravity <i>N = 1678 (missing codes = 93)</i>					
Offence Gravity	N	Gender predominance	Predominance score⁽¹⁾	Index male	Index female
Low	500	Female	1.3	195	245
Medium	687	Male	1.58	104	66
High	486	Female	1.21	98	110
Very high	5	No females	-	-	-

Index Score. This calculates the proportion of the expected value to the absolute value. If the expected and absolute values are equal, this would be represented by the base figure of (100).

1 = This value represents the magnitude to which the type of the offender history is dominated by a particular gender. A score of 1 would indicate that the offence gravity is indifferent to gender type eg in gravity score 1, *by virtue of being a female offender*, an offender would be 1.3 times more likely to commit a gravity 1 offence than a male offender (assuming that they are both to commit an offence).

Predominance Score = Index (Predominant Gender) / (non Predominant Gender)

Note

This table confirms the earlier findings on gender distribution by offence gravity shown in Table 17.

Gender Predominance by Specific Psycho-social Problems

This table shows that within the specific psycho-social problem areas the only dominance for males was in alcohol and literacy.

Table 25

Gender Predominance by Specific Individual Psycho-Social Problem					
Problem areas	N	Gender predominance	Predominance score ⁽¹⁾	Index male	Index female
Alcohol	521	Male	2.33	107	46
Literacy	417	Male	2.34	110	47
Index Score. This calculates the proportion of the expected value to the absolute value. If the expected and absolute values are equal, this would be represented by the base figure of (100).					
Predominance Score = Index (Predominant Gender) / (non Predominant Gender)					

Analysis by Community

The following table shows the association between distance and gender. It is not significant. This together with the summary data in Table 20, formed part of the decision to treat the whole sample as one specific group. However, what is of prime importance is that 77% of the sample do offend within their own community.

Table 26

Analysis of Distance by Community			
Distance	N	Inside own Community	Outside own Community
Male	1,600	1236 (77.3%)	364 (22.7%)
Female	171	132 (77.2%)	139 (22.8%)

Inside "own community" = the distance travelled to commit an offence up to 3 miles.
 χ^2 : 1 df. Not Significant.

Conclusion

Based on the data analysed across the genders, which indicated that apart from some small differences there is no significant reason for breaking the sample down into gender types, the cohort will be treated as a homogenous sample throughout the rest of this analysis.

OFFENCES BY RELEVANT VARIABLES

Introduction

This section examines the profile of offender characteristics by offence type. The following tables aim to examine the offence and assess whether it can be characterised by the psycho-social characteristics associated with the offender and his/her indigenous factors. The aim is then to construct a profile of the offender and show its linkage to the distance travelled to offend.

Age Range by Type of Offence (%)

The following table clearly shows the age distribution by offence type. It is important to note that violence, burglary and motoring are committed by the younger age range of 16 - 20. Violence again peaks at the 31- 40 age range with a similar peak for motoring. The motoring peak again occurs in the 41 - 50 age range. It is difficult to explain the violent peak in the 31 - 40 age range but the motoring offences may well be linked to offences of excess alcohol or other motoring offences arising out of the influence of alcohol. The sexual offences are characterised predominantly by the 41 - 60 + age range, but 30.4% are under 25. It would be imprudent to put too much emphasis on the probability that the younger age range is linked to hetero or homosexual behaviour, with the older range possibly linked to paedophilia. Further investigation could solve this speculation.

The overall pattern of the age range distribution shows that the numbers would produce a skewed distribution with the younger age range which decreases consistently down to 51+. Offending is predominantly a feature of the younger age range.

Table 27

Age Range by the Type of Offence showing the column % of the Sample by Type of Committed Offence								
Age Range	Offence Type							
	N	Violence	Sexual	Burglary	Theft	Motoring	Drugs	Other
16 - 20	460	32.7	8.7	31	20.6	29.7	22	25.2
21 - 25	427	21.2	21.7	27.2	25.1	23.1	22	23.4
26 - 30	349	15.8	4.3	21.4	24.2	15.2	19	19.6
31 - 40	347	23	-	16.2	21.2	19.2	28	18.7
41 - 50	108	5.5	21.7	1.1	6.5	7.9	8	11.2
51 - 60 +	61	1.8	43.5	3	2.3	4.9	1	1.9

Note - 19 cases had missing age codes.

Offence Type by Previous Criminal History

The following table shows that 550 of the sample have already served a custodial sentence for a wide range of offences predominantly burglary and theft. Violent offenders have served custodial sentences but more have been fined or given sentences of some form of supervision. Sexual offenders tend to have few or no previous convictions, but unsubstantiated indications show that they may have committed numerous offences before being apprehended. Burglars are predominantly sent to prison but it could be argued that a violent offence against a person is possibly more damaging than an offence against one's own property. Dishonesty has a wide range of sentencing patterns but a large number receive a custodial sentence. Motoring offences are again distributed across the sentencing pattern, and those who do finally receive a custodial sentence are those motorists who have committed multiple offences or numerous offences of excess alcohol. Drug offenders again receive custodial sentences but those who receive fines or the lesser sentences may well be at the bottom age of the drug offending continuum or may well be linked to sentences that could involve some form of treatment. 18 offenders had no previous convictions but were convicted of drug offences; this indicates that they may be starting off on a drug career and could ultimately commit the more serious offences of the future.

Table 28

Previous Criminal History (using the most serious previous sentence) by the Current Offence (%)								
Offender History	Offence Type (n = 1713)							
	N	Violence	Sexual	Burglary	Theft	Motoring	Drugs	Other
Custodial	550	25.3	13	53.5	30.5	21.5	28	26.9
Suspended sentence	21	1.2	-	0.6	1.8	0.5	4	1
Community service	147	8.6	-	5.6	10	9.3	10	5.8
Supervision	154	13	8.7	7.8	10.5	7.3	9	4.8
Fines	226	17.3	8.7	4.5	22.9	16.7	19	26
Other sentences	50	4.3	4.3	0.6	3.3	3.5	-	6.8
No previous	228	16.7	39.1	14.6	16.3	18.9	18	13.5
Previous n/k	280	13.6	26.1	12.9	15.8	22.2	12	15.4

58 cases had missing offence codes.

Offence Type by Offence Gravity (%)

The following table shows the distribution of offence by gravity of the offence. This is a particularly interesting table especially the relationship between violence and low gravity offending.

Violence is generally regarded as a relatively serious crime. However violence can range from common assault to murder, and within the low gravity scale would be the offences in the lesser range although over 24.5% are within the medium gravity and 29% into the high gravity. These would contain offences of grievous bodily harm and other serious incidents of violence.

Sexual offences show that 73.9% are within the high gravity range, although a small number of lesser sexual offences would fall within the medium range, albeit still serious and distressing to the victim.

90% of burglary falls into the medium range of severity but there are a small number which would be deemed very serious and would include such offences as aggravated burglary which may have an element of violence attached to it. With burglary being the highest in the medium gravity level, this does to some extent contradict the previous Table 28 on previous criminal history. If the gravity level is in the medium range, why does it warrant such a high level of imprisonment? Is the offence so serious that custody is the main sentence?

Offences for drugs have a high gravity score of 78.4%. This reflects the offences of supplying drugs rather than possession. The simple possession and personal use of recreational drugs is indicated by the low gravity score of 11.3%. This implies that the lower gravity range are not coming before the courts, but the police are concentrating on the more serious offences of supplying.

In the motoring offence categories the codes range from medium (46.6%) to high (40.9%) of which serious road accidents, excess alcohol and other serious motoring offences may reflect the nature of the high offence gravity.

Table 29

Offence Gravity by the type of Offence showing the % of the Responding Sample compared with the Offence Sample								
Gravity levels	Offence Type							
	N	Violence	Sexual	Burglary	Theft	Motoring	Drugs	Other
Gravity low	498	46.4	-	0.3	52.2	12.4	11.3	81.6
Gravity medium	675	24.5	26.1	90.2	19.1	46.6	10.3	16.5
Gravity high	487	29.2	73.9	9.6	28.7	40.9	78.4	1.9

Note - 171 cases had missing gravity codes.

Offence Type by Psycho-social Problems

The following table shows the relationship between each of the psycho-social problems and the type of committed offence. A "YES" response to the problem indicates that the problem has contributed to, or significantly influenced, the persons offending behaviour. The response is then linked to the type of committed offences.

As expected, sexual offences are related to relationship problems and high risk status, and if the offender has him/herself been sexually abused then the ongoing relationship problems could be inevitable.

Violence is characterised by problems with alcohol, mental health and relationships. These three characteristics can be seen in the violent offender, either singly or all together.

As expected, drugs offences are related to drug problems. Burglary and dishonesty offences show a wide range of problems. Dishonesty (excluding burglary) is female dominated. Burglary shows a broad range of problems including the addictions suggesting that many burglars may well be funding a "drug habit". With the exception of gambling, of which the numbers are extremely small, all these tables are significant at the 1% or 5% level.

The incidents of physical health, mental health and literacy problems are spread across a range of offences.

Explanation

The following tables show the percentage for each type of offender who had committed the appropriate offence and was exhibiting that particular problem eg 57.4% of violent offenders have drug problems, 70.8% of violent offenders also have alcohol problems. χ^2 is calculated using each type of offence where the response to the type of problem is equal to yes or no.

Table 30

Psycho-social Problem by the type of Offence showing the % of the Responding Sample compared with the Offence Sample							
Problem Areas	Offence Type						
	Violence	Sexual	Burglary	Theft	Motoring	Drugs	Other
Drugs	57.4	-	76.4	51.4	33.3	82.5	26.3

χ^2 : df = 6. Significance = < 0.01

Alcohol	70.8	40	68.9	42	53	41.9	60.9
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χ^2 : df = 6. Significance = < 0.01

Gambling	-	-	3.7	3.1	3	6.5	5.9
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χ^2 : Not Significant

Literacy	7.1	-	3.6	16.2	20	3.1	18.8
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χ^2 : df = 6. Significance = < 0.01

Physical Health	20	33.3	47.1	37.9	21.1	27	16.7
-----------------	----	------	------	------	------	----	------

χ^2 : df = 6. Significance = < 0.01

Mental Health	47.4	40	41.2	49.3	26.6	14.7	47.7
---------------	------	----	------	------	------	------	------

χ^2 : df = 6. Significance = < 0.01

Driving	6.7	-	6.4	15.5	70.3	8.8	16.7
---------	-----	---	-----	------	------	-----	------

χ^2 : df = 6. Significance = < 0.01

Sexual	7.5	100	3	9	1	-	6.3
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χ^2 : df = 6. Significance = < 0.01

Offender sexually abused	-	100	6.7	63.6	18.2	-	-
Offender physically abused	-	-	6.7	66.7	33.3	-	-

χ^2 : df = 6. Significance = < 0.05

Relationships	75	71.4	68.3	52.9	38.9	25.7	55.6
---------------	----	------	------	------	------	------	------

χ^2 : df = 6. Significance = < 0.01

High Risk Offender	82.6	10.2	7.3	5.9	5	8.4	-
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χ^2 : df = 6. Significance = < 0.01

Conclusion

The following table provides a profile of the offender characteristics by offence type. These results indicate that the offence type is significantly related to age, gender, offence gravity and the range of psycho-social problems.

Structure of the Offender Profile by Offence Type and Psycho-social Problems

Table 31

Offender Profile using Significant Characteristics by Offence Type							
Variable	Offence Type						
Name	Violence	Sex	Burglary	Theft	Motor	Drugs	Other
Predominate gender range	M	M	M	F	M	F	F
Predominate age range	16-20 31-40	41-60+	16-30	26-40	16-20, 41-59	31-39	41-49
Problem Areas							
Alcohol	Y	-	Y	Y	-	-	-
Drugs	-	-	Y	-	-	Y	-
Relationships	Y	Y	Y	-	-	-	-
Physical health	-	-	Y	Y	-	-	-
Mental health	Y	-	-	Y	-	-	Y
Literacy	-	-	-	Y	Y	-	-
Sexual	-	Y	-	-	-	-	-
Gambling	-	-	-	-	-	-	-
Driving	-	-	-	-	Y	-	-
HRO Status	-	Y	-	-	-	-	-
Offence Gravity Level	Medium	High	High	Medium	High	Low & High	Low & Medium

**THE RELATIONSHIP BETWEEN THE COMMUNITY OFFENDER
AND THE TRAVELLER BY RELEVANT VARIABLES - ANALYSIS
OF DISTANCE TRAVELED**

Introduction

The null hypothesis of this study is that there is no relationship between the distance travelled by the offender to offend, that distance and the other relevant psycho-social variables relating to the nature and characteristics of the offence. The key mileage is three miles - this encircles the boundaries of the individual's own community defined from now on as the "community".

Any offender who goes beyond the three mile limit will be defined as "a traveller" and will have been deemed to have committed an offence outside his/her own community, but a secondary analysis will examine the characteristics of the "far traveller" (an offender who travels in excess of six miles to offend).

With three miles being the core calculation, it was necessary to examine the distances between all the relevant postcodes. This was calculated by using longitude and latitude, and allowed for the distance between the centre point of one postcode and the centre point of the next or any other post codes. However, as postcode areas differ in size, it was necessary to re-calculate the offence location postcode point to the offender locale postcode point rather than the centroid point, and then to convert that distance to the mileage relevant to the offender locale and the offence location.

Comparisons of Distance Travelled to Offend

The crucial difference between the "community offender" and both types of "traveller" offender is that the "community offender" has no known convictions outside the three mile community zone, whereas those defined as "travellers" were essentially extra-community offenders. As the vast majority of them offended outside their community areas, (4% of the near travellers and 5% of the far travellers) and also had

additional convictions which occurred within their communities, therefore, it is reasonable to treat the groups as dichotomous.

The following graphs compare the distance travelled to the offence.

Graph 1 - distance travelled by offence type

This graph shows the relationship between offence and distance. This shows that between 76% and 85% of offences are committed within the offender's community, although it is important to note that burglary, violence and motoring offenders travel up to six miles. Of particular significance is the sexual offender with almost 14% travelling more than seven miles. The ten miles plus, albeit small, do indicate that these offenders are travelling to commit burglary, robbery and a number of violent offences.

Graphs 2 - 9 distance by type of offence

These graphs show more clearly the mileages actually travelled in blocks of two miles.

Graph 2 - for all offence types

This graph shows the rapid decrease beyond three miles, but with small peaks along the mileage continuum, with a small peak at the twenty miles plus. This similar pattern is reflected within

Graph 3 - Dishonesty offences

This graph shows a similar pattern as reflected in Graph 2, but with less defined peaks along the mileage continuum.

Graph 4 - Burglary offences

A similar pattern is found for burglary, but with a peak at the eleven to fourteen miles, and again at the fifteen, sixteen miles and twenty plus. This graph shows at the initial

continuum there are very few offences under the one/two mile point, clearly indicating that burglars do not offend in their absolute immediate area but are prepared to travel, and to travel considerable distances in order to commit crime. There are peaks between the twelve and twenty miles plus and with offenders travelling considerable distance beyond their own local community, which indicate that a level of offence is planning is involved.

Graph 5 - Sexual offences

The graph relating to sexual offenders clearly shows the number of offences within the offender's own community and then a significant drop at the three mile point, with 5% of offences are being committed between four and seven miles and a peak between eleven and thirteen miles. This implies the possibility that under three miles are familial type sex offences eg incest etc, whereas the peaks beyond the three mile are extra familial type sex offences.

Graph 6 - Drug offences

The graph on drugs is particularly interesting as it shows the bulk of offences again within the community, but a steady proportion of offences right across the mileage continuum indicating the potential need to travel to obtain drugs for personal use or for supplying.

Graph 7 - Motoring offences

The graph on motoring offences shows a distribution across the continuum, but it would be difficult to draw any set conclusions for this particular graph as the motoring offence group encompasses all ranges of motoring offences and may be related to serious traffic and/or excess alcohol. There is a potential for error as the offence location recorded by the police is usually where the offender was actually apprehended rather than where he/she took the vehicle in the first instance.

Graph 8 - Violence and damage offences

The graph on violence and damage is of particular relevance and, like the graph in respect of sexual offences, suggests an intra or extra familial violent relationship. However, it is more likely to reflect the spontaneity of the offences occurring at a location rather than the implications of travelling in order to commit the offences.

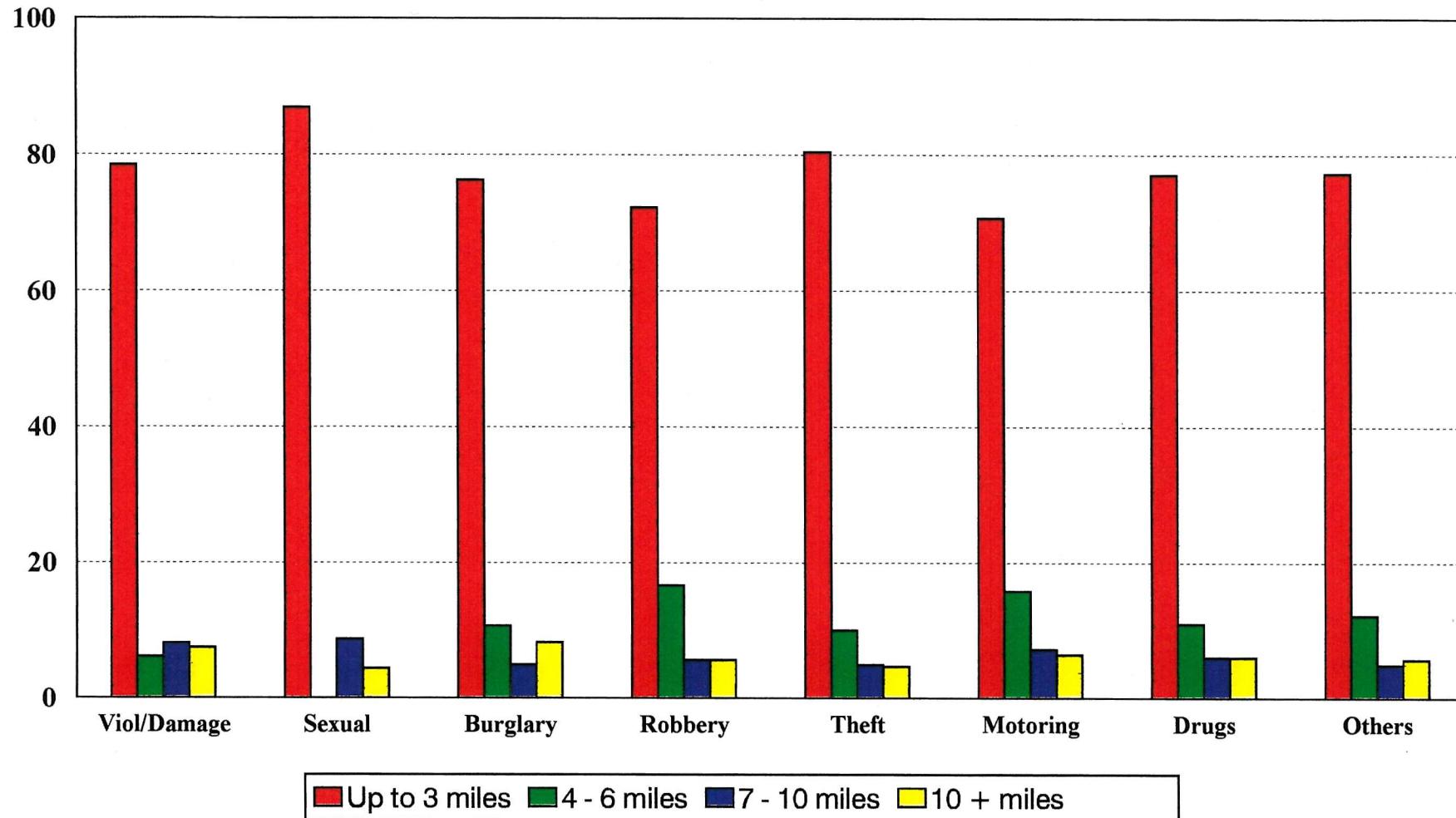
Graph 9 - all other minor offences

This graph shows the mileage travelled for committing all other lesser offences. The bulk of these lesser offences are committed within the offender's community and then there is a peak between seven and nine miles and then some smaller peaks beyond sixteen miles. As these offences are a mixture of indictable and non-indictable, the reasons for why such peaks should occur is difficult to explain.

Conclusion

These graphs show the pattern of offending across distance, and indicate that the majority of offenders commit crime in or against members of their own community. However, there are certain specific patterns. Offences characteristically committed in the local community are sexual, dishonesty, some drugs and violence. Those typifying offences committed outside the own community are burglary, motoring offences, some violence and drugs. When measuring offence location and offender locale these graphs clearly indicate that it is possible to characterise offenders, and the type of committed offence, by the relationship between the offender and the patterns of offence demography, particularly identifying these small hub points for specific types of offences, which include sex, violence and burglary.

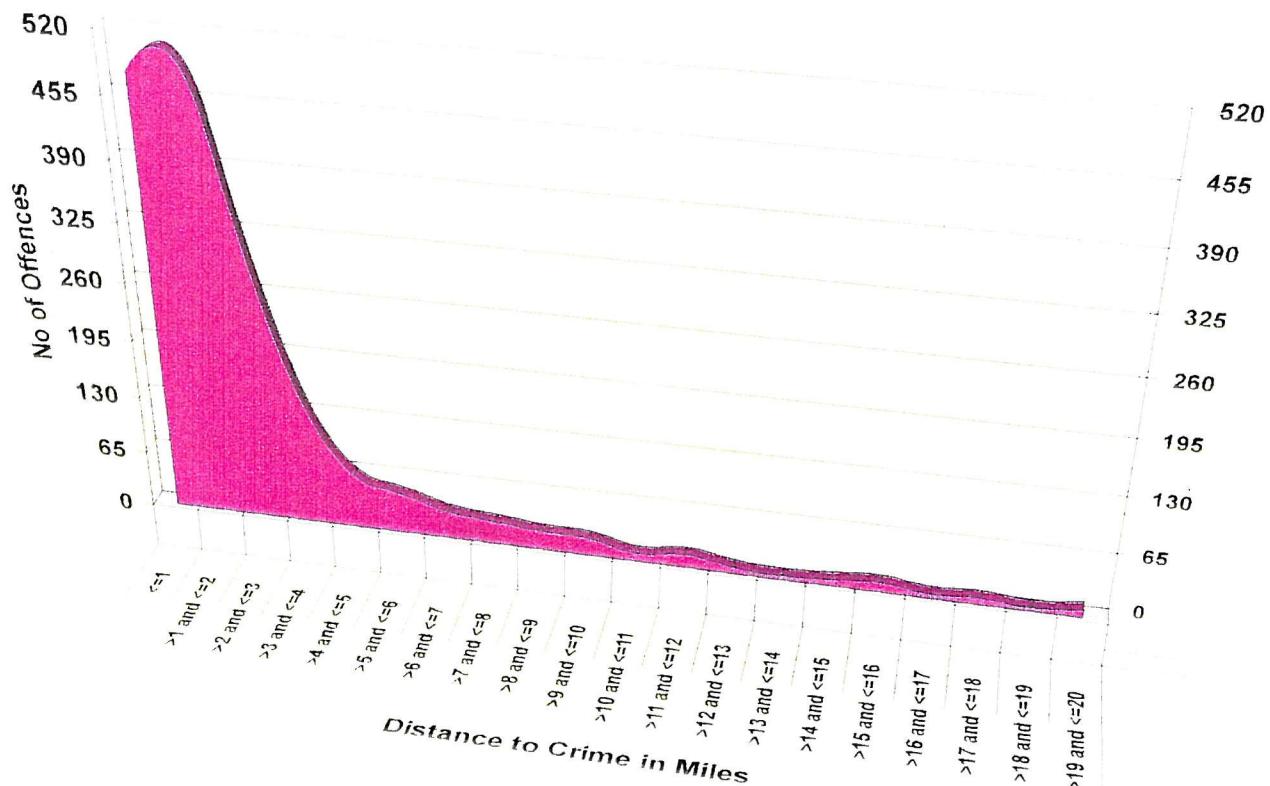
Graph 1. Distance Travelled by Offence Type.



Data is the % of Crimes committed within each Category by the distance travelled from the offenders own locale to the offence location.

Distance To Crime in Miles

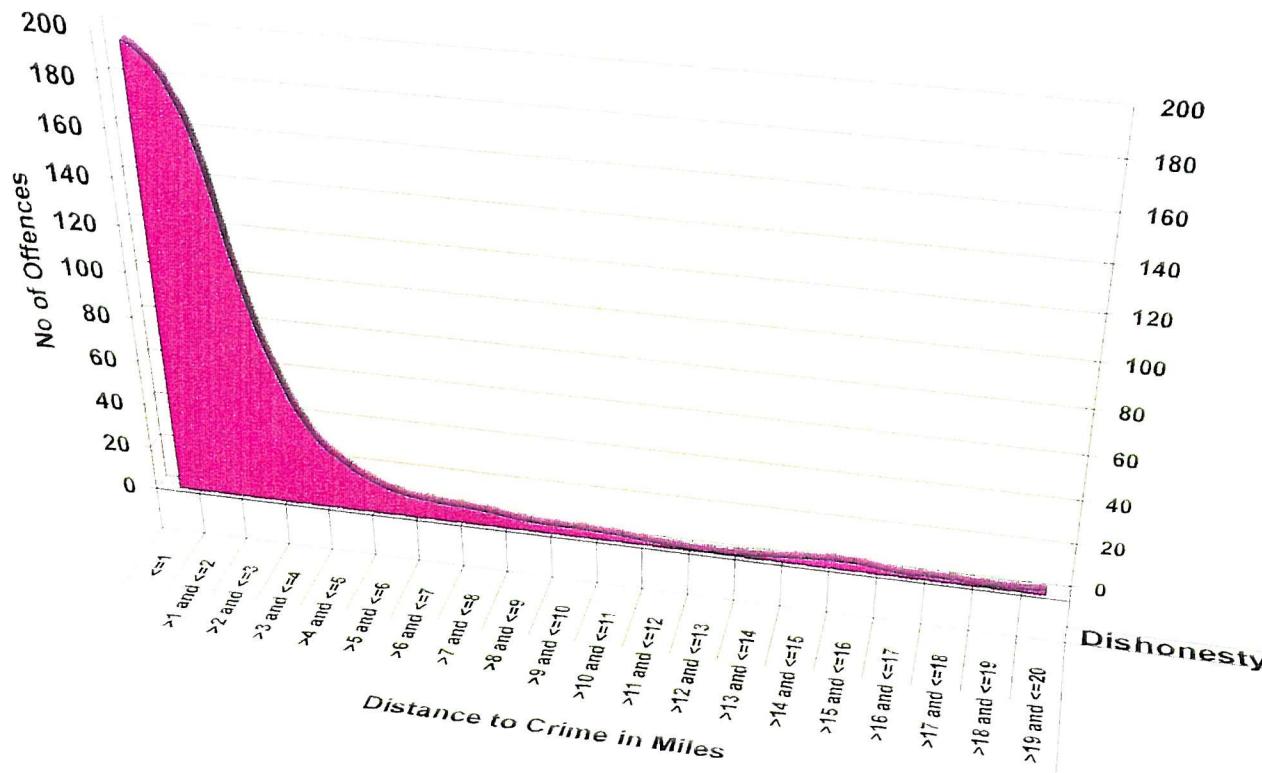
GRAPH 2



Offence Type = All (n=1771)

Offence Type by Distance to Crime in Miles

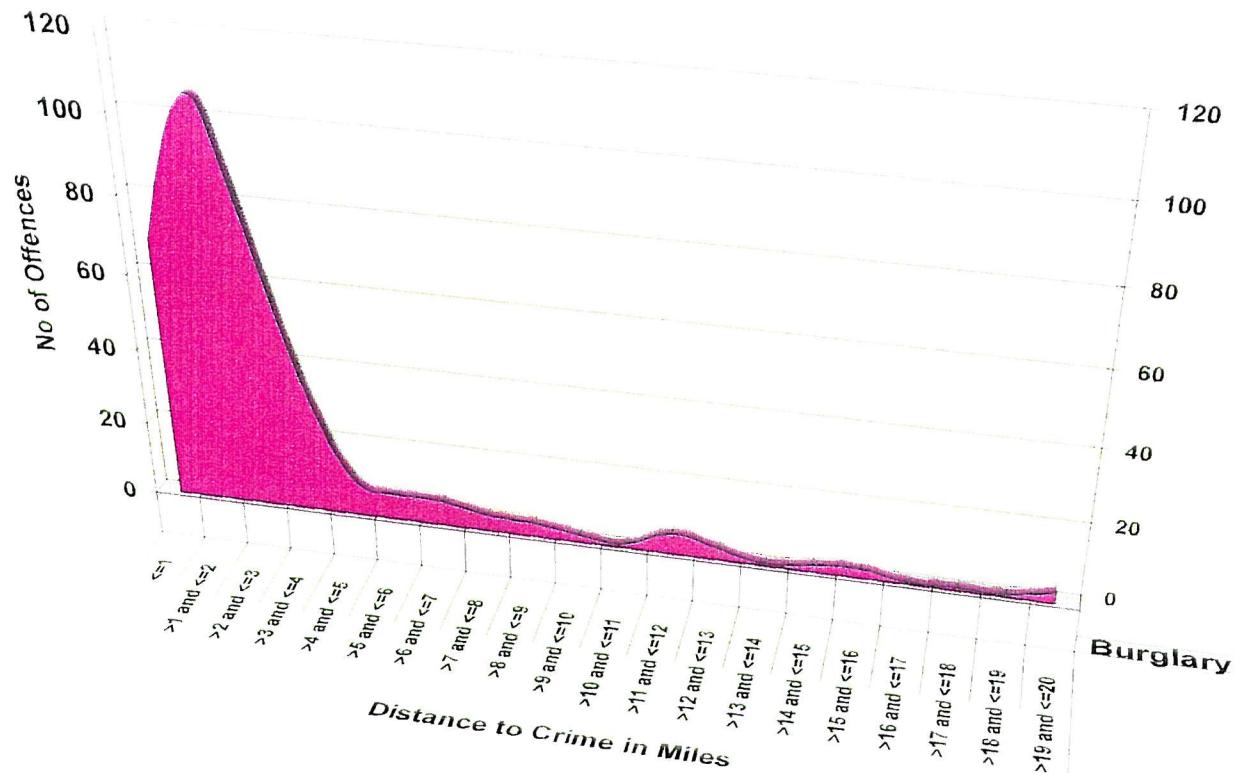
GRAPH 3



Offence Type = Dishonesty (n=585)

Offence Type by Distance to Crime in Miles

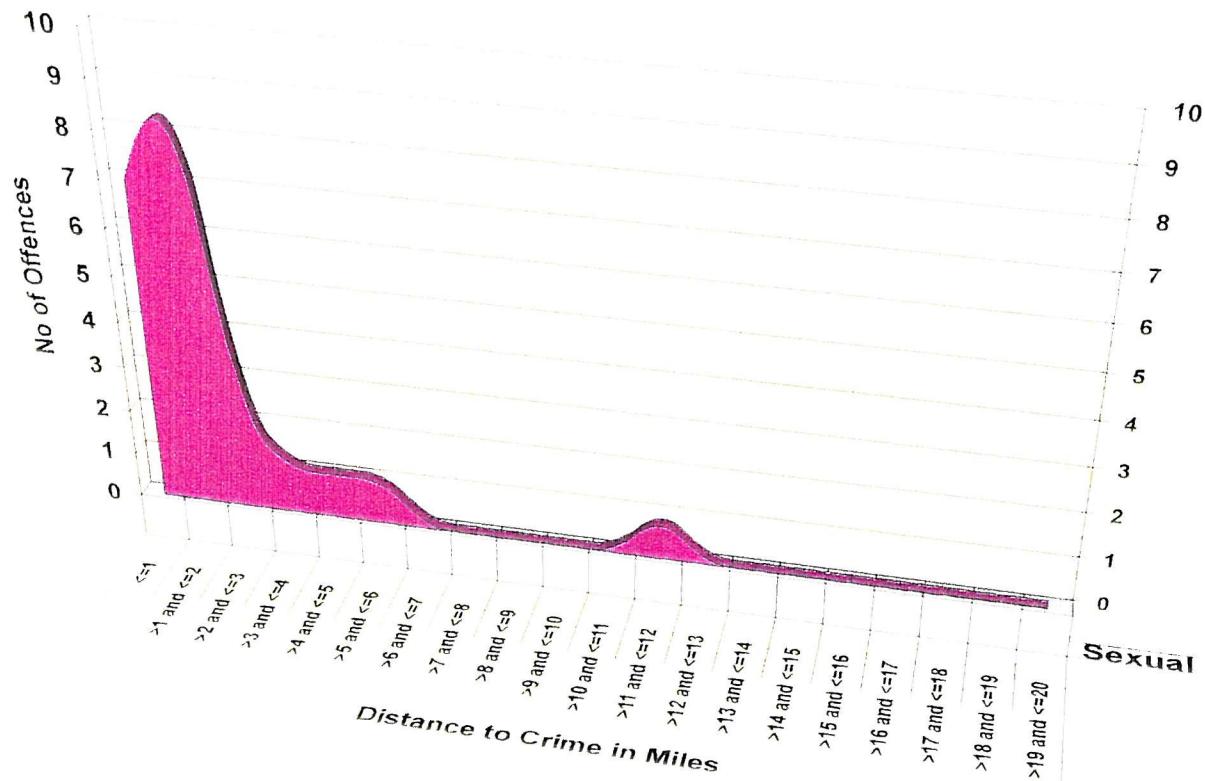
GRAPH 4



Offence Type = Burglary (n=364)

Offence Type by Distance to Crime in Miles

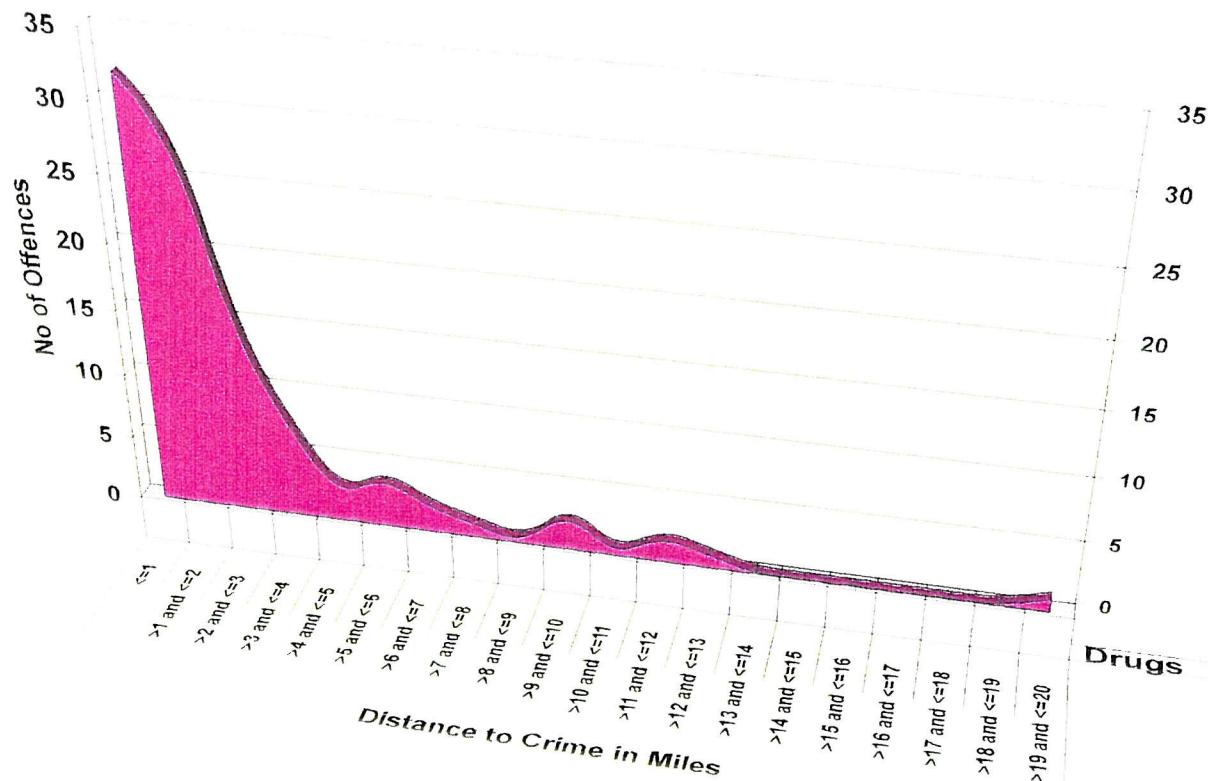
GRAPH 5



Offence Type = Sexual (n=23)

Offence Type by Distance to Crime in Miles

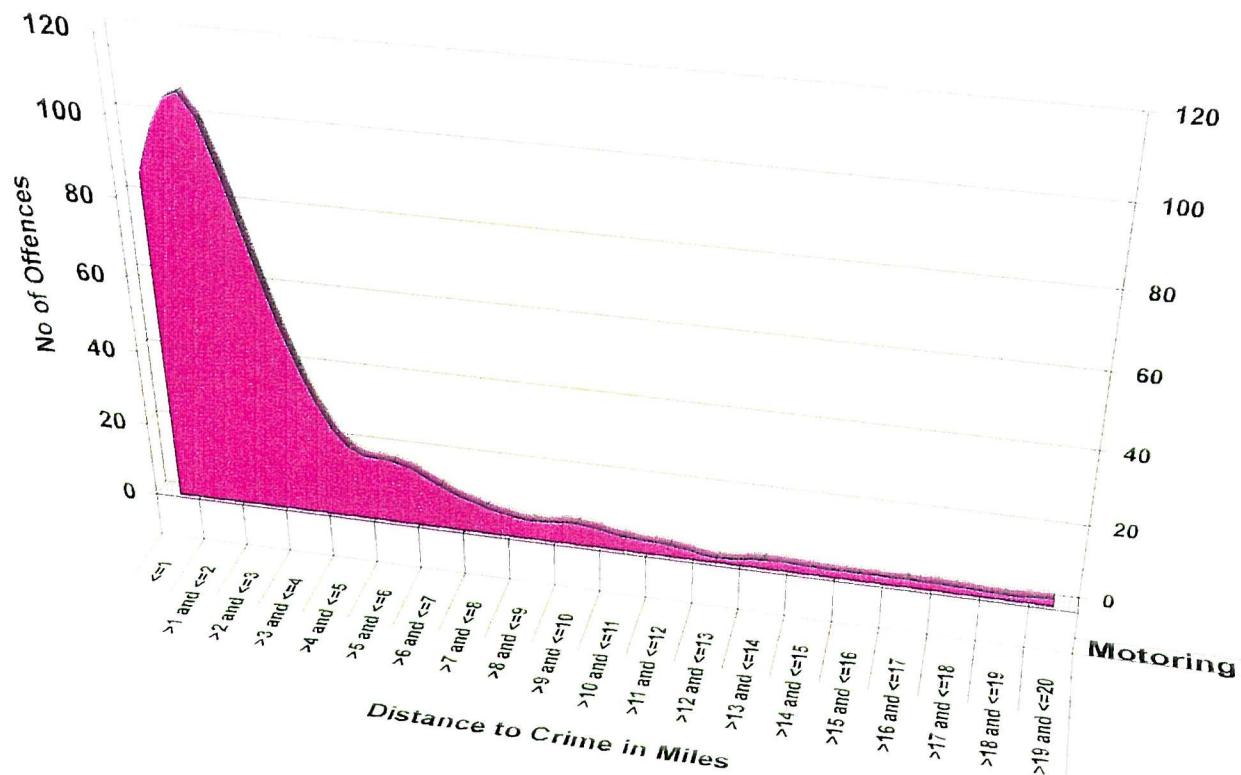
GRAPH 6



Offence Type = Drugs (n=100)

Offence Type by Distance to Crime in Miles

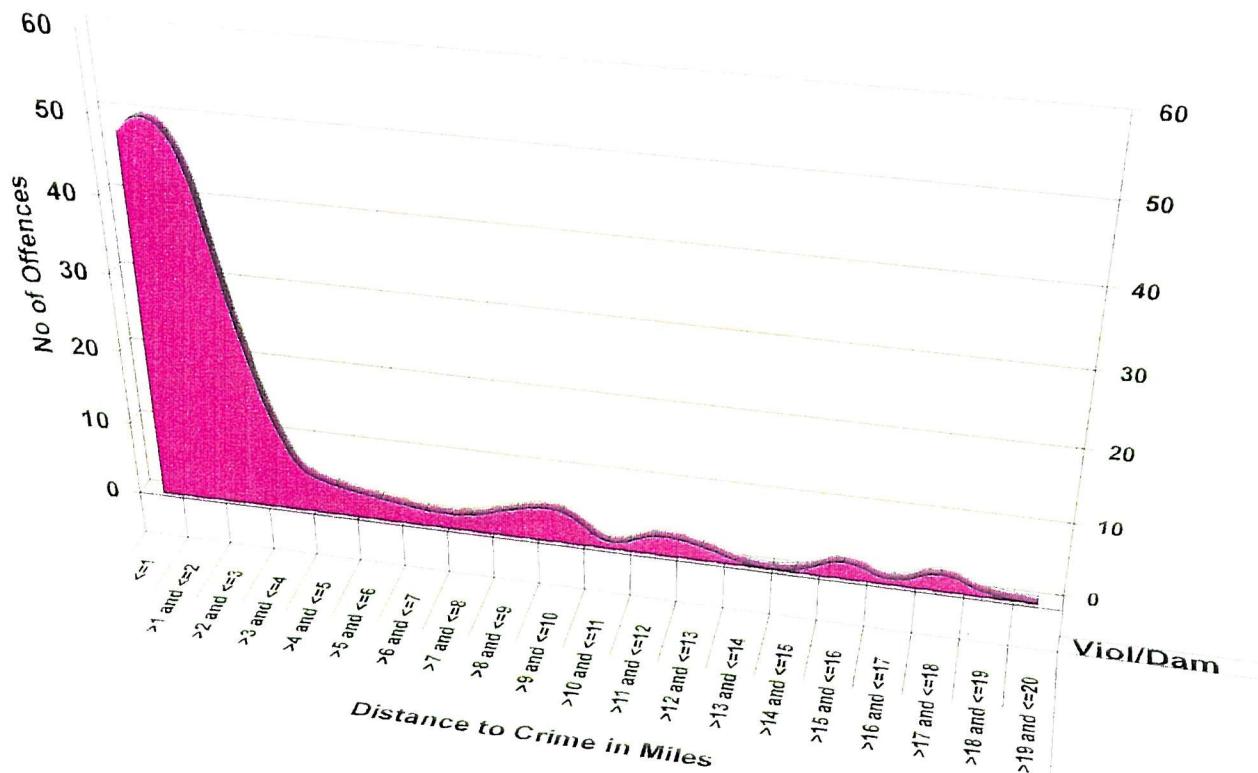
GRAPH 7



Offence Type = Motoring (n=421)

Offence Type by Distance to Crime in Miles

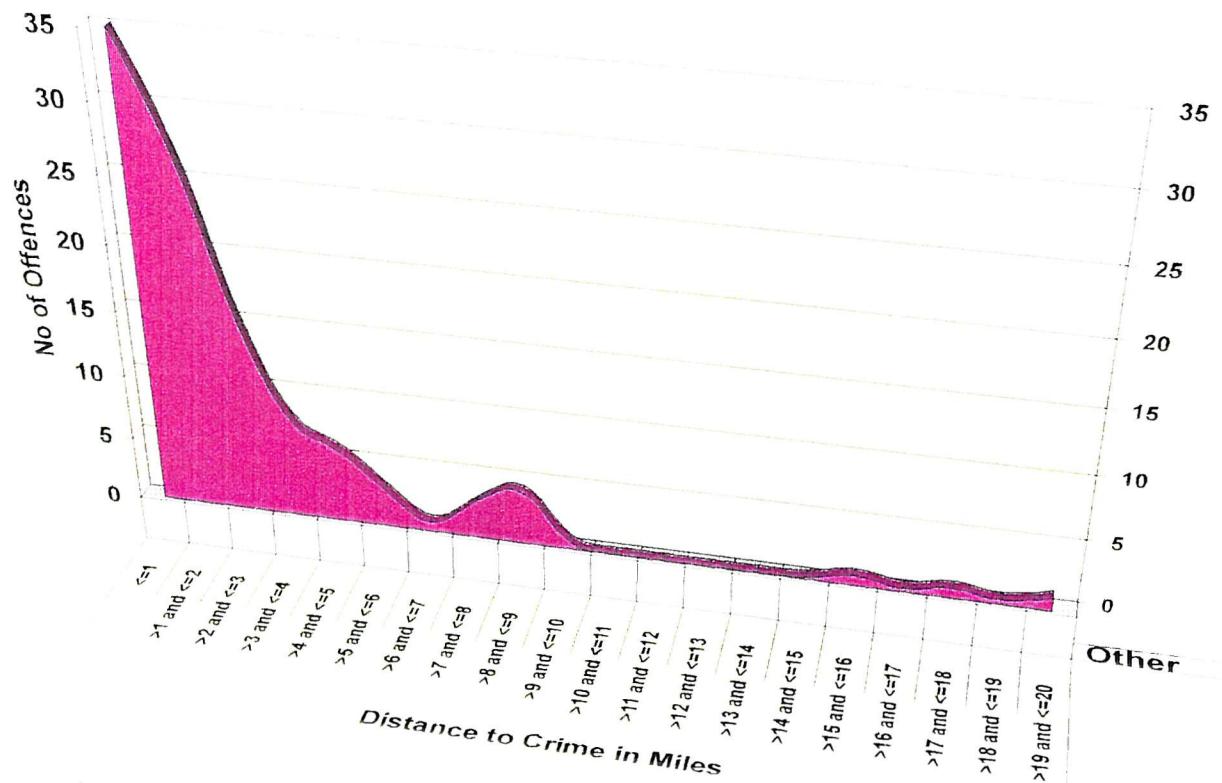
GRAPH 8



Offence Type = Violence and Damage (n=165)

Offence Type by Distance to Crime in Miles

GRAPH 9



Offence Type = Other (n=107)

DISTANCES TRAVELED COMMUNITY VS TRAVELLER

Introduction

The previous graphs indicate that there is a positive relationship between offence location and offender locale. It is important to identify whether the distance travelled is related to the indigenous factors about the offender and whether in turn, his/her psycho-social characteristics are possibly associated with the committed offence.

Community vs Traveller (Community N = 1368 Travellers N = 403)

To offend against one's own community has been defined as travelling up to three miles. To become a "traveller", the offender will move beyond the three mile limit and in some cases, this is in excess of twenty miles. Later analysis will divide the sample into the following categories:

1. own community offender (up to 3 miles)
2. near traveller (over 3 miles, up to 6 miles to offend)
3. far traveller (in excess of 6 miles to offend)

Distance Travelled by Gender

The following table shows the association between distance and gender. It is not significant. This, with the previous data on Gender Predominance, formed part of the decision to treat the whole sample as one specific group. However, what is of prime importance is that 77% of both males and females within the sample offend within their own community.

Table 32

Analysis of Distance by Community			
Distance	N	Community	Traveller
Male	1,600	1236 (77.3%)	364 (22.7%)
Female	171	132 (77.2%)	39 (22.8%)

χ^2 : 1 df. Not Significant.

Distance by Age Range

The following table analyses the relationship between age and distance. However, the percentages do not indicate that there are any major differences between the community percentages and the travelling percentages except in those < 20 years when there is a 6% increase in that age range who travel. However, this is to be expected as the younger age range are more likely to travel beyond their own area, but there are significant differences between the two groups.

Table 33

Distance by Age (%)		
Age	Community	Traveller
< 20	24.6	31.5
21 - 25	25.6	21.1
26 - 30	20.3	18.4
31 - 40	19.9	18.6
41 - 50	6.4	5.2
51 - 60 +	2.7	5.2
Total	100	100

χ^2 : df = 6. Significance = 13.7. 5% level.

Distance by Ethnic Origin

The percentage of ethnic offenders within the overall area is less than 0.1% and of those who offend is less than 0.01%, but those who do offend are committing offences within their own community.

Table 34

Distance by Ethnic Origin		
Ethnic Origin	Community	Traveller
Black	16	-
Other	7	1
Total	23	1

χ^2 = No Significance

Distance by Offence Type

The following table is clearly supported by the previous graphs, and shows the "travelling" group contains a number of the burglars, motoring and violent offenders. As earlier stated this is not an unexpected finding. Of importance are the percentages for those who remain within the area - 80% for theft, and 87% for sex offences. The sex offending factor again suggests the potential for a familial component. The very high level of crime clearly shows these offenders are preying upon their own community.

Table 35

Distance by Offence Type (%)		
	Distance Travelled	
Offence Type	Community	Traveller
Theft	80.4	19.6
Burglary	76.4	23.6
Sex	86.9	13.1
Drugs	77	23
Fraud	85.9	14.1
Motoring	70.9	29.2
Violence	78.3	21.7
Other	78.5	21.5

χ^2 : df = 6. Significance 12.3. 1% level

Distance by Offence Gravity

Although the following results are not significant, there are some key points. The majority of all the offences committed are scored within the medium gravity range and are very close for both the community and the travelling group. An equal amount (29%) of high gravity offences are committed inside and outside the community. The high gravity offences committed outside, again, are linked to the previous data on violence, robbery and burglary. Many motoring offences, when committed outside the community, are rarely high gravity offences, but may be within the medium range. The

similarity in the findings for both community and traveller were unexpected. It had been wrongly assumed that the traveller would be committing the "high gravity" offences. This finding, initially, will accept the specific null hypotheses 6 "that there is no association between the distance travelled and the gravity of the offence".

Table 36

Distance by Offence Gravity (%)		
Gravity	Community	Traveller
Low	31.4	27.7
Medium	39.6	42.8
High	29	29.6

χ^2 : Not Significant

Missing codes = 93

Distance by Previous Criminal History

The following table shows that the total sample (over 30%) have already served a custodial sentence, which links to the commission of medium or high gravity offences. This also shows that the sample contains offenders who are already very "experienced" in their criminal careers. Only 15.9% of community offenders and 18.2% of travellers are first offenders. The remaining cross percentages between community and traveller vary very little. Of particular note is that 18.2% of offenders with no previous conviction travel outside the community to offend. It is likely that the custodial offenders may well again fall into the burglar/violent category, but the "no previous" offenders are unexplainable.

It raises the question as to who the offenders with no previous convictions are. Yet 18% of them will travel outside the community to offend. Speculation suggests these may be persons who have drug problems, who are going into new areas to sell drugs and get apprehended. Or are they the burglars who, for the first time, are committing serious offences, possibly to fund a drug habit? Or, as is more likely, are they outside

their own community, "opportunist" criminals who are suddenly confronted with a situation that is in some way rewarding, who offend and are apprehended? Perhaps previously they have been "clever" and this is the first time they have been caught.

Depending upon the real answer to this speculation, it raises a deeper question of what is the trigger that precipitates a person with no previous convictions into actually committing a crime. It also raises the same speculation relating to those offenders with no previous convictions who offend within their own community.

Table 37

Distance by Previous Criminal History (%) (using the most serious previous disposal)		
History	Community	Traveller
Custody	31.7	32.6
Suspended	1.7	0.6
CSO	9.1	7.6
Supervision	8.9	8.9
Fine	13.7	12.6
Other	3.1	2.8
No Previous	15.9	18.2
Not Known	15.9	16.8
Total	100	100

χ^2 : df = 7. Not significant

Missing codes = 40

Distance by High Risk Offender

The following table is not significant but is of importance. Out of the sample, 163 offenders had been deemed to be "high risk offenders" meaning that they have, or could have, "endangered life". These are offenders living within the community and of those offenders, forty of them will have travelled outside of their own community to commit offences.

Table 38

Distance by High Risk Offender (%)		
HRO	Community	Traveller
Yes %	8.9	11
No %	91.1	89

χ^2 : df = 1. Not Significant

Distance Travelled by Psycho-Social Problems

The following table shows the various psycho-social problems presented by the offender and contrast the percentage differences between the community offender and the traveller.

Table 39

Distance by Psycho-Social Problems

Problem areas	N	Community(%)	Traveller(%)	% level
Drugs	294	72.4	27.6	< 0.05
Alcohol	270	68.9	31.1	< 0.01
Gambling	13	53.9	46.1	N.S
Mental Health	165	70.3	29.6	< 0.05
Physical Health	153	67.3	32.7	< 0.01
Physical Abuse	13	61.5	38.5	N.S
Sex Abuse	11	72.7	27.3	N.S
Sex Problems	32	84.4	15.6	-
Relationships	228	68.4	31.6	< 0.01
Literacy	53	71.9	28.3	N.S
Driving	121	71.9	28.2	N.S
High Risk Offender	163	77.4	22.6	N.S

Distance by Drug Problems

Nearly 28% (significance < 0.05) of offenders travel outside of their own community where it is deemed that drugs contribute to his/her offending problem. Is there a need to travel to obtain drugs or resources for drug purchase or supply? However 72% who have a drug problem offend within their own community. This does not suggest they are all drug offences, but are offenders with drug problems which contribute to their offending behaviour.

Distance by Alcohol Problem

31.1% (significance < 0.01) of those with alcohol problems travel to offend outside their own community, but why? Is the traveller supported by the drink in order to give him/her some form of courage to commit the offence, or does the drink reduce the offender's inhibitions and so allow an offence to occur? (An unsubstantiated comment, origin unknown, states that a person's super-ego or conscience is soluble in alcohol).

Distance by Gambling Problems

The findings were not significant and, as the numbers were extremely small, it does not warrant further comment on the distance factor.

Distance by Mental Health Problems

It is noteworthy that 165 cases were deemed to have mental health problems which contributed to their offending behaviour. 27% (significance < 0.05) travel outside their community, but almost three quarters remain in their community when committing their offences. The reason why these offenders travel is unknown. However the findings suggest that, on examining the types of crime committed by offenders with mental health problems, there were no significant differences in the patterns of crime compared to the general cohort.

Distance by Physical Health Problems

33% (significance < 0.01) of offenders with health problems travel outside their community to offend. The nature of the physical health problems are not known, but whatever the condition, 33% are capable of travelling outside the community to commit their offences.

Distance by Physical and Sexual Abuse of the Offender

It is relevant to comment on these two tables together, as in some instances, the offender has been both physically and sexually abused. Both tables are not significant and the respondents are small in number. In spite of the small numbers, there is evidence that the past abuse has in some way contributed to the offending behaviour of these persons.

Distance by Sexual Problems

These findings were not significant and the numbers were extremely small (32). Only five offend outside their own community, which suggests that the remaining twenty seven may well be linked to familial type offences and that those outside the community are likely to be linked to the more serious type of extra-familiar abuse.

Distance by Relationship Problems

The findings were not significant but almost 32% do travel outside their own community.

Distance by Literacy Problems

The findings were not significant and the numbers are small (53). 71% offend within their own community and only 28% travel. Again, it must be noted that the numbers are small.

Distance by Motoring Offences

The findings were not significant. Of those who were convicted of motoring offences, 28% of those are deemed to have problems relating to motoring which contributed to their offending behaviour. 28% offended outside the community. This was not an unexpected finding but may be an artefact as the origin of the motoring offence may be totally different to where the offender was finally apprehended. For example, a driver with excess alcohol may have started his/her journey inside his/her own community, but not be stopped by the police until he/she is outside his/her own community. That becomes the place where the offence is deemed to have been committed. Therefore, to argue that 28% actually travel is probably spurious.

Conclusions

Evidence within the findings shows that distance and the type of offence are directly related. 77% of crime is committed within one's own community (up to 3 miles), but the younger age range travel outside the area to commit offences. Those offences committed outside the community are predominantly violence and burglary with a possible element of extra familial sexual offences. Of prime importance is that those who are deemed to be high risk offenders do travel, but 75% offend within their existing community.

As earlier stated, results relating to motoring may well be spurious.

Offenders with various psycho-social problems do travel outside their own community to offend. However, it must be noted that within some of the problem areas the numbers are extremely small. The evidence does not clearly indicate any specific reason as to why offenders with specific problems travel. Offenders with sexual problems (15.6%) may well be travelling out of their own community in order to participate in sexual behaviour. Offenders with drug problems (27.6%) may well be visiting other areas in order to obtain drugs or to commit crimes to fund their own particular drug behaviour.

Of more importance is that, regardless of the psycho-social problem, approximately 70% of persons with one or more psycho-social problems stay within their own community to offend.

THE "FAR" TRAVELLERS - A SPECIAL GROUP?

The previous section in this chapter identified the various significant relationships between the community offender and the travellers. The relationships show that there were significant differences between age, the type of offence, the previous criminal history and a number of psycho-social problems linked predominantly to addictions and health. Some of the reasons for the differences were not fully explicable, but are of prime importance in recognising that there is a difference between those who offend within their own location and those who offend outside their community.

Examination of Graphs 2 to 9 show the range of offences over all the mileage points, clearly indicating that at the seven mile point there is a drop in the number of offences. The line then continues with peaks along the mileage continuum. This suggested that there may well be a second sub-group of offenders. Further analysis of this data produced the following three groups:

1. the community offenders (those who travel up to three miles to commit their offences)
2. the near traveller (those who offend beyond the three mile point but up to six miles)
3. the far traveller (those who offend in excess of six miles)

This raises the question are there any significant differences between:

1. the community vs the near offender
2. the community vs the far offender
3. the near offender vs the far offender

All of the data used in the comparison between community and traveller were re-analysed on the new distances for each of the variables in order to ascertain if there were any significant differences between the three groups.

The following table is a summary of the data showing the various relationships and the significance levels across the three groups. There are only two significant differences between the near offender and the far offender which relate only to mental health problems and age. However, the table does show the significant differences between the community and the other two groups. It is important to note that the differences between both groups and the community are linked to the factors relating to relationships, health and addictions. Again this highlights the earlier dilemma of attempting to explain why people with relationship problems and physical health problems should travel distances to offend. The explanation for drug problems may be linked to offenders having to travel in order to obtain money to fund their habit or to meet their supplier. The data show that between the near and far travelling groups, there are no major differences, but collectively confirm the earlier findings that there are relevant differences between those who offend within their own community and those who offend outside their own community. This sub-analysis basically confirms the earlier findings that community vs traveller are two specific groups who have differing characteristics and commit differing types of offence.

Table 40

Characteristics of the Community Traveller, the Near Traveller and Far Traveller

Table of Chi-squared significance results : distance categories showing opposition vs all variables

Variable	Distance Categories		
	Community vs near traveller (n = 1561)	Near traveller vs far traveller (n = 442)	Community vs far traveller (n = 1539)
Sex abuse	NS	NS	NS
Physical abuse	< 0.05	NS	NS
Alcohol problems	NS	NS	< 0.01
Drug problems	< 0.1	NS	< 0.1
Relationship problems	< 0.05	NS	< 0.05
Physical health problems	< 0.01	NS	< 0.1
Mental health problems	NS	< 0.05	< 0.01
Literacy problems	NS	NS	NS
Sexual problems	NS	NS	NS
Gambling problems	NS	NS	< 0.05
Driving problems	NS	NS	NS
HRO status	NS	NS	NS
Offence type	< 0.05	NS	< 0.1
Offence gravity	NS	NS	NS
Offender history	NS	NS	< 0.05
Age	< 0.1	< 0.05	< 0.01
Gender	NS	NS	NS

Definition of distance categories used in analysis:

Category	Distance travelled to offend
Community	<= 3 miles
Near traveller	> 3 miles and > 6 miles
Far traveller	> 7 miles

Chapter 5

Crime in the Community

Abstract

It was found that 77% of crime was committed by the offender in and against his/her own community. Thus certain postcode areas will retain a large amount of crime and only export a small percentage, but other areas could import a high level of crime. "Retained" crime means that the offender lives and offends in his/her own community. However, if the same offender travels outside that area to another postcode area, then the crime will be exported from postcode "A" and imported to postcode "B". Based on this premise, it was possible to calculate the proportion of crimes that were retained, imported or exported for a particular postcode area. This information is of prime importance in assessing which areas have differing importation and exportation factors. This can indicate the safeness or the vulnerability of an area due to the high importation of crime. From this data, a safety quotient or community harm factor can be calculated.

This data, in conjunction with the other factors relating to the offender, his/her offence and psycho-social characteristics, will lead to the production of "predictor" for the type of offence committed and its location within or outside the offender's own community.

Introduction

The data shows that 77% of offences committed by this sample are committed and retained within the offender's own community. This is distributed across the county area and will reflect differences within the varying postcode areas. It is accepted that any crime committed must cause community harm, whether directly to the community or to persons within that community. Some areas will "retain" or "export" larger or smaller amounts of crime, or be harmed, or less harmed by the amount of offending that occurs within the particular postcode.

The area ranges from rural/urban affluence to parts of the community that can be described as loosely having "inner city characteristics". Therefore, certain postcodes will be expected to import crime, eg affluent areas will import burglaries whereas inner areas will probably retain thefts, drugs and some violence.

Crime Retained by Postcode Area

The following table shows the postcode areas, indicating the percentage of crime retained within the postcode and the percentages of crime that are exported from the area. For example, Z5 - 28% of offenders who live in Z5 offended within Z5 whereas 72% of offenders who live in Z5 offended outside Z5. Therefore, the amount of crime retained within the Z5 area = 0.39%. Thus, within this small area approximately three out of every four offenders will go outside their postcode to offend. Therefore, it could be argued that Z5 is a relatively low crime area in terms of offences, but it contains a number of offenders who go elsewhere to offend. U4 shows 72% of offenders commit crime within the area and only 28% go outside their postcode. Therefore, approximately three out of every four offenders commit crime within their own area. It could be argued that U4 then has a large number of offenders who prey on their own community.

Table 41
Area Crime Retention by Postcode

Postcode area	% Crime retained in area ⁽¹⁾	% Crime exported from area ⁽²⁾	Area crime retention factor ⁽³⁾
Z1	50	50	1
Z2	47	53	0.88
Z3	35	65	0.54
Z4	26	74	0.35
Z5	28	72	0.39
Z6	42	58	0.74
Z7	33	67	0.49
Z8	39	61	0.64
Z9	34	66	0.51
Z10	22	78	0.28
Z11	29	71	0.4
Y12	48	52	0.92
Y13	18	82	0.21
Y14	35	65	0.53
Y15	50	50	1
Y16	38	62	0.61
Y17	31	69	0.45
Y18	29	71	0.4
W19	57	43	1.33
W20	46	54	0.85
W21	54	46	1.17
W22	39	61	0.64
V23	65	35	1.86
U1	56	44	1.27
U2	33	67	0.49
U3	35	65	0.53
U4	72	28	2.57
U5	39	61	0.64
Q6	24	76	0.31
Q7	25	75	0.33
Q8	0	100	0
Q9	38	62	0.63

Postcode area	% Crime retained in area ⁽¹⁾	% Crime exported from area ⁽²⁾	Area crime retention factor ⁽³⁾
T10	25	75	0.33
T11	59	41	1.44
Average	44	56	0.77

1. "Retained" means that offender home postcode = offence location postcode (community offender)
2. "Exported" means that offence location postcode is outside the offender's own postcode area (traveller)
3. "Retention factor" = 1/2 and gives an indicator of the proportion of crimes that are retained within a postcode area. This figure should be treated with caution, as retention will depend to some degree on the physical size of the particular postcode area.

Crime Exportation by Postcode Area

Each postcode area produces a percentage of crime and receives a percentage of crime. Example, Y12 produces 9.2% of the total crime committed in the total area. It receives into its own area from other postcodes 7.5% of the total crime. When the two factors are divided, there is an exportation factor (ratio) of 1.23. Therefore, Y12 exports more of the crime for the county than it receives into its own postcode area. Y15 produces 5.6% of the total county crimes and receives 7.9% of the county crimes. This shows a negative factor, which means that Y15 imports more crime than it exports. It can be argued that Y12 is safer, although producing an amount of crime, its offenders go to various other postcodes to offend. Y15 imports a greater number of offenders from other postcodes and is criminally attractive. Although these findings are highly relevant, they must be treated with a degree of caution. The purpose of this study was to examine whether offenders went outside their own "community" to offend, not outside their own postcode. The community was defined as a specific three mile limit, and that three mile limit could, in small postal code areas, overlap with

other postcodes. This produced crime and received crime in postcode areas which may well be adjoining, and the distances may be less than the stated three miles that is required for the definition of the offender's own community.

However, these tables are important as they indicate the ebb and flow of crime across the postcode areas.

The prime importance of this data is that the average area crime retention factor is 0.77. This supports the earlier findings that 77% of crime is committed by offenders within their own community. Although the postcodes do not necessarily equate community to the postcode size, and the geographical location to other postcodes, the relationship between the two calculations is too important to ignore.

Table 42
Area Crime Exportation by Postcode

Postcode area	% crime produced by area	% crime received by area	Crime exportation factor
Z1	10.1	9.8	1.03
Z2	3.6	7.2	0.5
Z3	1.1	1.5	0.73
Z4	2.4	5.1	0.47
Z5	4	3.7	1.08
Z6	4.1	4	1.03
Z7	1.9	2.5	0.76
Z8	5.8	6.3	0.92
Z9	5.7	4.7	1.21
Z10	4.5	2.1	2.14
Z11	5.5	2.8	1.96
Y12	9.2	7.5	1.23
Y13	0.6	1.5	0.4
Y14	2.7	2.6	1.04
Y15	5.6	7.9	0.71
Y16	3.4	2	1.7
Y17	2	2.7	0.74

Postcode area	% crime produced by area	% crime received by area	Crime exportation factor
Y18	0.4	0.5	0.8
W19	0.8	0.9	0.88
W20	2.1	1.2	1.75
W21	2.1	2.1	1
W22	1.6	1.8	0.89
V23	3.6	3.4	1.06
U1	1.4	1.4	1
U2	0.3	0.3	1
U3	1.1	1.2	0.91
U4	8	8.3	0.96
U5	1.3	1.1	1.2
Q6	1.2	0.5	2.34
Q7	0.2	0.1	2
Q8	0.2	0.3	0.66
Q9	0.7	0.5	1.63
T10	0.2	0.2	1
T11	2.5	2.5	1

"Produced by area" means that the crime was committed by an offender with the home postcode given in the first column.

"Received in area" means that the crime was committed in the postcode area given in the second column, (and was committed by an offender from another area).

"Exportation factor" = 1/2 and indicates the direction and magnitude of crime flowing from or to the postcode area. A positive score means that a higher quantity of crime is produced by members of that postcode area than is received by members of that area. The converse is represented by a negative score.

Summary

The data contained in this section is particularly relevant to an understanding of the way in which the varying postcode areas will retain, import or export crime.

Awareness of the significance of this data has very strong relevance for crime prevention and the policing of particular areas. However, such data will also have strong negative effects. It is possible that such information could be used by insurance companies to increase insurance premiums if the area imports a considerable amount of crime. Also, information of this nature could have relevance to estate agents who could identify those areas where crime is not imported and thus become more desirable. It could be argued that this information is extremely sensitive because of these reasons and, as such, could be argued to be indirectly discriminating against various postcode areas.

For example in a recent study by Pritchard and Bagley (2000) on young persons subject to sex abuse (pending publication), they have used some of the data contained within the study on the importation and exportation of crime. They have identified one particular postcode showing that if young people are placed within that postcode, the potential for a person to become a victim of crime rises considerably. Therefore, if this data was used to identify where the crime importation was low, or the exportation was high, then the placing of a young person in that area would considerably reduce the risk of them becoming a victim when extremely vulnerable.

It is of interest to note that on 2nd February 2000, ITV television services reported on a computer programme being developed and tested by a police service in the South, which was calculating the probability of an offence being committed in a particular area of the town. Based on the information developed earlier in this study, a later chapter will identify how this information can be used to calculate the probability of an offender committing an offence within or outside his/her own community, and the type of offence. If such information were linked to the programme developed by the police, then three key factors would emerge:

1. the probability of the offence occurring inside or outside the offender's community
2. the probability of the type of offence that would occur
3. if linked with the police data the particular crime area could be narrowed down and identified

As earlier stated, this information is extremely powerful and has considerable potential for crime prevention but also has negative side effects if used wrongly.

Chapter 6
Findings, Hypothesis Testing
and Interpretation

Abstract

This chapter brings together the core relevant findings obtained from the data analysis. From these findings, it demonstrates the rejection of the primary null hypothesis, which stated that the evidence will show that there is a direct association between the offence location, the offender locale and the offender's own psycho-social characteristics, in relation to the type of offence he/she commits.

The specific sub-null hypotheses are examined and, with the exception of sub-hypothesis six, rejects the null hypotheses and demonstrates that the evidence points to an association between the various factors contained within each of the sub-hypotheses. However, null sub-hypothesis six is accepted as there was no association between the locality of the offence and its gravity levels.

Introduction

This chapter will examine all the relevant findings and its effect on the various null hypotheses. It is important to reiterate that earlier in the analysis, the data indicated that it was not necessary to divide the data according to gender. Throughout the sample there were only small significant gender differences, with the exception of predominant scorings in previous custody for males, violence and sexual offences. There were only small differences in the psycho-social problems relating to alcohol and literacy in males. As a result of these small differences, there was no major reason for breaking the sample down into gender types, and the cohort was treated as a homogenous sample throughout the remaining analysis. Further, it was possible to treat the community and traveller offenders as dichotomous groups, because no community offender's crime was outside their locale, whilst the traveller offences were overwhelmingly extra-community.

The prime purpose of this study was to demonstrate the interaction between the following four inter-related factors:

1. the offender's locale
2. the location of the offence
3. the type of offence committed
4. the influence of the specific psycho-social make-up of the offender

HYPOTHESIS AND ANALYSIS

Primary Null Hypothesis

The primary null hypothesis to be tested is that there will be no direct association between the offender's locale and the distance travelled to the location of the offence by the type and nature of the crime and the offender's psycho-social characteristics

There is strong evidence that the primary null hypothesis can be rejected. The evidence shows that there is a direct association between the offence location and the offender's locale, and that this evidence is supported by the type of crime committed and the offender's psycho-social characteristics. The evidence shows that 77% of crime is committed within the offender's own community (up to three miles).

Before the production of further evidence to support the rejection of the null hypothesis, it is important to reiterate that the "travellers" were re-analysed into two groups, "near travellers" (from three to six miles) and the "far travellers" (seven miles plus). There were no significant differences between the near travellers and the far travellers, except in relation to mental health problems and age. However the evidence showed that there were significant differences between the community and the near traveller and the community and the far traveller. Crucially, the key issue is that the community offender had no known convictions within three miles of their own locale.

Distance by offence type showed a significant difference between the two groups (<0.05). The data confirmed that burglars, violent offenders and motoring offenders were the principle travellers. However, the motoring findings should be treated with caution as the data is considered to be spurious. The community retained 80% of the offenders for theft and 87% for sex offences, which suggests strongly that offenders prey on their own community and, within the sexual offences, there is an element of intra-familial behaviour.

Distance travelled by the offender with psycho-social problems demonstrate that there is a difference between the community offender and the traveller. Offenders with drug problems (< 0.01) show that 72.4% remain within their community for the commission of drug related offences. The offenders with alcohol problems demonstrated that 68.9% of offenders remained within their community, (< 0.01). Offenders with physical health problems and mental health problems (70.3%) also offend within their own community. It should be remembered that the number of offenders with a range of psycho-social problems is relatively small. Therefore the findings must be treated with some caution, but it is still important to note that 70% of people presenting a range of psycho-social problems offend within their own community.

Summary

The primary null hypothesis is rejected because

1. there is a direct association between locale and distance with 77% of offenders offending within and against their own community
2. there is a significant difference between the type of offence committed within the offender's community and outside their own community
3. there are significant differences related to the offender's psycho-social problems

Specific Null Hypotheses

1. There is no association between the type of offence and the offender's locale

This null hypothesis is rejected. There is a significant association between the type of offence and the offender's locale (< 0.05).

2. There is no association between the type of offence and the distance of the offence location

This hypothesis is rejected. There is an association between the type of offence and the distance of the offence location. Graphs 1 to 9 show the relationship between the type of offence and the committing location along a mileage continuum. The graphs show that between 76% and 85% of offences are committed within the offender's community (up to three miles), but there are core peaks for burglary, violence and motoring offences of beyond six miles.

3. There is no association between the psycho-social profile of the offender and the type of committed crime

This null hypothesis is rejected. There is an association between the psycho-social profile of the offender and the type of committed crime (Table 30 - offender profile and psycho-social areas). As expected violence is related to alcohol, relationships and mental health problems with sexual offending linked to relationship problems. Dishonesty is also heavily related to alcohol, drugs and relationship problems and although this is expected, the relationship of physical and mental health and literacy in respect of dishonesty is less explainable. The table summarises the psycho-social characteristics and is evidence for rejecting the null hypothesis.

4. There is no association between the psycho-social profile of the offender and distance of the offence

It is not possible to totally reject the null hypothesis. There is some association between the psycho-social profile of the offender and the distance travelled to offend. There is a significant relationship between the distance travelled and drug problems. 72% who have a drug problem offend within their own community but 28% travel outside the community to obtain drugs or the

resources to fund the supply. Those with alcohol problems (31%) travel outside their community to offend. It is difficult to explain this association. It is also difficult to explain the significance of the association between the community and those travellers who have mental, physical health and literacy problems. Why do these people travel outside their community to offend? The data provides no evidence to come to any specific answers.

5. There is no association between the type of offence, the offence location and the offender's psycho-social profile

This null hypothesis is rejected. There is an association between the type of offence, its location and the offender's psycho-social profile. Evidence within the findings clearly show that the type of offence is directly related, with 77% of crime being committed within one's own community. The offences committed outside the community are predominantly violence, burglary and some extra familial sexual offences. Within the various psycho-social problems, ranging from 15.5% to 46.1% with problems, offenders do travel outside their own community to offend. However, it must be noted that the numbers are small and the significant part of the psycho-social problems is related to the addiction problems and those associated with health and relationships.

6. There is no association between the locality of the offence and its gravity (Home Office) levels

This hypothesis is confirmed. There was no association between the locality of the offence and its gravity levels. Although the hypothesis is accepted, the finding is of some importance as almost 30% of high gravity offences are committed inside or outside the community. The similarity of the findings for community and traveller were unexpected, and it had been wrongly assumed that the traveller would be committing the high gravity offences.

Summary

The primary null hypothesis is rejected as there are significant associations between the four main variables:

1. the offender's locale
2. the location of the offence
3. the type of offence committed
4. the influence of the specific psycho-social make-up of the offender

The secondary null hypothesis (6) is less conclusive. This is a surprise, as it had been expected that the more grave offences would have occurred more often outside the community.

Chapter 7

Use of the Data as an Offence Type and Location Predictor

Abstract

To the best of knowledge, this study has provided one of the largest, most comprehensive data set of a coterminous Probation Service caseload. It is readily acknowledged that it would be possible to explore the data further, but this would be beyond the bounds of the current research and its limited resources, and with a primary objective of a thesis. Consequently, this study has avoided the temptation of pursuing other interesting agenda, with the exception of the following related areas:

1. to explore the practical use of this data linked to those objectives, and whether it is possible to develop a predictive tool for practice
2. to examine the dimensions of being a victim of a crime and to illuminate the offender's experience (which will be explored in the penultimate chapter)

Discriminant analysis was used to develop a formula based on the demographic attributes of the offender, his/her own psycho-social characteristics, the offender's past criminal history, the offence type and the offence location. Using these categories, a mathematical function was generated in order to calculate a score which can be drawn from each of the attributes. This allowed the production of an offence type/location predictor. From the formula and the generated scores, a simple input screen was produced, whereby a "practitioner user" could input the subject's relevant details and the programme would calculate and produce a probability factor relating to the type of further offence and its possible location. 23% of the total sample were randomly selected and put into the predictor. Each result was then checked against the actual outcome. The predictor scored a success rate of 63%. Although this score could be improved, it does, however, suggest that the predictor score does have an element of reliability which is better than a random sample. Although this is a fairly simple and basic predictor, it is 1.35 times more successful than randomly predicting the type of offence and its location of being inside or outside the offender's community.

PREDICTING THE OFFENCE TYPE AND LOCATION

Introduction

This chapter examines and develops the dichotomy between the community and the travelling offender. It also explores whether the data can be used in order to predict the potential for certain types of crime, and whether that crime will be committed within or outside the offender's own community. Such a tool would be an extremely useful adjunct to understanding the nature of a criminal's behaviour and where he/she is likely to offend. Knowing where an offence is likely to occur would have important ramifications for resourcing crime prevention, and the development of local community support action facilities in order to stop crime occurring in one's own community. To produce such a tool required the data to be subjected to a discriminant analysis procedure.

Discriminant Analysis

The purpose of the discriminant analysis was to

1. determine whether the categorisations imposed were legitimate
2. generate a mathematical formula to predict from the offender's demographic and psycho-social characteristics:
 - offence type of crime to be committed, if committed
 - whether the crime would be committed within, or outside of the offender's community

Strategy

The strategy employed was to perform two key discriminant analysis. The first was factorised by offence type, with the independent variables being demographic and

psycho-social problems. The second was factorised by "in/outside of community", using demographic and psycho-social problem variables.

By employing this strategy, it was possible to generate a mathematical formula to predict both the predicted offence type and crime location (in/out of community).

The formula was generated such:

d = demographic attributes

p = psycho-social characteristics

o = offence type

c = inside/outside community

Discriminant Analysis 1 produced a formula $f(d,p) = o$

Discriminant Analysis 2 produced a formula $g(d,p) = c$

It is intended that in future predictions o will be predicted from $f(d,p)$, with d and p inputted from the raw data of the individual case. c will be predicted from the mathematical function $g(d,p)$.

Results

Reliability of categorisation

As a control variable, the discriminant analysis success is measured against the chance of categorising a case by random selection, this is formalised such:

$p(\text{success})_{\text{random}} = 1 / \text{no of categories}$

Discriminant analysis 2 (DA₂)

(for $g(d,p) = o$)

n = 151

Random success rate

c has two categories, therefore $p(\text{success of DA}_1)_{\text{random}} = \frac{1}{2} = 0.5$

Discriminant Analysis Success Rate

DA₁ result Success rate = 0.6755 (see DA2)

This means that DA₁ is $(0.6755/0.5 = 1.351)$ 1.351 times more successful than random selection in predicting whether a subject would offend inside or outside his/her own community from a small set of demographic and psycho-social characteristics.

The scores for in/outside community are calculated in the same way as OCS above.

This is represented on the computerised form, constructed so as to provide a predictive calculating tool processing the above information. There are two buttons on the form, one for "inside community", the other "outside community" - the button selected corresponds to the category most correspondent to the subject profile (see section "Computerised Predictor" page 179).

Derivation of mathematical functions from discriminant analysis

The derivation of the mathematical functions depends heavily on the techniques and mathematical computations drawn from the book "Discriminant Analysis", William R Klecka, Series: Quantitative Applications in the Social Sciences. (Sage University Paper No 19). It is not proposed to take the details of this analysis any further at this stage, but to refer the reader to a fuller description of the analytical technique contained in Appendix 7.

Computerised Predictor

Using discriminant analysis has allowed the data to be compiled onto a singular electronic form. This form allows an operator to utilise a "Windows" environment, so as to input a subject's demographic and psycho-social characteristics. The form returns predictions in the form of OCS scores for each offence category, and whether an offence committed would be likely to be inside or outside the offender's community.

The following table shows

Case (1) male, aged 35, with a previous criminal history of which the most serious disposal was custody. He had problems relating to alcohol and mental health.

The discriminant analysis predicts that the probability of his next offence will be for violence (0.26*) which he will commit within his own community (up to three miles).

Offence Type / Location Predictor																	
Case Details	Case ID 1	Gender <input type="radio"/> Female <input checked="" type="radio"/> Male	Age 35														
Case Previous History	Case Problems	Offence Predictions															
<input checked="" type="radio"/> Custodial <input type="radio"/> Supervisory <input type="radio"/> CSCO <input type="radio"/> Fine <input type="radio"/> Other sentence <input type="radio"/> Pre cons, but not known <input type="radio"/> Suspended sentence <input type="radio"/> No previous convictions	<input checked="" type="checkbox"/> Alcohol <input type="checkbox"/> Drugs <input type="checkbox"/> Relationships <input type="checkbox"/> Physical Health <input checked="" type="checkbox"/> Mental Health <input type="checkbox"/> Literacy <input type="checkbox"/> Sexual <input type="checkbox"/> Gambling <input type="checkbox"/> Driving	<table><tbody><tr><td>Violence / Damage</td><td>0.26*</td></tr><tr><td>Sexual</td><td>0.06</td></tr><tr><td>Burglary</td><td>0.19</td></tr><tr><td>Dishonesty</td><td>0.17</td></tr><tr><td>Motoring</td><td>0.15</td></tr><tr><td>Drugs</td><td>0.15</td></tr></tbody></table> <p>Outside Community <input type="radio"/></p> <p>Inside Community <input checked="" type="radio"/></p>				Violence / Damage	0.26*	Sexual	0.06	Burglary	0.19	Dishonesty	0.17	Motoring	0.15	Drugs	0.15
Violence / Damage	0.26*																
Sexual	0.06																
Burglary	0.19																
Dishonesty	0.17																
Motoring	0.15																
Drugs	0.15																
<small>n.b. The greater an offence prediction score, the closer the case fits to that particular offence characteristics (relative to other offences). Sum of Prediction scores = 1, Prominent Offences are marked by an asterisk.</small>																	

An OCS result is considered acceptable if OCS score/sum of OCS scores > 0.25

The above form shows the OCS scores on the rightmost side; these are normally labelled with their relevant offence code. The in/outside community predictor is shown on the bottom right, and is normally accompanied with corresponding radio buttons to show the selection. The psycho-social (problem) data is shown in the middle section, each problem is usually "ticked" as "yes" or "no" with the use of a tick box. Case previous history is shown on the left, a history (most serious previous disposal) is usually selected by means of corresponding (mutually exclusive) radio buttons.

Summary

The offence type/location predictor was developed following the data being subject to a discriminant analysis, and the calculations are shown within the text and within the relevant appendices. The value of this simple predictor is that, with a small amount of information, it allows the user to calculate the probability that a certain type of offender with previous history and relevant psycho-social problems will re-offend and to be informed whether the offence would be committed inside or outside the offender's own community and an indication of the type of offence he/she is likely to commit.

Although this is a fairly basic predictor, the calculation would be 1.35 times more successful than random selection in predicting whether an offender would offend inside or outside his/her own community. In order to test the success rate of the predictor, four hundred cases (23%) were randomly selected from the data set with the relevant information required for the predictor, but excluding the offence and its location. The data was then matched with the prediction of the type of offence, location with the known offence and location. When re-calculated this produced a success rate of 63%.

Although this is an encouraging success rate for this basic predictor, it does have the potential for increasing the success rate if developed further on a much larger database than the existing data set of 1771 offenders.

Chapter 8

The Offender as Victim

and / or Perpetrator

Abstract

The qualitative data, as a vehicle for illuminating the findings derived from the quantitative data, is explored. It enables the statistical data to be cross checked with the offender's perceptions of how he/she functions in their own environment. It was based upon the interviews with twenty five randomly selected offenders, using a semi-structured questionnaire in order to obtain their perceptions of crime, its occurrence within their community and whether they themselves had been a victim of any form of crime.

Each offender was extremely co-operative and very candid about their own perceptions of having been a victim and an offender.

Their responses about being a victim ranged from anger to revenge and feelings of violation. Their perceptions of the police, when they themselves were a victim, indicated that the gap between offender/victim and the police was extremely wide.

Although this was a small study and used primarily to animate the quantitative data, it indicated that a large number of offenders have themselves been a victim of crime, showing that in their own community there is an element of prey and being preyed upon, and this is contrary to the image of social solidarity in the deprived areas.

Introduction

In recent years the study of the effect of crime upon the victim has achieved significant prominence. This has been heavily supported by various Governments, who have bowed to public pressure that the victim has often been the missing person within the criminal justice process, and that too much emphasis has been placed upon the needs of the offender. This, in its own way, has brought about a significant change in society's attitude, its policy and the structure of the system towards the offender. Whilst one should not underestimate the harm and distress caused to the victim, it is often forgotten that the offender may have also been a victim. Within the justice system, victims are left out almost from the time the crime is committed, with little emphasis being placed on his/her role right up until the final sentence. It is correct that we should be concerned about the rights of the victim, even if at some stage the victim has also been an offender, victims vs offenders are not exclusive categories. Within this study, the focus upon the victim indirectly challenges the right of the offender in the justice process. This evaluation is to examine the perceptions of victim, both as victim and perpetrator of a crime, and to examine the general perceptions that the victim/perpetrator has of the system. Data presented earlier in the study quite clearly indicate that the offender frequently preys upon his/her own immediate community. As such, evidence will be presented to show that the role as victim/perpetrator is an area in which the perpetrator (now a victim) is considerably at a disadvantage within the criminal process, and his/her perceptions of how he/she is treated are severely distorted.

Methodology

The aim of the study was to interview twenty five randomly selected offenders using a semi-structured questionnaire (Appendix 5), with the purpose of eliciting from the subject his/her indigenous factors concerning their background, their own offence, their perceptions in respect of the crime inflicted upon them, their views about the police and opinions about their own neighbourhood as a source of crime and criminals. The questionnaire followed the offender through his/her own personal factors, their

own crime and their responses when a victim. At each stage they were prompted for greater details in respect of their perceptions when an offender and/or a victim.

Fifty names were selected using a random number method. The sample was extended in order to ensure that when the respondents were approached, the expected sample of twenty five would be achieved. Over a period of four and a half months the respondents were approached and appointments made. As expected, a number failed to keep their appointment. This raises the question of how representative was the final sample; how does one really know? Did those who attend feel a greater commitment or did those who failed to attend show the attitudes that could be symptomatic towards the system and/or authority? Ultimately, twenty five subjects were interviewed in various offices with each interview taking between one and one and a half hours. On being approached for the interview session, each person was assured of the confidentiality of their responses and was asked if they would object to the interview being recorded on tape. In the first eight interviews, only one was amenable to this method and it was decided to abandon the tape recording part of the procedure and record the details on the questionnaire. Throughout the twenty five interviews, each offender was extremely co-operative and showed great interest in expressing their views about their own crime and their perceptions about their experiences having been a victim.

The first important question after the introductions was to ascertain whether they had been

1. a victim first and then an offender
2. an offender first and then a victim
3. only an offender

Analysis of Data

Table 43
Victim / Offender Status

Victim first then offender	14
Offender first then victim	10
Offender only	1

As only one case out of the twenty five was deemed to be a non-victim, the analysis will include that case within the victim first, then offender. What is of importance is that of the twenty five randomly selected cases, twenty four out of the twenty five had been victims at some time or another during their life period.

Table 44
Victims/Offender : Social Factors

Offender First		Victim First
Gender		
Male	13	11
Female	1	-
Age		
17 - 21	2	2
22 - 30	9	6
31 - 40	1	1
40 +	2	2
Ethnic Status		
White	14	11
Marital Status		
Married	3	1
Single	10	9
Divorced	1	1

Offender First		Victim First
Accommodation Status		
Flat / Bedsit	7	7
No fixed address	2	1
Owner	1	-
Other	1	-
Parent's house	3	1
Association housing	-	2
Employment Status		
Employed	3	1
Unemployed	10	8
Long term sick	1	2
Learning Difficulties		
Yes	-	-
No	14	11
Mental Health Problems		
Yes	2	1
No	12	10
Disabilities		
Yes	2	1
No	12	10

This table shows the indigenous factors relating to the sample. The offender first/victim first data shows that there is no major difference between the two sub-samples. It is encouraging that the figures support the randomness of the selection, as per the distribution of such factors across the normal caseload - predominantly male with a high unemployed status, white, predominantly single, living in a bedsit with a scattering of social or physical difficulties. Earlier statistical data in this study shows similar findings.

Table 45
Victim/Offender: Offences and Convictions

Victim First		Offender First
Offences		
Theft / burglary / fraud	7	6
Violence	2	5
Motoring	1	3
Drugs	1	-
Other	-	-
Previous Convictions (No.)		
1	2	1
2 - 3	1	2
4 - 6	1	4
6 - 10	2	2
10 +	5	5

This table shows the type of offence and number of previous convictions within the sample. This table shows that across the sample over 50% are for dishonesty and almost a third for violence; with five "offenders first" committing offences of violence. 14 out of the 25 offenders (56%) have six or more convictions, the highest number being 32. This random group not only preys heavily on the community, as per the number of their convictions, but are also themselves victims.

Table 46
Victim/Offender: their Role as Perpetrator

Victim First		Offender First
Reasons for Offending		
Crime for drugs	4	5
Need for money, homeless	3	2
Anger	1	-
Reputation "one of the lads"	1	2
"Don't know"	2	2
Poor schooling	-	1
Mental problems	-	1
"I want to drive"	-	1
Did you know the victim		
Yes	6	5
No	5	9
Distance from own home		
Up to 1/2 mile	1	4
over 1/2 to 1 mile	2	1
over 1 mile up to 2 miles	2	2
over 2 miles up to 3 miles	-	1
over 3 miles	5	5
Homeless at time	1	1

This table shows the breakdown when the sample was prompted for their reasons for offending and their knowledge of the victim. This table reflects the significance of drugs as a factor contributing towards crime. Nine out of the sample stressed money for drugs and five for money which generally related to homelessness and unemployment. The smaller numbers relating to what one might describe as "social problems" are seriously questioned, bearing in mind that they are all cases who have been "through the system" and are looking, to some extent, for excuses for their criminality. Eleven out of the twenty five (44%) knew the victim. (The victim may not necessarily be a person; in some instances victims were the bank the offender had defrauded, the local shop, or some other community facility within their area).

It was particularly interesting that the offender when confronted with this factor, did not strictly see the bank as a victim, and crimes that were against non-tangible human

factors were seen to be victimless. Thirteen, (52%) or over 50%, had committed crimes within three miles of their own home.

Table 47
Victim and/or Offender

Victim First		Offender First
Number of times a victim		
0	1	-
1	2	6
2 - 3	5	5
4 - 6	1	1
6 +	2	2

This table shows the number of times members of the sample had been a victim. Eight (67%) had been a victim of a crime three or more times. Although they are offending against the community, other offenders are also significantly preying on them; six (25%) had been a victim four or more times, one having been a victim over ten times.

Table 48
Offender now Victim - The Crime and its Setting

Victim First		Offender First
(excludes one not a victim)		
Offence		
Burglary	3	6
Dishonestly	1	1
Violence	6	6
Arson	-	1
Where		
Street	-	1
Own home	4	8
Pub / Town	3	4
Car park	2	-
Other	1	1

Victim First		Offender First
Did the offender know you		
Yes	5	5
No	4	8
Not known	1	1
Did the offender get caught		
Yes	3	1
No	4	9
Not known	3	4

This table explores the type of offence perpetrated against members of the sample.

Nine suffered burglary, and more worrying is that twelve (50%) had been subjected to offences of violence. Due to the nature of the offence, as expected, the burglary and dishonesty had occurred within the sample's own home and the bulk of the violence had occurred out in the community. One serious and violent offence had occurred some way out of town where the victim had been subjected to a "beating". Ten (42%) knew the offender who committed the crime against them, and, of twelve who recorded that they did not know the offender, four suggested that they had "an inkling" of who the potential perpetrator might be.

Thirteen (54%) did not know if the offender had been apprehended for the offence, but pointed out that it was unlikely that the offender would be arrested as, in most of the cases, they **did not report** the offence to the police.

Table 49

Victim/Offender: Perception of the Police and their Role

Victim first		Offender first	
Did you report all crimes to the police			
Yes	4		4
No	7		10
If "No" why not			
Got my property back my own way		Police no help	
No point	3	No faith in the police	
Waste of time	2	Police hostile to "cons"	
I will get my own back		No point - not worth it	3
		No way	
		I will not get treated fairly	
		Deal with it myself	2
		No good - don't get involved	

This table is of extreme concern. Seventeen (68%) would not report the crimes perpetrated on the sample to the police. Their comments divide, almost equally between having no belief that the police will in any way place any worth or value in doing anything about the incident, and the underlying tone that the offender will "deal with the matter" in his/her own way. When prompted on these questions, four indicated that "that's life, these things happen, don't get involved". The hostility expressed towards the police was quite vehement, ranging from "they're of no help" through to "they're actually hostile to me because I am an offender myself". When prompted as to whether they believed their neighbours or friends would report crimes to the police, it was almost equally divided across the two samples. 52% believed that their neighbours may well report crimes to the police, but in this were included some vague responses (possible, maybe, not sure, so-so).

Table 50
The Police Attitude to the Offender as Victim

Victim First	Offender First
Police approach to offender as victim	
Negative	Negative
Bad luck now you know how it feels	No care - apathetic
Not taken seriously	Don't bother - I come from a criminal family
You deserve it	Sort it out yourself
Don't want to know you	Not fair because of my previous
	Not interested / not understood
	Poor police attitude
Positive	Positive
Will do a fair job	Fairly
Some might be fair	Treated as normal public
Treated no different	
Possibly be treated differently?	
Treated fairly	

This table shows the responses prompted for when asked if the offender felt he was treated differently by the police when a victim. The responses were categorised into positive and negative, and it is encouraging that there are a number of positive comments. However, the offender first sample shows more negative comments. Across the whole sample, there appears to be a response that indicates that if you are a criminal and then become a victim yourself, the police treat you in such a way as to indicate "well you now know how it feels", and that their help was being indicated by the sample as somewhat limited and biased against the offender.

Table 51
Victim/Offender: Views on being the "Victim"

Victim First	Offender First
Offender's view on being a victim	
Very angry as I was an innocent party caught up in a fight	No real feelings about it
Used to it (ten times a victim)	Awful - makes me feel bad about what I have done
Expecting it	Put me off crime
Not like it - sorry for my mum (house burglary)	Bitter
Upset	I asked myself why I offend
Even though I have done it, I felt violated	Angry - why me
I was in the wrong place (violent assault)	Now I know how it feels
Bloody aggrieved	I want revenge ????
	Gutted
	Pxxxxx off

This table draws on an earlier part of the interview schedule and examines how the offender feels when he/she is now the victim. It was inserted at this point in the analysis as it was felt that it linked more to the responses in Table 50.

The responses indicate diversity between an expectation and almost an acceptance of being a victim, with a number of responses indicating anger, revenge and the feelings of violation. There were three comments about now knowing how it feels and questioning why they themselves offended. There was also a comment about what it feels like for "my mum" who has now suffered a burglary. This is clearly an area that links into the Government's view on mediation and reparation, which suggests that the offender/victim should perhaps meet the other offender who has committed a crime against him/her and explore the relationship in a mediating setting. However, this somewhat idealistic view of mediation denies the existence and the influence of the sub-culture in which the offender/victim exist and/or commits his/her crime.

The sample was then prompted for an exploration of their own neighbourhood as a source of crime and criminals. The responses were very mixed. The sample was drawn from across a southern county and came from areas that differed from a rural

community to the equivalent of an "inner city" type district. The bulk of the sample indicated that within their area, even allowing for the variation across its structure and class distribution, there was knowledge of high unemployment, high drug problems, vandalism and petty theft. Even those who indicated that they lived in "a nice area" believed that they would be subject to others who would come into the area to commit offences of burglary. Nearly all expressed an anxiety that much of the crime committed in or around their area was in order to obtain money for the purchase of drugs.

The sample was then prompted for their perception of the sort of crimes that people would commit within their own area, and crimes they would commit outside their own area. They then were asked the same question as to the sort of crimes they would commit within or outside their own area. (There could be more than one response).

Table 52

Victim/Offender: Perception of the type of Crime committed in own Community

Offences	Within own community	Outside own community	Total
Car theft	5	-	5
Burglary	3	16	19
Robberies	-	4	4
Damage	2	-	2
Vandalism	2	-	2
Petty crimes	7	-	7
Anything - but not to get caught	-	1	1
Not known	-	1	1
Drug dealing	8	-	8
Violence	1	-	1

This table shows the type of crime perceived by the sample that would be committed by people within or outside their own community area. Their perception is that most of the crimes committed within their own area are more of nuisance value, but it is accepted that a certain amount of drug dealing would take place within the community. Of particular significance is that sixteen responses for burglary (84%) would go outside the community including four for robbery (10%). This suggests that the

sample's belief that their own community is an area where petty crime and drug dealing occurs could be perceived as acceptable. The amount of perceived burglary within the community is only three responses (16%).

Within any community there must be unequal risks. Not everyone in a particular area is at risk of crime. Those who go out of their area to commit burglary are influenced by the gains from the perceived "wealth" of the area.

Table 53

Victims/Offenders: Crime they would commit In or Outside their Own Community

Offences	Within own community	Outside own community	Total
Theft	4	-	4
Burglary	2	18	20
Petty crime	6	-	6
Violence	1	1	2
Fraud	1	-	1
Car theft	2	1	3
Drug dealing	4	-	4
Serious crime	-	2	2
None	4	1	5

This table shows the crimes that the sample themselves would consider committing within or outside their own area. The results, as expected, are very similar to their perception of the offending public. They would go out of the area to commit burglaries (18 (90%) responses). They would consider a certain amount of drug dealing within their own community, along with petty crime and theft, although it is significant that four responded by saying they would not commit crime within their own home area. However, their perception of the public offender and their own perception of offending suggests that they are, through petty crime and drug dealing, preying on their own, but for the more serious, profitable crime, they would venture beyond their own community boundary.

Conclusion

In this brief study on the offender as victim, the purpose was to look at a qualitative approach that would give the quantitative approach an animation enlivened by human response.

This brief diversion from the quantitative data into the qualitative data is to give the original statistical analysis a more living existence looking at the offender as both victim and perpetrator. In the British Crime Study (1982 & 1992), Break and Hale (1992) have commented on the probability of certain members of the population being associated with victimisation and having crimes of various types committed against him/her. However, there is very little written work that examines a link between the offender being both offender and perpetrator.

Peelo (1992) cites various cases where the status of the offender determines the likelihood of him/her being subjected to crime, and points out in that study that an offender's property is often regard as "fair game" by other members of the community. As many of our offenders often live in crime prone areas, then they become the targets for repeated offences against them. This study indicates, and is supported by Peelo, the contention that on becoming victims of crime, the offenders are not taken seriously and they tend to be subject to a differential level of treatment by society and the police. Thus, the offender/victim has now become disillusioned with a law which does not appear to protect them as equal citizens when they are offended against. It could be that the offenders have to develop coping mechanisms in order to deal with their deprived circumstances - one such deprivation is the denial of a right to equal treatment before the legal process - a fact which offenders must unfortunately (and unjustly) absorb.

Peelo further comments that the motive for offending is complex, but alongside this, in order to survive, everybody must be doing "it" to everybody else. This study could warrant a further investigation as to whether there are any significant differences

between offending first and then becoming a victim or vice versa, but the scope of this study does not allow that level of analysis.

One of the major findings within this brief analysis is the evidence of an association which indicates that an offender can be both victim and perpetrator. These offenders are socially poor, often existing in areas that one could argue are socially deprived. They are frequently unemployed and, although they prey on their neighbours, their neighbours are also preying on them; moreover when they seek equality and fairness, little is done. Fattah (1986) comments "we cannot preach justice to the aggrieved and at the same time tolerate injustice towards the aggressor".

The disconcerting result from a small part of the study is the clear evidence elicited from the twenty five randomly selected cases, twenty four of whom had themselves been a victim. Out of a current caseload of 2,500, the possibility exists that a very large number of the remaining caseload are victims as well as offenders. It would appear that there is little that is really known about the offender as victim and perpetrator.

Is it possible that the offender's response to being the victim is a form of self-defence in order to survive in a very stressed environment? "Prey and be preyed upon". Contrary to the popular image of social solidarity, there is no "honour amongst thieves".

Chapter 9

Synthesis and Conclusions

Abstract

This chapter draws together the quantitative data and shows how the qualitative data matches. It demonstrates the relationship between the gender and the differing travelling groups.

It explores the value of this data and how it can enhance further understanding of the relationship between location and locale, and how an area imports, exports or retains crime, which causes community harm.

It shows how the data was used in the development of a predictor which could improve the greater understanding of criminal behaviour, if linked to existing risk and psychometric scales.

Offenders predominantly do not travel but offend within their own community, where they are not only offenders, but are frequently a victim. The data explodes the myth of a dramatic increase in rural crime, as the movement between urban and rural areas is extremely small.

Various criminological studies carried out over many years have investigated a multitudinal range of the "alleged" causes of crime. These studies have explored the social, the psychological, the environmental and many other suggested causes along the offending continuum. None can be reliably defined as being specifically causal factors. This study argues that the alleged causes are in fact "agents" that are "catalytic" and indirectly contribute to, influence or in some way take part in the decision an offender makes in order to commit his/her offence. This supports Downs's (1997) description as a crime with no specific causation. It also identifies with Clarke R (1977) diagram (Table 1) which shows the alleged causes and their interactions, but Clarke ignores "choice of action", which only comes into being by extending "choice of action" into the diagram.

The decision to offend may be affected by one or more of the stated interactive factors, and influenced by the offender's own internal psycho-social characteristics. However, only the offender can decide when the crime will be committed, where it will be committed and the actual type of offence to be committed which has been the central focus for this thesis.

All the actions up to the offence may be legitimate, but they require a further decision to commit the wrong by the person his/herself. Only then does the wrong occur Nozick (1997). The offender may also be operating on a chosen set of decisions, selecting from a range of social arrangements which, via his/her crime, gives him/her an advantage over the victim (Rawles 1971). Nonetheless, the type of offence is seriously influenced by the offender's previous criminal history and the disposals that he/she has been sentenced to for other previous offences.

Where the offence occurs and the probability for its re-occurrence is obviously a major factor in understanding the offence, the offender and the way each part interacts within the offender's community.

This study analysed a three year cohort that was drawn from a practitioner developed database which contained a wide ranging list of variables related to the offender,

his/her psycho-social characteristics and the offence location. The sample, probably the largest coterminous data base in the country, was capable of being analysed from a wide range of approaches. It contained many rich veins of information and each in its own distinct way, could form part of a series of research studies. It should be noted that the data has already formed part of two independent research projects: (Pritchard 2000 and Pritchard and Butler 2000) on School Exclusion and Delinquency, and the potential for crime in young adults as predator and/or victim.

However, for the purpose of this research the data was analysed according to offence location, offender locale, the type of offence and the offender's psycho-social characteristics and their joint influences on the type of committed offence. A key weakness in this study, apart from the "consumer" interviews, is that aggregated data analysis tells little about the individuals and their motives, and only gives adumbrate broad trends.

A further problem is related to the very richness and comprehensiveness of the data and the pull to explore a number of potentially interesting findings. Hence, the researcher has had to struggle to avoid alluring byways, as the data is full of indicators of areas that merit further research.

Key Findings

The key findings which have practice and policy implications are that:

1. Seventy seven percent of offenders in either rural or urban areas do not travel; they offend within and against their own community.
2. Rural offenders live and offend within their own rural community. The number of offenders who travel from urban to the rural to areas offend is extremely small.

3. There were no significant differences between the type of committed offence and the offence location across the genders, but there are some small differences related to the psycho-social makeup across the genders.
4. Communities import, export or retain offenders who inflict upon the community a degree of criminal harm.
5. There is no significant relationship between the offence location and the gravity of the offence.
6. The offender can also be a victim of crime. The offender not only preys upon his/her community, but is him/herself preyed upon, Peelo (1992). The expected social solidarity that might be present in his/her community did not appear to deter the criminal in his/her mutual depredations.
7. The data can be used as part of a predictor scale, which can calculate the probability of the type and location of the offender's next offence.

Relevance to the Practitioner and their influence on Policy Issues

1. Community vs Traveller

More than three quarters of offenders live and offend within their own community. The remainder predominantly travelled to offend, whilst a few of these offenders also offended in their community and travelled. As the numbers were extremely small and not significant, the sample was analysed as a dichotomous group of "Community" and "Travelling" offender. Whilst it was possible to identify the near and far traveller by distance, for all practicable and analytical purposes, there was no difference between them, as they shared most of the features which distinguished them from the community offender.

It was expected that those offenders who travelled in excess of three miles would be the more "sophisticated criminal", the criminal who lives or earns his/her living by crime. For violence and burglary, this assumption was confirmed as the travellers did have a higher predilection, but the strength of the assumption was not as strong as anticipated. Bersani's (1970) now old study, but one with an extremely large sample of 19,327, showed, even then, property offenders did not move out of their area.

The extra-familial sex offender was also a traveller who appeared to seek his victims outside the family. This was in accord with other research, Bagley & Thurston (1997), Pritchard & Bagley (2000), Fisher & MacDonald (1998).

Motoring offences featured highly among the travellers, but this was found to be a spurious result. It was difficult to ascertain exactly where the car or vehicle was stolen and where the offender was actually arrested.

There was also evidence that the travellers committed drug related offences, but it was difficult to argue whether this was to obtain drugs or to expand the offender's drug selling area. It is also possible that assignments were made beyond the community area to obtain drug supplies for onward selling, and that the offence occurred when being apprehended during the transaction.

The implication for both practitioner and policy makers is extremely important if they can identify which offenders travel and which offend in the community. It could be envisaged that appointments to see or contact the Probation Officer are deliberately made at a more inconvenient time, eg during the evening or at weekends, which might well impede the opportunity for the offender to commit his/her crime. Interfering with their time would act as a form of control. This has potentially important implications when determining intervention arrangements between intra- and extra-familial sex offenders.

The current Home Secretary (Jack Straw) in a speech to the Police and the Probation Service in May 2000 was almost suggesting this type of control by using weekend

prisons. However, it does raise the question that if this took place, there may well be the likelihood of increased offending in the community area, for if the traveller was contained, he/she may revert to community based crime.

However, as we do not know why offenders choose to be either a community or a travelling criminal, it may be worth exploring the impact of such a policy. The "serious" offender would probably not be deterred. Why for example do some elect to travel? Does it reflect the differences between the opportunistic or the sophisticated criminal, the clever or the less able offender? It seems logical to assume that detection is more likely within one's own community. This could be a weakness in the argument. Community offenders are in the majority because they are more likely to be detected and convicted. We do not know.

As the majority of offenders offend within their community, this could have implications for policing techniques. The relevance of a beat policeman or a highly visible police presence within the community could well deter local crime. It may also be relevant for the concept of "zero offending" (every type of crime from the minor to the most serious is taken before the Courts), a technique being successfully used in New York and presently being tried in Rochdale.

As most offenders offend within their community, this awareness has importance for the increased use of Neighbourhood Watch schemes and community policing. A greater use of Probation organised groups, eg employment training, literacy groups and drug treatment schemes and the increase use of cognitive awareness groups, could be beneficial. As the offender does not move out of the community, then the location of the resources in the offender's area becomes a viable consideration. "The offender resides close to the location of his or her crime".

Implications for further Research

Although the study has indicated a number of significant results, it also indicates a number of areas that warrant further investigations. The data contained within this

study covers a multi-variate, stable 3 year cohort which contains data that would enable varying methodologies to be used on a range of further analysis. The following are suggested as being of major interest.

1. The development of a criminal career and its linkage to travelling. Does an offender first prey on the community and then travel?
2. Greater understanding of the relationship between burglars, violent offenders and the distance travelled to offend.
3. The differences between the characteristics of sex offenders who travel and their links with intra- and extra-familiar sexual behaviour.

2. Gender Differences

It was expected that there would have been some significant differences across the genders. However, this was not the case and the sample could be treated as a total cohort. This is an extremely important result because there is evidence of an increase across the types of crime being committed by females, Home Office Criminal Statistics (1998). It could be argued that this is because their own internal psycho-social characteristics and decision making processes are no different than those of male offenders.

Women offenders are an increasing number on a Probation caseload; why there is this increase is open to speculation. The popular press and many others have suggested feminism, easier abortion, greater freedom, equal opportunities across the gender, and numerous other unsubstantiated opinions. How, or perhaps as equalities increase, attitudes which were the preserve of the male are now being shared by women. Are we going to see an ever increasing number of women "behaving badly"?

This study has demonstrated that the psycho-social characteristics, the type of offence and the distance travelled by women is synonymous with their male counterparts.

This information is of prime substance to the practitioner who is being urged to instigate various rehabilitative groups, with special reference to women only groups or women specific sections.

If women are presenting cross-gender features, then it raises the question as to why the resources are being used on women "only" schemes. Perhaps the time has come when policy makers should recognise that with both genders having equal rights, the use of scarce resources to sustain division of genders based projects should be re- examined .

Why there is an increase in offending by women, what the pattern is of their offending and how their criminal careers mirror those of their male counterparts might well be a topic for future research

3. Rural Crime

The evidence demonstrates that offenders in rural areas live and offend in those communities, whilst the movement of offenders from urban to the rural is extremely small.

In recent years, politicians and the public, via the popular media, have argued that with an ever decreasing amount of resources directed to a criminal/social environment, there are now major differences between urban and rural crime. The rural areas are being denuded of police resources, with a consequential reduction in public protection. The general belief is that offenders are flooding into the rural areas in order to commit all types of crime and that victims are completely without police protection and, as such, may have to protect themselves. Archer (1999) in a study on "poaching gangs" argues a belief by rural dwellers of urban offenders travelling into the country to offend. This fear, to some extent encouraged by the popular media, argues the potential for a rise of "vigilantes". The murder of a burglar in Suffolk, (May 1999) for which the perpetrator was given a life sentence, exacerbated these issues. The media and the public were arguing for self-protection, rural protection groups and an acceptance that self protection was not to be seen as a crime.

It must be recognised that in small rural communities, an offender committing a crime within that community becomes very "visible" and maybe known to others. Therefore the potential for apprehension is increased, whereas a similar event in a busy town could endow on the offender an element of "invisibility" he/she "is one in crowd".

Policy makers should be increasingly aware of the needs of rural communities and to recognise that crime in those communities may be a reflection in the decline of community solidarity. Nonetheless, this study shows that in a county with clearly marked urban and rural communities, the majority of urban offenders do not travel. This reinforces Bottoms, Capone and Nichols et al, "offenders do not travel". This particular county does have fairly poor transport facilities which may directly impact upon the distance rural offenders travel. A practitioner should be very conscious of car thefts from rural areas. Are the cars being stolen for nefarious purposes within the community, or are they being used to commit a crime elsewhere, or merely as a mode to go to and from the town for lawful purposes?

Clearly the replication of this study on a predominately rural area would be important as it may indicate differences across the three sub-groups. Further research to explore the inter-relationship between transportation and crime, and their influence on community retained crime, warrants further exploration.

4. Community Crime

The technique used in this study allowed the exploration of the relationship between offence location and offender locale, and produced a clarification of how a community can be harmed. From the postcode calculations, it was shown that a community can retain levels of community harm, it can export community harm and it can import community harm. Thus an area may be extremely safe, but may have a high criminal population who all offend outside the postcode area (exportation), and at the same time the area imports very little crime. Another area might be deemed to be in "decay" or have "inner city" type characteristics if it retains a high level of offending and also imports offending, but with very little exportation. Such an area would be

considered extremely unsafe. This situation would be exacerbated if the area was also deprived of community resources and had poor social communication or relationships.

The awareness of importing, exporting and retaining harm is extremely relevant if used to enhance the safety of a community. It has implications for resourcing. It could include increased beat patrols by the police and neighbourhood watch schemes, improved security, better street lighting and CCTV cameras which may well discourage retained offending and the importation of crime.

An area that has low importation and low retention rates may offer pointers as to why that particular postcode area has increased its safety quotient.

However, there is the potential for such information to be mis-used. If an area has high importation and high retention, then there is the potential for increased insurance premiums and a decreasing popularity with the law abiding resident population. A residential awareness that 77% of crime is committed in their own area by offenders within a three mile radius of their own community could cause concern. A potential for distrust across the neighbourhood groups, or within certain areas, could lead to a further increase in the possibility of neighbourhood breakdown. This awareness is already in existence. Almost every individual within a community will be able to state a family, a road, an estate or an area that is believed to be the source of all the crime for a particular area. This evidence was clearly reflected in the views expressed by the interviewees sample. Within the awareness of such mistrust is the potential for community development. If the community has the will and drive, supported by the community funding agencies, police and the local councils, together they could work to improve community stability, relationships, and trust.

Unless major community changes take place, the area will continue into "decay". Correspondingly, an area with low importation and low retention may well become highly desirable and expensive, but unfortunately be the magnet for those 23% of offenders who travel in order to commit other offences, primarily burglary and violence.

However, the potential for such "a big brother oversight" is quite alarming. Yet on the other hand, innocent individuals could consider that the awareness of such information available to the police is reassuring by knowing in advance the way in which the community may be affected by future crime and how the police, by various security methods, could prevent it occurring.

The evidence produced in this study indicates that some areas have low crime importation and low retention rates. The way an area maintains, increases or even decrease its community harm safety quotient could be an important factor in any future evaluation.

5. Offence Gravity and Offence Location

The association between these two factors was not significant, which was unexpected. It had been anticipated that the relationship between distance and the more serious offences would produce high gravity scorings. The evidence did not support this finding. An equal amount (29%) of high gravity offences were committed inside and outside the community. It was wrongly assumed that the traveller would commit the high gravity offences, having left his/her own community with visibility to the anonymity of a distant community. The majority of committed offences were within the medium gravity range, which were almost equal for the community and the travellers.

Impressionistically the practitioner and the police believe the gravity - travel axis. High gravity offenders travel, low gravity offenders do not.

If the findings were replicated and produced the same results, there would be the need for an education programme to help staff re-adjust their current assumptions and perceptions.

The closeness for the three levels of gravity, which is almost equal across the community and the traveller, is at this stage unexplainable. It seems to contradict the

notion of the sophistication versus the spontaneous/opportunistic criminal. Why this might be requires further investigation and a different methodology, which should be more individualistic and qualitative.

6. Offender as Victim

It was found that the offender him/herself is frequently a victim of perpetrated criminal behaviour. They expressed an almost "simple belief" that they themselves expected to be preyed upon. When they reacted as a victim and reported such matters to the police he/she was told that "you got what you deserve", and that significant help or assistance was not usually forthcoming. With the belief that the police are not particularly interested in the offender when he/she is a victim, there emerged a more sinister factor. The offender's themselves indicated that in a number of cases, they knew who the perpetrator was and they "would deal with it in their own way". Here is the potential for the rise of an internal vigilante group whereby the offenders "police" other offenders.

The qualitative smaller sample was used as a tool towards animating the statistical results, and it allowed a window into how the offenders perceived their own world. This indicated that the potential for the offender to be the victim was far higher than expected. The awareness for the practitioner is that the offender can be both offender and victim. This is important, because if an offender is prepared to take action against his perpetrators, then he/she is placing themselves in an offending situation to which it could be argued that the practitioner is an aware bystander. The practitioner should be more prepared to act as an intermediary between the aggrieved as victim and the police as investigators.

Policy makers should be aware that the offender/victim has rights and that denial of these rights is indirectly breaching established codes and procedures on crime investigations. Even if you are an offender you should not be denied your human rights.

Understanding the development of a criminal career might indicate whether the offender starts as a victim and then become an offender, or is an offender preyed upon and then becomes a victim. This may well be part of the decision making sequence entered into by the offender when he/she commits their offence and requires further exploration.

7. Use of the data as offence type/ location Predictor

The data concerning the offender's criminal history, the type of offence and the offence location, gave opportunity to develop a probability factor that could enhance the prediction of where and what type of offence the offender could perpetrate in the future. At the time this thesis was being completed, a southern county police force was experimenting with a computer programme to identify the next crime and its general location. If such a programme was linked to a predictor that identified the probability of the type of offence and its community location, then the two techniques together would be a powerful tool in terms of preventing crime occurring.

The use of discriminate analysis as a statistical technique to develop a predictor tool is in no way unique. It was used in this particular way to enable the development of a user friendly computer programme, based on a simple inputting screen, to show the user the probability of the next type of offence and its location as being inside or outside the offender's community. This predictor produced an accuracy score that was better than random selection and, when cross-referenced with a sample of known outcomes, had a 63% accuracy rate.

Such a predictor, if used within the Probation Service alongside risk analysis, offending behaviour tests and psycho-social scales, would provide the Probation officer with a tool-kit that would be comprehensive enough to describe the relationship between the offence, the psycho-social characteristics of the offender and the demographic environment within which the offender commits his/her crime.

The need for testing on a larger sample with a greater range of offence types could well merit a replication of this study, to seek to develop a more accurate predictive tool which might contribute to crime reduction..

Conclusion

The uniqueness of this study is reinforced by an electronic literature search for recent articles/books on work relating to crime and offender geography and location relationships. Only two were found. Archer (1999) on Poaching Gangs and Taylor (1997) on Crime in Context. Neither study explored the relationship between location and locale.

It is believed that this study enhances the understanding of the relationship between offence location and offender locale, and how the spatial variations in the types of crime and the distances involved are distributed across the various postcode community areas.

The work's major strength is that it has demonstrated that there is a strong association between location, locale and the offenders psycho-social characteristics.

The importance of these findings has major implications for both practitioner and policy makers. The results could well contribute to the reduction in crime and the enhancement of the community and its internal relationships. Perhaps even a return to "social solidarity and community cohesion".

The Rt Hon P Boateng MP (2000) said "a combination of poverty, family conflict, poor educational opportunities, poor services will find many people destined for a life of social exclusion and underachievement". However he goes onto say "barriers related to gender, ethnicity, disability or *where people live too often gets in the way*". This truly acknowledges the importance of location and locale.

Appendices

Appendix 1

Type	Offence Patterns	Self-Definition and Attitudes
Professional Thief	Confidence swindle, "bunco", con-games," deliberate betrayal of confidence Non-violence offences Technically skilled crime Large profit	Self-definition as a criminal. Pride in status as a skilled criminal Defines himself as "smart" Views police, etc as occupational risks
Professional "Heavy"	Armed robbery, burglary, allied offences Violence or threats of violence involved in offences Technically skilled crime Large profit	Self-definition as criminal Pride in status as a skilled criminal Defines himself as "able to take it." "Right guy" attitudes Views police, etc as occupational risks
Non-Professional Property Offender	Robbery, burglary, larceny, allied offences Violent or threats of violence involved in offences Relatively crude and unskilled offences Relatively small profit	Self-definition as a criminal Pride in criminal status as a measure of toughness Views himself as tough and manly, exhibits exaggerated concern for others' perceptions of him as a "tough guy" Exhibits hostility toward police and correctional authorities
Naive Cheque Forger	Passing "NSF" cheque, usually on own bank account Non-violent offences Offences usually unskilled and lacking in deception Relatively small profit	Self-definition as a non-criminal Does not take pride in status as a criminal Views himself as a person burdened with personal problems Does not exhibit hostility toward police and correctional authorities
White Collar Criminal	Violations of state and federal regulations regarding business and financial activity Non-violent offences Technically skilled and complex offences Large profit	Self-definition as a non-criminal Does not view himself as a skilled criminal Pride in status as a businessman Views himself as an honest citizen Does not exhibit hostility toward police, courts etc
Embezzler	Conversions of property from a position of financial trust Non-violent offences Technical skill of the offences varies considerably Financial profit varies considerably	Self-definition as a non-criminal Does not view himself as a skilled criminal Views himself as different from "real criminals" Does not exhibit hostility towards police and correctional authorities
Professional "Fringe" Violator	Violations of law using professional skills but outside of proper conduct, eg abortion Non-violent offences Technically skilled crime Relatively large profit	Self-definition as a non-criminal Does not view himself as a skilled criminal Pride in status as a professional person Views himself as an honest, non-criminal person Does not exhibit hostility toward police and correctional authorities

COST BENEFIT SCHEDULE FOR THEFT*

Costs	Benefits
Probability of being caught: probability of being punished if caught <i>times</i> dollar value of punishment : fine or time; lost earnings	Market value of stolen property when fenced plus money stolen
Loss of legal income : time out from awful occupation	Use value of stolen property retained by thief
Loss of peripheral benefits of lawful occupation : paid vacation, medical insurance	Tax freedom
Job costs: learning skills and acquiring tools; payoffs to inside men and others; fencing	Leisure: eg, a burglar's work versus work week of legal job available to thief
Job risks: accident, being wounded or killed	Job satisfaction: pleasure in one's work, self-employment satisfaction, excitement, pleasure in being skilled thief
Work involved in theft: casing and doing	Security: freedom from risk of unemployment
Subjective cost: anxiety about getting caught and punished	Security: free room and board, free health care, aid to dependents, wages earned <i>if</i> imprisoned
Subjective costs of punishment: shame, guilt. How much does a specific fine hurt? How much does imprisonment hurt? How much are time and freedom worth, subjectively?	Repute: as successful thief
Damage repute: as thief, or as unsuccessful thief if caught	

*Costs and benefits are *possible* ones. They need not all pertain to a particular actor, and they may, of course, differ in actuality from an actor's *judgement* of them.

Taken from Gwynn Nettler's book Explaining Crime

DATA COLLECTING SHEET**OFFENDER**

1) Gender	<input type="checkbox"/>	2) Age	<input type="checkbox"/> <input type="checkbox"/>
3) Ethnic	<input type="checkbox"/>	4) HRO	<input type="checkbox"/>
5) Self Harm	<input type="checkbox"/>		
6) Postcode	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
7) Type of Area		8) Offence	<input type="checkbox"/> <input type="checkbox"/>
9) Court	<input type="checkbox"/>	10) History	<input type="checkbox"/>
11) Seriousness	<input type="checkbox"/>	12) Proposal	<input type="checkbox"/> <input type="checkbox"/>
13) Sentence	<input type="checkbox"/> <input type="checkbox"/>	14) Type	<input type="checkbox"/> <input type="checkbox"/>
15) Employment Status	<input type="checkbox"/> <input type="checkbox"/>	16) Debts	<input type="checkbox"/>
17) Accommodation Status	<input type="checkbox"/>	18) Marital Status	<input type="checkbox"/>
19) Alcohol Problems	<input type="checkbox"/>	20) Drug Problems	<input type="checkbox"/>
21) Relationship Problems	<input type="checkbox"/>	22) Health Problems	<input type="checkbox"/>
23) Psychological Problems	<input type="checkbox"/>		

24) Numeracy / Literacy Problems 25) Sexual Problems

26) Gambling Problems 27) Driving Problems

28) Sexual Abuse 29) Physical Abuse

CONFIDENTIAL

PROB No:

Section 1

DORSET PROBATION SERVICEINPUT RECORD

2 0 9

Client Ref No. 1. HRO/CPR 2. Self Harm 3.

PERSONAL DETAILS

Surname Initials

DoB 4. Former/Alias Initials Gender 5.

Address

Address

Address

Postcode 6. Postcode Postcode

Tel No. _____

Tel No. _____

Tel No. _____

Offence (s)

Victim/Offences:
Description

Home Office
Offence 7. Substantive Offence Gravity 8. Proposal 9. Sentence 10. PSR Writer 11. Team 12. Supervising Officer 11. Team 12.

Sentence

Commencement/
Hearing DateSentence or
OrderLength/
AmountAdded
Conditions

Court Comments On Sentencing

Post Sentence Interview

Signed _____

Date _____

SIGNIFICANT TELEPHONE NUMBER

Section 2

PROB No:

2 0 9

REQUEST FOR PSR

Request for PSR

Court Name _____

Means Enquiry

Committal Notification

Deferred Sentence

Deferred Sentence Expectations

Date of

First Hearing 13.

--	--	--	--	--	--

Court H/O 14. Court Name 15.

--	--	--	--	--

Date of

Committal 13.

--	--	--	--	--	--

Date of PSR request 13.

--	--	--	--	--	--

Date of Final Hearing 13.

--	--	--	--	--	--

Other Reports Requested - (✓ the box)

Medical Psychiatric Other

Solicitor: Name, Address, Telephone No:

Court Comments on Seriousness 16.

 Below/Serious enough threshold Serious Enough --> Community Sentence So serious --> Custody No indication given

Any Court Duty Officer comments on Seriousness

Request by the Court: Sentencing Options/other specific requests

ASSOCIATED INFORMATION

Tick box ✓ if there is any information given about -

Drug Misuse

Mental Disorder

Health Problems

Alcohol misuse

Sex offending

Disability

History of attempted suicide

Any explanatory comments

OTHER RISK FACTORS If "Yes" tick box as appropriate

	Potential Risk	Known Risk		Potential Risk	Known Risk
Child Protection	<input type="checkbox"/>	<input type="checkbox"/>	Domestic Violence	<input type="checkbox"/>	<input type="checkbox"/>
Schedule 1	<input type="checkbox"/>	<input type="checkbox"/>	Violence towards Staff	<input type="checkbox"/>	<input type="checkbox"/>

Any other relevant comments/details

.....

PREVIOUS OR CURRENT PROBATION INVOLVEMENT - (MOST RECENT)

Officer	Type of Order	Date	Brief Details

OTHER AGENCIES INVOLVED (e.g. CDT, Psychiatrist)

Agency	Involvement	Any Other Comments

REMAND STATUS

Custody Institution

Bail Other Bail Issues

 Bail Conditions

 e.g. Bail Support

DOCUMENTATION

	Enclosed (<input checked="" type="checkbox"/>)	Applied for
Previous convictions		
Charge sheet		
Advance disclosure papers		
Medical/Psychiatric		
Other (specify)		

ASSESSMENT ARRANGEMENTS

PROB No:

2 0 9

Availability for interview by PSR writer - state any work/home commitments, hours of work, part-time or casual etc

Place

Assessment route

Date Time am/pm

PSR Interview only

Is confidentiality an issue? Y/N

Assessment Centre

Details

Specialist Assessment

Form completed by:

Date:

Office:

Please return completed PSR to:

by:

Date:

Section 3**PSR/COMMITTAL - REPORT AND ASSESSMENT INFORMATION**

To be completed by PSR Writer

DATE OF FIRST APPOINTMENT

--	--	--	--	--	--	--

EMPLOYMENT STATUS 19.

ETHNIC ORIGIN 17.

--	--	--	--	--

DEBTS (STATUS) 20.

PREVIOUS HISTORY 18.

--	--	--	--	--	--

ACCOMM/STATUS 21.

PREM 1 COMPLETED (✓ BOX IF YES)

MARITAL (STATUS) 22.

REFERRAL DURING PROCESS FOR PSR

(Leave box blank if no referral made)

Community Drug Team

Probation Centre 1A(2) (3)

Sex Offender Programme

Community Alcohol Team

Mental Health Programme

Probation Hostel

Other (state)

PROB No:

2	0	9	
---	---	---	--

Section 4

CORE INFORMATION NOT CONTAINED IN PSR

1. Developmental History
2. Education
3. Employment/Training Record
4. Medical/Psychiatric History
5. Family Information
6. Leisure Interests
7. Other Comments

Section 5

PROB No:

2	1	0
---	---	---

TO BE COMPLETED BY THE SUPERVISING OFFICER**CLIENT DETAILS AT COMMENCEMENT**

Date of Commencement 23.	Type of Supervision 24.	Length 25.	Home Office Offence	Substantive Offence Gravity													
<table border="1"><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>						<table border="1"><tr><td> </td><td> </td></tr></table>			<table border="1"><tr><td> </td><td> </td><td> </td></tr></table>				<table border="1"><tr><td> </td><td> </td></tr></table>			<table border="1"><tr><td> </td></tr></table>	
Additional Requirements 26.	Hostel Code 27.	Date of Release Prison/Y.O.I. 28.	Risk of Reconviction Score 29.														
(1) <table border="1"><tr><td> </td></tr></table>		(2) <table border="1"><tr><td> </td></tr></table>		<table border="1"><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>							<table border="1"><tr><td> </td><td> </td></tr></table>						

Client problems on Commencement

Alcohol 30.

Drugs 31.

Relationships 32.

Physical/Health 33.

Psychological/Psychiatric 34.

Literacy/Numeracy 35.

Sexual 36.

Gambling 37.

Driving 38.

Is there any evidence or information that the Offender has him/herself been a victim of:

Sex Abuse (Victim of) 39.

--

Physical Abuse (Victim of) 40.

--

Domestic Violence 40a.

--

(These three boxes can be completed any time during the Order/Licence)

OFFENDER AS PERPETRATOR AND / OR VICTIM**Semi-Structured Interview Questionnaire**

1a	1b	1c	1d
1) Gender	Employment Status	Ethnic Origin	Marital Status

1e
Accommodation

1f	1g	1h	1i
2) Age	Learning Difficulties	Mental Health	Disabilities

3) Last Offence
4) Sentence

Prompt for: a) Day / time
b) Place
c) Value / injury
d) Who against / did you know victim
e) How far from own home
f) Why this place / person
g) How did you get caught
h) Effect of sentence

5) Number of previous convictions =

6) Why do you offend?
Prompt for reasons.

7) Have you been offended against - nature of offence

Prompt for: a) Nature of offence
 b) Day / time
 c) Place
 d) Value / injury
 e) Why you / did offender know you
 f) Where the did crime occur
 g) Relationship to own home
 h) Did the offender get caught
 i) If yes, sentence
 j) How did you feel as victim and how the offender was sentenced

How many times a victim?

7) Did you report all offences committed against you?
If no, why not?

8) Recognition - if as an offender he is treated different when a victim.

9) Do you think your neighbours / friends report all offences against them?
If no, why not?

10) Prompt for own neighbourhood as a source of crimes and criminals.

11) Why?
Prompt for: a) Environment / structure
 b) Class
 c) Deprivation
 d) Employment situation
 e) Drug situation

12) Why do people commit crime?
Prompt for: a) In own area
 b) Outside own area

13) Give examples of type of crime they would commit.
Prompt for: a) In own area
 b) Outside own area
 c) What sort of crimes would you not commit

Distances between Postcode Area Centroids

Long (x)	Lat (y)	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9	BH10	BH11	BH12	BH13	BH14	BH15	BH16	BH17	
Long (x)	Lat (y)	4104 843	4081 313	4081 749	4071 437	4122 273	4146 529	4124 742	4111 234	4090 174	4076 263	4055 169	4049 49	4054 298	4040 064	3995 473	3955 821	4019 729	
BH1	4104 843	917 988	914 099	930 41	912 371	917 988	919 716	936 027	942 508	948 125	954 39	958 171	933 11	894 656	908 806	903 513	925 981	944 02	
BH2	4081 313	914 099	14	0.0	1.0	0.6	2.5	3.9	2.9	2.5	2.1	2.4	3.1	2.2	2.0	2.5	5.2	5.3	
BH3	4081 749	930 41	16	1.0	0.0	1.2	2.5	3.9	2.6	1.9	1.2	1.5	2.3	1.9	2.7	5.4	7.6	4.1	
BH4	4071 437	912 371	20	0.6	1.2	0.0	3.1	4.5	3.5	3.0	2.4	2.6	2.9	1.8	1.5	1.9	4.6	7.6	3.8
BH5	4122 273	917 988	10	2.5	2.5	3.1	0.0	1.5	1.1	1.6	2.6	3.4	4.7	4.5	4.3	5.0	7.7	10.0	6.3
BH6	4146 529	919 716	25	3.9	3.9	4.5	1.5	0.0	1.6	2.5	3.8	4.6	5.9	5.9	5.7	6.4	9.1	11.4	7.7
BH7	4124 742	936 027	16	2.9	2.6	3.5	1.1	1.6	0.0	0.9	2.2	3.0	4.4	4.5	4.9	5.3	8.0	10.2	6.3
BH8	4111 234	942 508	15	2.5	1.9	3.0	1.6	2.5	0.9	0.0	1.3	2.1	3.5	3.7	4.5	4.7	7.3	9.4	5.5
BH9	4090 174	948 125	20	2.1	1.2	2.4	2.6	3.8	2.2	1.3	0.0	0.8	2.2	2.6	3.9	3.8	6.3	8.2	4.2
BH10	4078 263	954 39	2.7	2.4	1.5	2.6	3.4	4.6	3.0	2.1	0.8	0.0	1.4	2.1	3.9	3.6	5.8	7.5	3.6
BH11	4055 169	958 171	38	3.1	2.3	2.9	4.7	5.9	4.4	3.5	2.2	1.4	0.0	1.5	3.8	3.1	4.9	6.3	2.3
BH12	4049 49	933 11	34	2.2	1.9	1.8	4.5	5.9	4.5	3.7	2.6	2.1	1.5	0.0	2.3	1.6	3.7	5.6	1.9
BH13	4054 298	894 656	33	20	2.7	1.5	4.3	5.7	4.9	4.5	3.9	3.9	3.8	2.3	0.0	1.2	3.6	6.2	3.6
BH14	4040 064	908 806	39	2.5	2.8	1.9	5.0	6.4	5.3	4.7	3.8	3.6	3.1	1.6	1.2	0.0	2.7	5.2	2.4
BH15	3995 473	903 513	66	5.2	5.4	4.6	7.7	9.1	8.0	7.3	6.3	5.8	4.9	3.7	3.6	2.7	0.0	2.7	2.8
BH16	3955 821	925 981	90	76	76	70	10.0	11.4	10.2	9.4	8.2	7.5	6.3	5.6	6.2	5.2	2.7	0.0	4.0
BH17	4019 729	944 02	53	41	3.8	3.6	6.3	7.7	6.3	5.5	4.2	3.6	2.3	1.9	3.6	2.4	2.8	4.0	0.0
BH18	4002 735	955 794	65	53	50	4.9	7.5	8.9	7.4	6.6	5.3	4.5	3.1	3.1	4.8	3.6	3.2	3.3	1.2
BH19	4021 182	809 537	82	72	8.1	6.9	8.9	10.0	9.8	9.6	9.3	9.3	9.1	7.6	5.5	6.1	5.8	8.0	8.1
BH20	3887 7	880 397	132	11.8	120	11.2	14.3	15.7	14.6	13.9	12.8	12.3	11.1	10.2	10.0	9.3	6.6	4.9	8.8
BH21	4022 053	1056 359	97	92	84	9.1	10.3	11.1	9.5	8.7	7.7	7.0	6.2	7.6	9.9	8.9	9.3	8.8	6.7
BH22	4080 732	1005 591	55	5.5	4.5	5.6	5.8	6.5	4.9	4.2	3.5	3.1	3.2	4.7	6.8	6.3	8.0	8.9	5.2
BH23	4172 092	961 951	48	62	5.7	6.7	4.0	3.0	3.2	3.8	5.0	5.6	7.0	7.6	8.1	8.5	11.2	13.2	9.2
BH24	4174 562	1053 443	91	101	92	105	8.7	82	7.7	7.7	8.1	8.3	9.2	10.4	12.0	11.9	14.0	15.2	11.4
DT1	3691 473	897 572	24.8	23.4	23.5	22.8	25.9	27.3	26.1	25.3	24.1	23.5	22.1	21.6	21.8	20.9	18.2	16.0	19.9
DT2	3689 875	958 387	25.0	23.6	23.6	23.1	26.1	27.5	26.1	25.3	24.0	23.3	21.9	21.6	22.2	21.2	18.6	16.1	19.8
DT3	3659 81	829 629	27.2	25.8	26.0	25.2	28.2	29.7	28.6	27.9	26.8	26.2	24.9	24.2	24.0	23.3	20.6	18.7	22.7
DT4	3666 055	781 237	27.6	26.2	26.5	25.6	28.6	30.0	29.0	28.4	27.3	26.8	25.6	24.7	24.3	23.7	21.1	19.4	23.4
DT5	3691 473	715 67	27.6	26.2	26.7	25.7	28.6	29.9	29.2	28.6	27.7	27.3	26.2	25.1	24.3	23.9	21.4	20.3	24.0
DT6	3443 683	951 905	39.7	38.3	38.3	37.7	40.8	42.2	40.9	40.1	38.8	38.1	36.7	36.4	36.8	35.9	33.2	30.8	34.6
DT7	3326 906	927 709	46.7	45.3	45.3	44.7	47.7	49.2	47.9	47.1	45.8	45.1	43.7	43.4	43.7	42.8	40.1	37.7	41.6
DT8	3465 906	1029 682	38.9	37.5	37.4	37.0	39.9	41.3	39.9	39.0	37.7	37.0	35.6	35.5	36.2	35.2	32.6	30.0	33.6
DT9	3641 509	1137 913	30.8	29.6	29.2	29.1	31.7	33.0	31.4	30.5	29.2	28.4	27.1	27.4	28.7	27.6	25.5	22.7	25.5
DT10	3756 689	1131 972	24.5	23.5	22.9	23.0	25.4	26.6	25.0	24.1	22.8	22.0	20.7	21.2	22.8	21.6	19.8	17.2	19.4
DT11	3843 981	1057 547	17.8	16.6	16.2	16.2	18.7	19.9	18.4	17.5	16.2	15.4	14.0	14.4	16.0	14.8	13.0	10.4	12.6

Distances between Postcode Area Centroids

	Long (x)	Lat (y)	BH18	BH19	BH20	BH21	BH22	BH23	BH24	DT1	DT2	DT3	DT4	DT5	DT6	DT7	DT8	DT9	DT10
Long (x)			4002 735	4021 182	3887 7	4022 053	4080 732	4172 092	4174 562	3691 473	3689 875	3659 81	3666 055	3691 473	3443 683	3326 906	3465 906	3641 509	3756 689
Lat (y)			955 794	809 537	880 397	1056 359	1005 591	961 951	1053 443	897 572	958 387	829 629	781 237	715 67	951 905	927 709	1025 682	1137 913	1131 972
BH1	4104 843	917 988	6.5	8.2	13.2	9.7	5.5	4.8	9.1	24.8	25.0	27.2	27.6	27.6	39.7	46.7	38.9	30.8	24.5
BH2	4081 313	914 099	5.3	7.2	11.8	9.2	5.5	6.2	10.1	23.4	23.6	25.8	26.2	26.2	38.3	45.3	37.5	29.6	23.5
BH3	4001 749	930 411	5.0	8.1	12.0	8.4	4.5	5.7	9.2	23.5	23.6	26.0	26.5	26.7	38.3	45.3	37.4	29.2	22.9
BH4	4071 437	912 371	4.9	6.9	11.2	9.1	5.6	6.7	10.5	22.8	23.1	25.2	25.6	25.7	37.7	44.7	37.0	29.1	23.0
BH5	4122 273	917 988	7.5	8.9	14.3	10.3	5.8	4.0	8.7	25.9	26.1	28.2	28.6	28.6	40.8	47.7	39.9	31.7	25.4
BH6	4146 529	919 716	8.9	10.0	15.7	11.1	6.5	3.0	8.2	27.3	27.5	29.7	30.0	29.9	42.2	49.2	41.3	33.0	26.6
BH7	4124 742	936 027	7.4	9.8	14.6	9.5	4.9	3.2	7.7	26.1	26.1	28.6	29.0	29.2	40.9	47.9	39.9	31.4	25.0
BH8	4111 234	942 508	6.6	9.6	13.9	8.7	4.2	3.8	7.7	25.3	25.3	27.9	28.4	28.6	40.1	47.1	39.0	30.5	24.1
BH9	4090 174	948 125	5.3	9.3	12.8	7.7	3.5	5.0	8.1	24.1	24.0	26.8	27.3	27.7	38.8	45.8	37.7	29.2	22.8
BH10	4078 263	954 39	4.5	9.3	12.3	7.0	3.1	5.6	8.3	23.5	23.3	26.2	26.8	27.3	38.1	45.1	37.0	28.4	22.0
BH11	4055 169	958 171	3.1	9.1	11.1	6.2	3.2	7.0	9.2	22.1	21.9	24.9	25.6	26.2	36.7	43.7	35.6	27.1	20.7
BH12	4049 49	933 11	3.1	7.6	10.2	7.6	4.7	7.6	10.4	21.6	21.6	24.2	24.7	25.1	36.4	43.4	35.5	27.4	21.2
BH13	4054 298	894 656	4.8	5.5	10.0	9.9	6.8	8.1	12.0	21.8	22.2	24.0	24.3	24.3	36.8	43.7	36.2	28.7	22.8
BH14	4040 064	908 806	3.6	6.1	9.3	8.9	6.3	8.5	11.9	20.9	21.2	23.3	23.7	23.9	35.9	42.8	35.2	27.6	21.6
BH15	3995 473	903 513	3.2	5.8	6.6	9.3	8.0	11.2	14.0	18.2	18.6	20.6	21.1	21.4	33.2	40.1	32.6	25.5	19.8
BH16	3955 821	925 901	3.3	8.0	4.9	8.8	8.9	13.2	15.2	16.0	16.1	18.7	19.4	20.3	30.8	37.7	30.0	22.7	17.2
BH17	4019 729	944 02	1.2	8.1	8.8	6.7	5.2	9.2	11.4	19.9	19.8	22.7	23.4	24.0	34.6	41.6	33.6	25.5	19.4
BH18	4002 735	955 794	0.0	8.8	8.3	6.1	5.6	10.2	11.9	19.0	18.8	21.9	22.8	23.6	33.5	40.6	32.5	24.3	18.2
BH19	4021 182	809 511	8.8	0.0	9.1	14.8	12.3	12.9	17.3	20.5	21.8	21.7	21.4	20.6	35.7	42.3	35.8	30.1	25.0
BH20	3887 7	880 311	8.3	9.1	0.0	13.3	13.8	17.8	20.1	11.8	12.8	14.0	14.6	15.4	27.0	33.8	26.8	21.4	17.0
BH21	4022 053	1056 359	6.1	14.8	13.3	0.0	4.7	10.6	9.2	22.0	20.8	25.6	27.0	28.5	35.3	42.4	33.4	23.4	16.6
BH22	4080 732	1005 591	5.6	12.3	13.8	4.7	0.0	6.1	6.3	24.2	23.6	27.4	28.3	29.1	38.4	45.5	36.9	27.5	20.9
BH23	4172 092	961 951	10.2	12.9	17.8	10.6	6.1	0.0	5.5	29.1	28.9	31.7	32.2	32.4	43.7	50.8	42.5	33.5	26.9
BH24	4174 562	1053 443	11.9	17.3	20.1	9.2	6.3	5.5	0.0	30.5	29.6	33.7	34.6	35.4	44.3	51.4	42.6	32.4	25.5
DT1	3691 473	897 572	19.0	20.5	11.8	22.0	24.2	29.1	30.5	0.0	3.7	4.5	7.1	10.9	15.2	21.9	15.6	14.7	14.6
DT2	3689 875	958 307	18.8	21.8	12.8	20.8	23.6	28.9	29.6	3.7	0.0	7.9	10.7	14.6	14.8	21.9	14.0	11.2	11.2
DT3	3659 81	829 629	21.9	21.7	14.0	25.6	27.4	31.7	33.7	4.5	7.9	10.7	14.6	14.8	21.9	21.9	14.0	11.2	11.2
DT4	3666 056	781 237	22.8	21.4	14.6	27.0	28.3	32.2	34.6	7.1	10.7	2.9	7.1	14.9	20.8	16.5	18.5	19.0	
DT5	3691 473	715 67	23.6	20.6	15.4	28.5	29.1	32.4	35.4	10.9	14.6	7.1	4.2	0.0	20.5	25.3	23.0	25.5	21.7
DT6	3443 683	951 905	33.5	35.7	27.0	35.3	38.4	43.7	44.3	15.2	14.8	14.9	16.8	20.5	0.0	7.2	4.6	16.3	21.7
DT7	3326 906	927 709	40.6	42.3	33.8	42.4	45.5	50.8	51.4	21.9	21.9	20.8	22.2	25.3	7.2	0.0	10.2	22.7	28.6
DT8	3465 906	1025 682	32.5	35.8	26.8	33.4	36.9	42.5	42.6	15.6	14.0	16.5	19.0	23.0	4.6	10.2	0.0	12.5	18.6
DT9	3641 509	1137 913	24.3	30.1	21.4	23.4	27.5	33.5	32.4	14.7	11.2	18.5	21.5	25.5	16.3	22.7	12.5	0.0	6.9
DT10	3756 689	1131 972	18.2	25.0	17.0	16.6	20.9	26.9	25.5	14.6	11.2	19.0	21.7	25.3	21.7	28.6	18.6	6.9	0.0
DT11	3843 981	1057 547	11.3	18.3	10.9	10.7	14.5	20.5	19.8	13.3	11.0	17.6	19.7	22.5	24.8	32.0	22.8	13.1	6.9

Distances between Postcode Area Centroids

	Long (x)	Lat (y)	DT11
Long (x)			3843 981
Lat (y)			1057 547
BH1	4104 843	917 988	17.8
BH2	4081 313	914 099	16.6
BH3	4081 749	930 41	16.2
BH4	4071 437	912 371	16.2
BH5	4122 273	917 988	18.7
BH6	4148 529	919 716	19.9
BH7	4124 742	938 027	18.4
BH8	4111 234	942 508	17.5
BH9	4090 174	948 125	16.2
BH10	4078 263	954 39	15.4
BH11	4055 169	958 171	14.0
BH12	4049 49	933 11	14.4
BH13	4054 298	894 658	16.0
BH14	4040 064	908 808	14.8
BH15	3995 473	903 513	13.0
BH16	3955 821	925 981	10.4
BH17	4019 729	944 02	12.6
BH18	4002 735	955 794	11.3
BH19	4021 182	809 537	18.3
BH20	3887 7	880 397	10.9
BH21	4022 053	1056 359	10.7
BH22	4080 732	1005 591	14.5
BH23	4172 092	961 951	20.5
BH24	4174 562	1053 443	19.8
DT1	3891 473	897 572	13.3
DT2	3689 875	958 387	11.0
DT3	3659 81	829 629	17.6
DT4	3666 055	781 237	19.7
DT5	3691 473	715 67	22.5
DT6	3443 683	951 905	24.8
DT7	3326 908	927 709	32.0
DT8	3465 906	1025 682	22.8
DT9	3641 509	1137 913	13.1
DT10	3756 689	1131 972	6.9
DT11	3843 981	1057 547	0.0

Derivation of mathematical functions from discriminant analysis

In the following two sections, examples will be worked through to show how OCS scores and in/outside community scores (C) are generated. The demonstration of how to arrive at C is given first as it is the simplest.

Example case

Each of the two calculations relies on numerical data from an individual case. The following case characteristics are to be used in the forthcoming examples:

Variable	Attribute	Data	Interpretation
a	Gender = male?	0	Female
b	Age	22	
c	Previous history	1	Custodial
Problems			
d	Alcohol	0	No
e	Drugs	1	Yes
f	Relationships	1	Yes
g	Physical health	0	No
h	Mental health	1	Yes
i	Literacy	0	No
j	Sexual	0	No
k	Gambling	0	No
l	Driving	0	No

(1 = yes, 0 = no)

In/outside community scores (C)

Using discriminant analysis DA2

In order to work out whether a subject would be most likely to offend within or outside his/her community a score must be generated from the above variables - and this compared to the typical scores for each category. The closest score represents the most likely category.

Comparison scores

The scores generated by the discriminant analysis for in/outside community can be read off from the section entitled "Canonical Discriminant Functions". The Group 1 score represents outside community, the Group 2 score represents inside community.

Category	Score
Outside community (O)	0.57
Inside community (O)	- 0.38

Derivation of mathematical function to generate score (C) from case

The mathematical function can be read off from the section entitled "Unstandardised Coefficients", (Appendix 7) on the discriminant analysis. This represents a linear function composed of coefficients which operate on the variables inserted from the case.

Each number in the "Function 1" column represents a coefficient by which to multiply the corresponding variable. So, in the example given above where age = 22 this should be multiplied by -0.1364 giving -3.008. This process is completed for all variables. These results are then summed, and the constant (final row) added. For the above example:

Calculation of C

Variable	Attribute	Data	Function 1(F1)	Data x F1
a	Gender = male?	0	- 0.96	0
b	Age	22	- 0.05	- 1.05
c	Previous history	1	0.12	0.12
	Problems			
d	Alcohol	0	1.62	0
e	Drugs	1	0.53	0.53
f	Relationships	1	0.17	0.17
g	Physical health	0	0.02	0

h	Mental health	1	0.23	0.23
i	Literacy	0	0.11	0
j	Sexual	0	- 2.37	0
k	Gambling	0	- 0.71	0
l	Driving	0	0.5	0
m	Constant	1	0.55	0.55
C	Sum			0.55

Therefore the linear function has returned a value of 0.55. This is to be compared with the two comparison variables given above:

Determination of prediction category

Category	Comparison Score	C Score	Difference
Outside community (O)	0.57	0.55	0.02
Inside community (I)	- 0.38	0.55	- 0.93

As the "outside community" score (O) is clearly closer to the C score, then it is predicted that the offence would be committed outside the offender's own community.

Offence Category Scores (OCS)

Using discriminant analysis DA1

In order to work out what type of offence a subject would be most likely to commit, a score must be generated from the subject's demographic and psychological variables - and this compared to the typical scores for each category. The closer the score, the closer fit is a subject to the offence type category. In the above case, as there are seven categories, the analysis generates six linear functions (F1 - F6) which compute six scores for each case (S1 - S6) for each offence category. These scores are compared against their corresponding comparison scores (C1 - C6) for each offence category. A least squares test is performed to see which offence category provides the closest fit of S1 - S6 and C1 - C6.

The OCS score is calculated by taking the reciprocal of the least squares result. The higher the score, the closer the subject is to the paradigmatic offence type profile (1/0 = infinity = perfect fit).

Multiple Discriminant Analysis

DA1 : Offence Type Categorisation from Psychological / Demographic Data

Eigenvalues

	eigenvalue	percent	cumulative	correlation
1	1.0512	56.70%	56.70%	0.7159
2	0.5494	29.63%	86.34%	0.5955
3	0.1367	7.37%	93.71%	0.3468
4	0.0627	3.38%	97.09%	0.2429
5	0.0466	2.51%	99.61%	0.2111
6	0.0073	0.39%	100.00%	0.0851

Canonical Statistics

	Wilks' Lambda	Chi-Square	Deg Fre	Significance
0	0.2471	2995.3526	72	0.0000
1	0.5068	1456.0984	55	0.0000
2	0.7852	517.9755	40	0.0000
3	0.8926	243.5038	27	0.0000
4	0.9485	113.2058	16	0.0000
5	0.9928	15.5726	7	0.0293

Standardised Coefficients

	Function 1	Function 2	Function 3	Function 4	Function 5	Function 6
Gender = M	0.1719	0.0300	0.4612	0.6290	-0.1803	0.1797
Age	0.1896	0.2884	-0.3349	0.0091	0.5382	-0.3270
History	0.0662	0.1594	-0.1571	0.1860	0.4454	0.4718
Alcohol Problems	-0.2105	0.1908	0.6729	-0.0338	0.3674	-0.2062
Drugs Problems	-0.1057	-0.2206	-0.3577	0.7509	0.1141	0.1533
Relationship Prob	0.0919	0.0169	0.1667	-0.2608	0.0447	0.6352
Physical Health	-0.0964	-0.0134	-0.1738	-0.1329	-0.1413	0.1635
Mental Health	-0.0687	-0.0140	0.1505	-0.0230	0.0735	0.3555
Literacy Prob	-0.0410	-0.0053	-0.0495	-0.1072	-0.1071	-0.2556
Sexual Problems	0.9532	0.1022	-0.0009	0.0549	-0.2072	-0.0868
Gambling Problems	-0.1560	-0.1776	-0.0509	-0.1832	-0.3460	0.0109
Driving Problems	-0.1972	0.9043	-0.2527	0.1458	-0.2268	0.1008

Structure Matrix

	Function 1	Function 2	Function 3	Function 4	Function 5	Function 6
Gender = M	0.0705	0.1057	0.5099	0.5801	-0.2758	-0.0329
Age	0.2285	0.2555	-0.2060	-0.0374	0.5771	-0.3268
History	0.0990	0.0536	-0.2018	0.0082	0.4137	0.4449
Alcohol Problems	-0.0959	0.2265	0.6603	0.0128	0.3896	-0.1184
Drugs Problems	-0.0861	-0.2691	-0.2875	0.6330	0.1088	0.1583
Relationship Prob	0.1324	0.0403	0.1994	-0.3169	0.0777	0.6212
Physical Health	-0.0429	0.0182	-0.1845	-0.1210	-0.0551	0.2478
Mental Health	0.0728	0.0686	0.1003	-0.0951	0.0924	0.4625
Literacy Prob	-0.0163	0.0096	0.0017	-0.1118	-0.2410	-0.1394
Sexual Problems	0.8937	0.1187	0.0122	-0.0216	-0.1551	0.0492
Gambling Problems	-0.0314	-0.0700	-0.0344	-0.1670	-0.4060	0.0393
Driving Problems	-0.2027	0.8715	-0.1381	0.1146	-0.3680	0.0910

Unstandardised Coefficients

	Function 1	Function 2	Function 3	Function 4	Function 5	Function 6
Gender = M	0.5019	0.0875	1.3470	1.8370	-0.5266	0.5247
Age	0.0199	0.0302	-0.0351	0.0010	0.0564	-0.0343
History	0.0234	0.0564	-0.0556	0.0658	0.1576	0.1670
Alcohol Problems	-0.4606	0.4176	1.4727	-0.0739	0.8041	-0.4512
Drugs Problems	-0.2548	-0.5312	-0.8812	1.8079	0.2748	0.3692

Multiple Discriminant Analysis

DA2: In/Outside Community Categorisation from Psychological / demographic Data

Eigenvalues

	eigenvalue	percent	cumulative	correlation
1	0.2199	100.00%	100.00%	0.4246

Canonical Statistics

	Wilks' lambda	Chi-Square	Deg Fre	Significance
0	0.8197	28.4296	12	0.0048

Standardised Coefficients

	Function 1
Gender = M	-0.3874
Age	-0.4331
History	0.3616
Alcohol prob	0.7713
Drug probs	0.2606
Relationship prob	0.0836
Physical Health	0.0097
Mental Health	0.1073
Literacy	0.0352
Sex problems	-0.3792
Gambling problems	-0.0611
Driving problems	0.2351

Structure Matrix

	Function 1
Gender = M	-0.3387
Age	-0.1364
History	0.2604
Alcohol prob	0.5583
Drug probs	0.2114
Relationship prob	0.2758
Physical Health	0.1924
Mental Health	0.2348
Literacy	0.0755
Sex problems	-0.2882
Gambling problems	-0.2015
Driving problems	0.2187

Unstandardised Coefficients

	Function 1
Gender = M	-0.9648
Age	-0.0477
History	0.1198
Alcohol prob	1.6186
Drug probs	0.5332

Relationship prob	0.1747
Physical Health	0.0239
Mental Health	0.2331
Literacy	0.1081
Sex problems	-2.3667
Gambling problems	-0.7075
Driving problems	0.5015
Constant	0.5504

Canonical Discriminant Functions

	Function 1
Group 1	0.5737
Group 2	-0.3783

Classification by Group

	Group 1	Group 2
Group 1	42	18
Group 2	31	60

Correctly classified: 67.55%

Distances Between Centroids

Clusters	Distance
A - B	0.9520

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