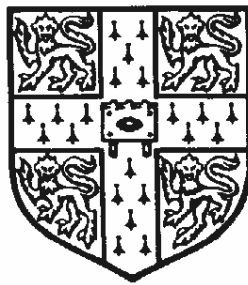


A few preliminaries and disclaimer:

This was a thesis written in partial fulfilment of the requirements for the degree of M.Phil. in Criminology at the University of Cambridge, in 1996/1997. Suffice to say, my thinking on the subject matter has advanced somewhat since then (some of the comments about determinism/freewill make me cringe!). I put it up on the web in 1998 (I didn't have time to look for a publisher...) and it has since received many thousands of hits. You are welcome to download a copy in any of the formats, and distribute the thesis freely as long as you make no monetary gain from such distribution. The thesis must not be modified, misrepresented, or distributed in part except for citation. If you wish to cite quotations etc. from this thesis, you are welcome to do so - I suspect a suitable citation might be: Mitchell, E. W. (1997). *The aetiology of serial murder: towards an integrated model*. Unpublished M.Phil. thesis, University of Cambridge, UK. If you wish to link to this thesis on the web, please make the link to the instructions on this page rather than directly to the thesis. The author, Edward W. Mitchell, bears no liability for proper or improper use of the thesis or information contained therein, e.g. by law enforcement agencies. Hope you enjoy it; I seem to recall that I enjoyed writing it! © Edward W. Mitchell, 1997-2001.

Thesis submitted in partial fulfilment of the
requirements for the degree of:

M.Phil. in Criminology 1996/97
University of Cambridge



The aetiology of serial murder: towards an integrated model

Edward W. Mitchell B.A. Hons (Oxon.)[†]

Supervisor: Professor David P. Farrington[‡]

[†] Magdalene College, Cambridge, Cambs., CB3 0AG, U.K.

[‡] Institute of Criminology, 7 West Rd., Cambridge, Cambs., CB3 9DT, U.K.

ABSTRACT

Despite considerable media and public interest, as well as a recent increase in offences and disproportionate social effects, serial murder is a crime that has failed to secure a much needed multi-disciplinary research programme. Various theses of the aetiology of serial murder exist, most of which choose to align with a psychiatric, sociological or biological explanation. Rarely has connection been made between theories in unrelated academic areas, and thus no coherent multi-disciplinary model to drive research into serial murder has been forthcoming. Most studies on serial murder have been based on second-hand material (court and newspaper reports etc.), are characterised by a journalistic style, and where direct access to subjects has been possible, studies have suffered from a lack of detail and tend to exist in isolation of any model. The original contribution of the present study is to examine and criticise various theories that directly and indirectly pertain to serial murder (and in particular to serial sexual murder), and integrate them into a multi-disciplinary aetiological model. Such a model should include sociological, psychiatric, psychological/developmental and biological elements. It is hoped that the model may focus research efforts into serial murderers and their offences.

DECLARATION OF ORIGINALITY

I declare that this thesis is substantially my own work. Where reference has been made to the work of others this is acknowledged in the text and bibliography

Signature:

Date:

DECLARATION OF WORD COUNT

The number of words in this thesis is 17,906 words not including bracketed Harvard System references in text and endnote reference list.

Signature:

Date:

*To the support of my
Mother, Father and Sister*

“You cannot have power for good without having power for evil too. Even mother’s milk nourishes murderers as well as heroes”. George Bernard Shaw, *Cusins*, in *Major Barbara*, act 3.

ACKNOWLEDGEMENTS

I wish to thank my thesis supervisor, Professor David Farrington, and my personal supervisor, Dr. Kate Painter, for their generous time and help. I am also grateful to the librarians in the Radzinowicz library at the Institute of Criminology (especially Jean and Caroline), who were a great help in locating material. Mrs. D. B. O'Keefe provided helpful comments. My parents, David and Karin Mitchell, generously funded my M.Phil. year in Cambridge.

CONTENTS

Abstract	i
Declaration of Originality	ii
Declaration of Word Count	ii
Acknowledgements	iv
Contents	v
Figures	vii
Tables.....	viii
Chapter 1: Introduction	1
<i>Rationale and aims of the present study</i>	<i>1</i>
<i>What is serial murder?</i>	<i>3</i>
<i>The typology of serial murder.....</i>	<i>6</i>
<i>The prevalence of serial murder.....</i>	<i>10</i>
<i>Fear of the crime</i>	<i>13</i>
<i>The concern of the present study</i>	<i>14</i>
Chapter 2: The serial sexual murderer	15
<i>Case study.....</i>	<i>15</i>
<i>Crime characteristics.....</i>	<i>17</i>
<i>The characteristics of the serial sexual murderer.....</i>	<i>20</i>
Chapter 3: Socio-cultural approaches to serial murder.....	23
<i>Introduction</i>	<i>23</i>
<i>Structural/functionalist approaches</i>	<i>23</i>
<i>Strain theory</i>	<i>24</i>
<i>Differential association.....</i>	<i>25</i>
<i>Societal bonds.....</i>	<i>25</i>
<i>Subcultural Theory</i>	<i>26</i>
<i>Inadequate socialisation.....</i>	<i>26</i>
<i>Gender roles</i>	<i>27</i>
<i>Ideology</i>	<i>29</i>
<i>Glorification</i>	<i>30</i>
<i>The role of religion</i>	<i>31</i>

Chapter 4: Psychiatric approaches to serial murder.....	33
<i>The place of psychiatry in explaining serial murder</i>	<i>33</i>
<i>Psychosis and schizophrenia</i>	<i>33</i>
<i>Multiple personality disorder (MPD) and dissociative disorders.....</i>	<i>35</i>
<i>Neurotic disorders</i>	<i>36</i>
<i>The role of psychopathy.....</i>	<i>38</i>
<i>The role of paraphilias</i>	<i>40</i>
<i>Gender identity disorder, homosexuality, and sexual dysfunction</i>	<i>43</i>
<i>Substance abuse.....</i>	<i>44</i>
Chapter 5: Developmental and psychological approaches to serial murder.	45
<i>Introduction</i>	<i>45</i>
<i>Psychodynamic theories</i>	<i>45</i>
<i>Frustration/aggression hypothesis.....</i>	<i>46</i>
<i>Developmental approaches</i>	<i>47</i>
<i>Personality approaches</i>	<i>49</i>
<i>The addiction approach.....</i>	<i>51</i>
<i>Behavioural or operant processes</i>	<i>52</i>
<i>Cognitive approaches</i>	<i>53</i>
Chapter 6: Biological approaches to serial murder.	57
<i>Introduction</i>	<i>57</i>
<i>Evolutionary and ethological approaches.....</i>	<i>57</i>
<i>Neurological contributions.....</i>	<i>59</i>
<i>Biochemical approaches.....</i>	<i>62</i>
<i>The possible role of genetics.....</i>	<i>64</i>
<i>Race and serial murder</i>	<i>65</i>
Chapter 7: Making sense of disparate theories: towards an integrated model.....	67
<i>Why an integrated model?</i>	<i>67</i>
<i>Two levels of explanation</i>	<i>68</i>
<i>An integrated model.....</i>	<i>69</i>
<i>What do we know? What do we need to know? How can we find out?</i>	<i>73</i>
Bibliography and references.....	76

FIGURES

Figure 1: <i>Method of calculation of Holmes & DeBurger's (1988) estimate of number of U.S. serial killer victims</i>	11
Figure 2: <i>Distribution of serial murder offenders (n=203) in the US by decade, 1790-1980 (from Egger, 1990)</i>	13
Figure 3: <i>Windows in serial murder</i>	17
Figure 4: <i>Holmes & Holmes' (1996) "process" model of violence</i>	37
Figure 5: <i>Cartoon depiction of the MacDonalld Triad's contribution to the development of a serial murderer</i>	48
Figure 6: <i>A small area of an hypothesised "cognitive map" of a typical serial sexual murderer</i>	55
Figure 7: <i>The dialectical relations between successive levels of social complexity.</i>	68
Figure 8: <i>An integrated model of serial murder</i>	71

TABLES

Table 1: <i>Summary of prominent cases of contemporary serial murderers</i>	5
Table 2: <i>Offence characteristics of sexually sadistic criminals (n=30), including murderers and serial murderers, in Dietz et al.'s (1990) sample.</i>	19
Table 3: <i>Offender characteristics of sexually sadistic criminals (n=30), including murderers and serial murderers, in Dietz et al.'s (1990) sample.</i>	22

CHAPTER 1: INTRODUCTION

“*What man was ever content with one crime?*”. Juvenal, Satires.

Rationale and aims of the present study

Serial murder is a crime characterised by a paucity of rigorous aetiological research and an excess of popular and journalistic theorising. It is a crime that has peculiarly engaged public interest and concern, yet failed to secure a much-needed multi-disciplinary research programme.

Early studies of multiple killers tend to consist of post-hoc case studies based upon tenuous paradigms such as psychoanalysis (e.g. Arieti & Shreiber, 1981), or accounts of clinical experience (e.g. Brittain, 1967), both of which do not submit easily to detailed analysis. Contemporary studies have relied upon data sets compiled from secondary (and often unreliable) sources such as newspaper accounts, trial transcripts and criminal records (e.g. Levin & Fox, 1985). Primary studies involving interviews with offenders have necessarily been carried out by those able to obtain access (e.g. police officers), and this tends to be reflected in the information obtained and the manner of data analysis and presentation (i.e. related to policy rather than any coherent theory e.g. Ressler *et al.*, 1988). Such studies further tend to suffer from major methodological and sampling problems, and in generalisability to a non-American population.

Studies on serial murder tend to exist in academic isolation. Most choose to align with psychiatry (e.g. Abrahamsen, 1973) or a peculiar pseudo-biology which incorporates whatever biological theories of crime are currently fashionable such as genetics, diet or brain

temperature (Leyton, 1983). Sociological insight tends to be represented only in the sometimes excellent case-studies written for popular consumption (e.g. Masters, 1993). Academic researchers are guilty of dismissing such lay accounts but themselves provide no alternative methodology for rigorous study. Other journalistic studies become too preoccupied with public fascination for morbidity to be of any use (e.g. Douglas & Olshaker, 1996).

A further difficulty is the way in which serial murder is perceived. Some believe that a subject so much the focus of popular and media fascination is not “worthy” of rigorous academic research. Others believe that a crime so heinous and immediately repulsive stands by itself, and is not subject to the type of criminological investigation afforded (often with success) to other forms of crime, or that it could be elucidated by any “peripheral” literature (i.e. that which does not pertain directly to serial murder). I subscribe to neither of these views. As we shall see below, the criminal careers of offenders practising serial murder are often characterised by other previous and concurrent offences (e.g. sexual assault, or “nuisance” crimes such as indecent exposure). The crime is one which lends itself well to phenomenological analysis.

The aims of the present study are to transcend such problems by drawing together multidisciplinary research into a coherent aetiological model of serial murder. Such a model will incorporate psychological, psychiatric, socio-cultural-economic, biological and legal/criminological research. It is hoped that such a model might provide a stimulus for a multi-disciplinary research effort by making explicit a suitable research agenda.

Before we can analyse the literature pertaining to such a model, it is first necessary to examine a comprehensive typology of serial murder and estimate its prevalence.

What is serial murder?

Definitions of serial murder/homicide differ between authors, but most agree that to qualify as a serial killer/murderer¹ an offender must kill at least two victims in *temporally unrelated incidents*. This temporal criterion is usually satisfied by a “cooling off” or “refractory” period between killings, ranging from hours to years. The Federal Bureau of Investigation (FBI) defines serial murder as the killing of several victims in three or more separate incidents over weeks or an extended period. Others argue for a higher number of victims (Dietz [1986] requires a minimum of 5 victims), but such a distinction is rarely useful and merely serves to further a “body-count” mentality. Indeed, the only difference between an offender who kills 1 victim (but who might have killed 100 if he had been able) and another who kills 30 may be the latter’s good fortune in evading detection. Therefore, distinguishing motive from opportunity may be difficult.

For the purposes of this thesis, a serial murderer will be defined as a *person who kills two or more victims in incidents that are geographically and temporally unrelated*. The key element in serial murder is that the series of murders do not share in the events surrounding one another. Such a distinction is represented in Egger’s (1984) definition:

Serial murder occurs when one or more individuals commits a second murder and/or subsequent murder; is relationshipless (victim and attackers are strangers); occurs at a different time and has no connection to the initial (and subsequent) murder; and is frequently committed in a different geographic location.

¹ The terms “serial killer” and “serial murderer” are used interchangeably.

Egger's definition, whilst comprehensive, should not exclude those murders that do not meet various criteria if they are "symptomatic" of serial murder. For example, E. Kemper killed his mother and her friend (not strangers to him), in the same incident (thus not meeting the criteria of temporal or geographical separation). However, E. Kemper is clearly a serial murderer (he also killed 8 others).

If the term "serial killer" is a recent one (first used in the early 1980s - Hazlewood & Douglas, 1980), the crime is not. There are few acts portrayed in modern literature on serial murder that were not reflected in the lives of historical figures such as Tiberius, Caligula, Tamerlaine, Vlad Tepes and Gilles de Rais (who supposedly tortured, raped and killed hundreds of children). "Modern" serial murder has its origins in the late nineteenth century ("Jack the Ripper" murders [London], Joseph Vacher [France], and Fritz Haarman [Germany]). Media attention and public curiosity, as well as the reduction of "linkage blindness" (the inability of geographically distinct police forces to link serial crimes to a geographically transient offender) by modern policing techniques (Egger, 1984) have brought the crime to popular and academic attention, although evidence also suggests that incidents of serial murder are increasing (Holmes & Holmes, 1996). Table 1 summarises some important cases of more recent serial murderers²:

² I am aware of the pitfalls of listing the names and number of (rather than names of) victims of those who have perpetrated serial murder. Some may consider it superfluous, as these incidents are "in the public domain" and most know of them in detail. Others consider it unsympathetic, or journalistic, or sensational. I am aware of these arguments and indeed considered writing a thesis containing not one of the names of those responsible for so much suffering (as has been called for by Dietz, 1996). I decided ultimately however, that such a stance would be (a) to acknowledge and propagate the "myth" and superior status of the serial killer; and (b) contradictory to proper investigation of the phenomenon. I believe that proper scientific investigation (such as that called for in this thesis) is instrumental in counteracting the development of serial killer research into a profitable, pseudo-pornographical diet for those with a taste for monstrosity and morbidity.

Chapter 1: Introduction

<i>Name</i>	<i>Year of capture</i>	<i>Sex</i>	<i>Type*</i>	<i>No. Victims</i>	<i>Modus operandum and associated information</i>
<i>A. DeSalvo ("Boston Strangler")</i>	1964	M	Power/ Lust	13	Sexual assault (often with inanimate objects and leaving bite marks) and murder through strangulation having gained entrance to property posing as a handyman/plumber. Considerable crime scene staging.
<i>I. Brady/M. Hindley ("Moors Murderers")</i>	1965	M/F	Power/ Lust	5 confirmed, 4 more probable	Rape & murder (with sadistic/torturing elements) of young children.
<i>C. Manson (& cult disciples)</i>	1969	M	Missionary	9 (more possible)	Killed supposedly in order to precipitate an ideological war.
<i>E. Kemper</i>	1973	M	Power/ Lust	10	Killed grandparents at age 14. Imprisoned. Upon release, murdered female hitchhikers, followed by decapitation and sexual assault. Confessed after killing mother and her best friend. Very high IQ and huge physical stature.
<i>T. Creech</i>	1975	M	Career criminal who kills	42	Contract executioner for a motorcycle gang/drug trafficking group. Some victims possibly sacrificed during cult worship.
<i>D. Berkowitz ("Son of Sam")</i>	1977	M	Visionary/ Missionary	6	Shot courting couples. Sent letters documenting his exploits to police and newspapers. Psychotic symptomatology - supposedly commanded by neighbours dogs to commit offences.
<i>K. Bianchi/A. Buono ("Hillside Stranglers")</i>	1978	M/M	Power/ Lust	9+	Impersonated police, then raped and killed prostitutes and other young girls, dumping bodies on hillsides in staged positions.
<i>J. Gacy</i>	1979	M	Power/ Lust	33	Respected member of local community who picked up young boys, raped and sexually assaulted them (often with torture), and buried them under his home after killing them.
<i>T. Bundy</i>	1979	M	Power/ Lust	22 confirmed, up to 50 possible	Used an arm cast to attract help and sympathy, raped and bludgeoned to death college girls (with overkill evidence), travelled great distances between offences.
<i>P. Sutcliffe</i>	1981	M	Visionary	13+	Killed prostitutes and others in response to directive auditory hallucinations
<i>C. Olson</i>	1981	M	Power/ Thrill	11	Killed mainly young boys and girls, and also hitchhikers. Marked psychopathic symptomatology.
<i>C. Falling</i>	1981	F	Missionary	2-5	Suffocated children while baby-sitting, believing them to be epileptic, like herself.
<i>B. Long</i>	1983	M	Power/ Lust	9 murders	Picked up women (especially prostitutes) in bars before raping and strangling them. XXY genetic constitution (some female secondary sexual characteristics).
<i>H. Lucas/O.Toole</i>	1983	M/M	Power/ Lust/ Thrill	Up to 300	Please see case study in Chapter 2.
<i>C. Gary ("Stocking Strangler")</i>	1984	M	Power/ Lust/ Killer-amateur criminal	9	Afro-Caribbean burglar and drug-pusher who raped and strangled prominent elderly white women. Congenitally disordered.
<i>R. Diaz</i>	1984	M	Thrill/ Custodial poisoner	12	A night nurse who murdered patients by injecting them with powerful coronary drugs
<i>J. Dahmer</i>	1991	M	Power/ Lust	17	Homosexual who picked up young Hispanic/Afro-American boys, drugged them, and then murdered them. Rape occurred both before and after death. Dismemberment and cannibalism appeared instrumental for pleasure.

*according to a hybrid of the typologies described below

Table 1: Summary of prominent cases of contemporary serial murderers

Serial murder is thus distinct from mass murder, defined as the act of killing three or more victims *as part of a single ongoing killing event*. Rappaport (1988) presents a brief typology of mass murderers: “pseudo-commandos” (generally young men obsessed with firearms whose rampage usually ends in suicide); “set and run killers” (arsonists, bombers and poisoners who plan the attack sufficiently to make good their escape); and “family annihilators” (generally chronic alcoholic middle-aged males who kill their wife, children, pets, parents and in-laws often without warning). Holmes & Holmes (1992) offer the further categories: “disciples” (cult members ordered to kill, often in suicide pacts) and “disgruntled employees” (who embark on a killing spree often as a result of job-dismissal). Although there are considerable differences between the offences of serial and mass murder (especially where a sexual component is involved in serial murder), they should not be seen as acts totally alien to each other. Their research may benefit from careful examination and contrast of both similar and dissimilar components.

The typology of serial murder

The National Centre for the Analysis of Violent Crime (NCAVC) at the FBI Academy in Quantico, Virginia, US, divides serial murder into two types: “spree” and “classic”. Spree serial murder satisfies the criteria of geographical separation, but rarely is there a “cooling off” period. The motive is usually financial and/or thrill-seeking. Classic serial murder satisfies both criteria: a predatory/stalking method is typically employed, and crime-scene evidence often suggests a sexual/sadistic motive.

Dietz (1986) presents a more detailed serial killer typology: (i) psychopathic sexual sadists (who torture and kill for pleasure); (ii) crime spree killers (as above); (iii) organised crime members (mafia, streetgangs etc. who kill for

instrumental/financial/territorial/retaliative purposes); (iv) custodial poisoners and asphyxiators (e.g. serial killings in nursing homes); and (v) supposed psychotics (those whose crimes occur as a result of psychotic delusions). To this list might be added the politically-motivated assassin (usually linked to terrorist organisations).

Of the above types, the psychopathic sexual sadist has received the most attention. The psychopathic prefix is misleading, however, and the term sexually sadistic murderer (sometimes referred to as lust murderer) or erotophonophilic (Money, 1990) is preferred here. Indeed, usage of the term “serial killing” has become equated with erotophonophilia (paraphilic murder - the killing of another human for or as part of sexual gratification). A distinction is thus drawn between those who kill for purposes of witness elimination after a sexual assault (Gresswell, 1994) and those who kill for pleasure.

Ressler *et al.* (1988) argue that the classification of serial killers is enhanced (particularly in relation to their apprehension) by classification into “organised” and “disorganised” offenders, based upon crime scene evidence. Organised crime scenes reflect evidence of a well-planned, repetitive, and skilfully-executed “production” distinguishable from the spontaneous/chaotic acts of disorganised offenders. The organised offender is more likely to use restraints (to seek control/power over the victim), commit sexual acts with live victims, and use a vehicle. The disorganised offender is likely to leave evidence and weapons at the scene, position the dead body, perform sexual acts after victim death (necrophilic behaviour), try to depersonalise the victim, and not use a vehicle. Although Ressler *et al.*’s distinction is useful, it is likely that there is a continuum of (dis)organisation, with offenders tending to become more disorganised as their criminal career progresses (as offending becomes more of a “requirement” than an “indulgence” - see *The addiction process* in Chapter 5). Holmes & Holmes (1996) also add the labels asocial and nonsocial to the disorganised/organised labels respectively. The disorganised asocial offender’s social deficits arise from how he is perceived and treated by others - he is viewed as “weird”. The

organised nonsocial offender, however superficially charming and normal, *chooses* his³ social fate.

The disorganised/organised typology also links with the distinction of geographical transience (Holmes & DeBurger, 1985). Geographically stable (“megastat”) killers are those who reside in, and take victims from, a similar locale. Geographically transient (“megamobile”) killers may travel huge distances between murders (or in a search for suitable victims). Hickey (1991) further distinguishes between three types of serial killers: travelling (those who commit murder while moving through or relocating to other areas - comprising 28% of serial killers); local (those who remain in a particular urbanised area or geographical region [45%]); and place-specific (those who murder in their home, workplace or other specific site [27%]).

A further typology uses motive and victim characteristics as a distinguishing criterion (Holmes & DeBurger, 1988):

Visionary The offender’s crime is inextricably linked to positive psychotic symptoms (hallucinations, delusions). Often a particular type of victim is selected (e.g. race, gender, age, occupation).

Missionary Believes, generally in the absence of psychosis, that society must be rid of a particular class of people (e.g. prostitutes).

Hedonistic This group may be divided into sub-types. *Lust murderers* kill for sexual enjoyment (see erotophonophiliacs, above). *Thrill-oriented killers* kill for the excitement of a novel experience. Both of these sub-types may show evidence of sadistic methods, mutilation, dismemberment, and pre- and post-mortem sexual activity. *Comfort-oriented*

³ The gender specific pronoun is used as few instances exist of female serial killers.

killers commit act-focused crimes (i.e. those instrumental in killing their victim, rather than focusing on the killing process). The motive may be psychological or financial gratification.

Power and control This offender is motivated by a desire for complete power and control over his victim. Sexual activity may occur, although this is used as an means of domination rather than for primary sexual gratification.

A “victim-focused” nomenclature has otherwise been largely ignored, to the detriment of techniques such as offender profiling (where crime scene evidence is used to contribute to hypothesise psychological/behavioural/geographical characteristics of the crime perpetrator in order to focus police investigation), and sympathy to victims and their survivors. This may be because the victims of serial murder are often those less valued in society e.g. women, ethnic minorities, gay men or prostitutes.

The final typology described here acknowledges a criminality dimension:

<i>Professional killer</i>	Kills for direct payment.
<i>Career criminal who kills</i>	Killing is secondary but instrumental to other criminal activity e.g. in drug cartel disputes.
<i>Killer-amateur criminal</i>	Murder is separate from other criminal activity (but minor crimes are often engaged in).
<i>Strictly amateur</i>	Serial murder is the sole crime of the offender.

Classifying serial murderers under the typologies described above (or a hybrid version of them) may have considerable use in offender profiling. For example, evidence of “overkill” at the crime-scene (e.g. multiple stab wounds, any one of which may have been sufficient to kill the victim) might suggest a supposed psychotic offender, whereas a single

bullet wound might suggest a professional killer. However, many of the typologies described have considerable overlap, especially Holmes & DeBurger's (1988) visionary and missionary types. Furthermore, they are not exhaustive, and as we shall see below, do not always lend themselves easily to case studies. Other typologies, perhaps based on extrinsic/intrinsic motivation, may be useful.

The prevalence of serial murder

The NCAVC (1992) has identified a total of 357 U.S. serial killers from 1960-1991 through various informational sources, with a total (suspected + actual) of 3,169 victims. In England and Wales between 1982 and 1991, 58 perpetrators killed 196 victims in 52 "incidents of multiple murder" defined as involving 3 or more victims (Home Office figures cited in Gresswell & Hollin, 1994). However, many of these victims were due to a small number of particularly prolific offenders, and many of the incidents were mass murder.

However, such reports do nothing to estimate the "dark figure" of serial murder. *Estimation* of serial murder prevalence ranges hugely. Claims tend not to be conservative, as if to inflate the importance of the various authors' research into serial murder. MacKay (1985) attributes 6,000 homicides *per annum* in the United States (p.a.U.S.) to serial murderers. Norris (1988) agrees with Holmes & DeBurger's (1985) estimate of 5,000 victims p.a.U.S., although he wrongly attributes this estimate to the FBI (it is instead based upon Norris's analysis of the Uniform Crime Reports [U.S. Department of Justice, 1983]), and he applies a limited definition of the offenders responsible:

In 1983 alone, according to the FBI, approximately five thousand Americans of both sexes and all ages - fifteen people a day and fully twenty-five percent of all murder victims - were

struck down by murderers who did not know them and killed them for the sheer “high” of the experience. The FBI calls this class of homicide serial murders and their perpetrators recreational or lust killers (Norris, 1988, p.33)

Such figures are likely to be a gross overestimate. Over the time period upon which Homes & DeBurger base their estimate, 16.5% of an annual rate of 20,000 homicides were committed by strangers, and a further 28.6% of homicides did not identify any offender-victim relationship. Although serial murder certainly accounts for a proportion of these crimes, Holmes and DeBurger’s estimate puts that proportion at 55.4%, which is clearly too high.

Holmes & DeBurger (1988) recant their estimate, but not fully. Their new estimate ranges from 3,500 to 5,000 victims p.a.U.S. This estimate is calculated thus:

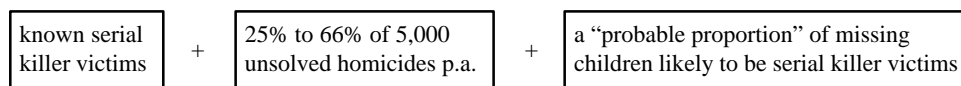


Figure 1: Method of calculation of Holmes & DeBurger's (1988) estimate of number of U.S. serial killer victims

The authors claim their estimate is “reliable” (although they can only have confused “reliable” with “accurate”, and even this is a bold claim). The figures upon which the estimate is based are contested; extrapolated estimates of missing children killed by strangers range from 300 to 40,000 p.a.U.S. (Egger, 1990). Better estimates would come from figures derived from suitable typologies of serial murder, for example, identifying the number of victims likely to have been killed by erotophoniphilacs or professional killers. Such study is vital before the true prevalence may be estimated, and prevalence for areas other than the U.S. is rarely considered. The nature of serial murder makes estimation difficult (victims may never be found or even reported missing), and although there is likely to be an extensive

“dark figure” of serial murder prevalence, it is probably not as large as some authors suggest.

Equally contested is the number of serial killers operating within any area at a point in time. Norris (1988) claims that 500 serial killers remain at large in the U.S. at any one time. More conservative estimates range from 30 (Starr, 1984) through 35 (Levin & Fox, 1985) to 100 (Leyton, 1986). Through the juxtaposition of the two estimates (highest number of victims and lowest number of killers), we may arrive at an average value of 200 homicides every year from *each* U.S. serial murderer. Although deliberately distorted, such a value does highlight the lack of consensus as to what is a fundamental statistic in the study of serial murder and serves to highlight the inadequacies of the field. In England and Wales, taking into account the much lower murder rate in the U.K. than U.S., a figure of up to 4 killers (satisfying the two victim criterion described earlier) at large may be accurate (Gresswell & Hollin, 1994).

Perhaps more important than the actual number of incidents of serial murder is the relative change in the number of incidents. Jenkins (1994) cites the words of retired FBI Agent Robert Ressler:

Serial killing - I think it's at epidemic proportion. The type of crime we're seeing today did not really occur with any known frequency prior to the fifties. An individual taking ten, twelve, fifteen, twenty-five, thirty-five lives is a relatively new phenomenon in the crime picture of the U.S.

Whether Ressler's words are true or whether researchers and those involved in the “selling of serial killers” are merely creating their own monster is still a source of debate.

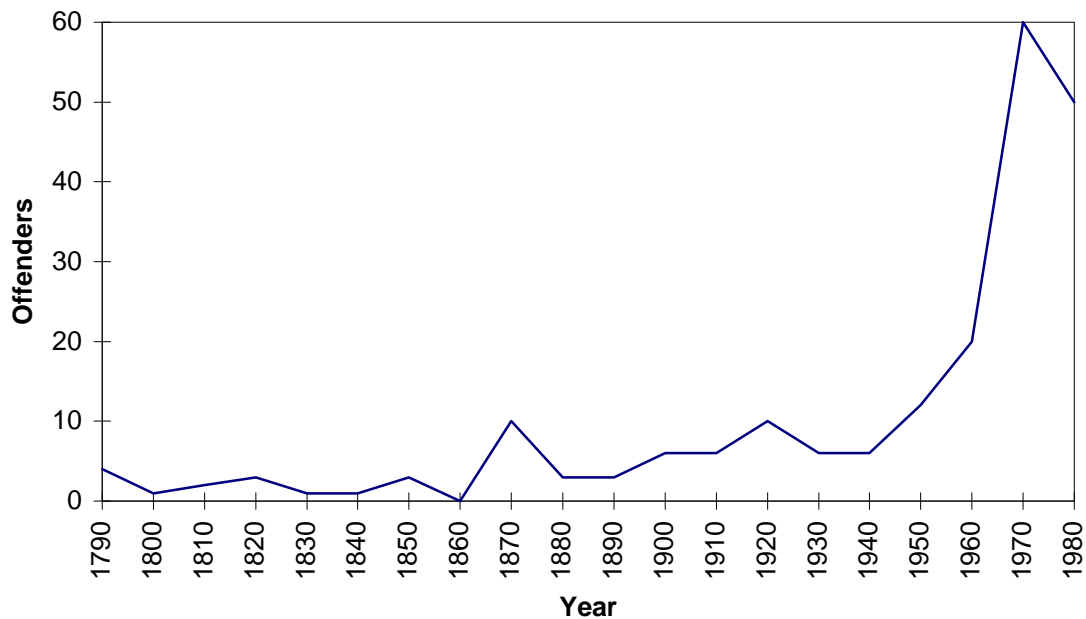


Figure 2: Distribution of serial murder offenders ($n=203$) in the US by decade, 1790-1980 (from Egger, 1990).

Between 1977 and 1984, the number of U.S. homicides with “no apparent motive” increased by 270% against a rise in all murders of only 12% (Egger, 1984). Hickey (1991) reports that incidents of serial murder have increased 10-fold in the last two decades compared to the previous two. Such reports may be attributed to a reduction in linkage blindness/greater detection rates or a genuine increase in cases. It is likely that both explanations play a role.

Fear of the crime

It might be argued that the true prevalence is not the key serial killer issue, but that a crime so heinous and terrifying has disproportionate social effects through fear of crime. Although the highest estimate of serial murder victims is only a tenth of U.S. vehicle-related fatalities a year (Egger, 1984) considerable human and financial resources are expended in

apprehending and prosecuting serial murderers (e.g. the cost of T. Bundy's trial and appeals totals over \$9,000,000 [Hickey, 1991]). Certainly few worse ordeals could be imagined than becoming the victim of an erotophonophiliac, thus fear of the crime is maintained not by its likelihood, but rather by its perceived cost. The difficulty of rationalising and understanding the crimes of the serial killer is likely to contribute to the profound psychological and social impact of the offence.

The concern of the present study

If a slip of the hand on the steering wheel can turn a normal person into a killer then it is conceivable that a second such happening could turn an otherwise normal person into a serial killer of sorts. Such individuals are not of interest in the present study, nor are those serial killers, although they possess *mens rea*, whose crimes can be attributed to an obvious, immediately understandable, external goal (e.g. terrorist, professional killer, rapist who kills for purposes of witness elimination). Such murderers may be described along largely different dimensions to those described in this thesis. It is generally believed that most serial murderers are serial sexual murderers (Ressler *et al.*, 1988), and it is the serial sexual murderer whose motivation is not immediately understandable (and whose crime is often described [wrongly] as "motiveless"). The serial sexual murderer thus provides the main focus for this thesis. The crime and the offenders' characteristics are examined in more detail in Chapter 2.

CHAPTER 2: THE SERIAL SEXUAL MURDERER

“Those who have been once intoxicated with power, and have derived any kind of emolument from it, even though but for one year, never can willingly abandon it. They may be distressed in the midst of all their power; but they will never look to anything but power for their relief”. Edmund Burke (1729–97), Irish philosopher, statesman. A Letter to a Member of the National Assembly, 19 Jan. 1791.

Case study

The following case study (compiled from accounts in Wilson & Seaman [1992]; Norris [1988]; Sears [1991]; and O’ Reilly-Fleming [1996]); is chosen as an example of serial sexual murder because it involves many of the typical elements found in such cases, albeit in extreme form.

H. Lucas was born on the 16/8/1932 in Blacksburg, Virginia. During childhood, both Lucas and his father, a double-amputee alcoholic, were beaten by his mother, a prostitute. One blow left him unconscious for 3 days before hospital admittance, after which he reported a variety of neurological symptoms such as dizziness, blackouts, and decorporealisation (“out of body” floating sensations). He was not allowed to cry. Lucas was deprived of food until near starvation and forced to watch his mother have sex with scores of clients. His earliest memory is of his mother shooting a client after sex, showering Lucas in blood. He was sent to school on his first day with long hair and in a dress. When his mother saw Lucas had become fond of the mule that he kept as a pet, she duly killed it and beat him for the expense of having the carcass removed. His father died when Lucas was 18.

As a young teenager Lucas practised bestiality and dissection on small animals, and also had intercourse with his half-brother. His mother’s lover decapitated a calf and had sex with the dead body in front of him. An accident with a knife left his left eye

partially blind, and he lost this eye totally in a further accident. At age 15 he claimed he killed a girl after raping her, when she struggled and screamed. A regular visitor to reformatory institutions for theft, he killed his mother after an altercation at age 28, receiving a 40 year prison sentence. He was diagnosed as a psychopath, a sadist, and a sexual deviant, grossly lacking in self confidence and with a variety of neurological and psychiatric (especially psychotic) symptoms. He attempted suicide several times in prison.

During prison he learnt much about criminality and police techniques from his interest in the records room. Despite his protestations that he would kill again, he was paroled in 1970. He murdered on the day of his release within walking distance of the prison gate. In the following crime spree he abducted children, raped young girls and killed (possibly over 100 victims) in apparently random fashion. He eluded capture through choosing victims of easy opportunity (e.g. hitchhikers and prostitutes), taking care in disposal of corpses, and by exploiting between-state police force “linkage blindness” (he claims he killed victims in 50 states). He killed and dismembered his common-law wife, and practised necrophilia, sodomy, pre-mortem beating and mutilations on other victims. He has since admitted to being unable to have sexual intercourse with a living person.

After his capture in 1983, he confessed to over 360 murders, although many are known to be false, and many may have been committed by his sometime partner, O. Toole. He is currently serving six life sentences, two 75-year sentences and a 60 year sentence for eleven murder convictions and further convictions for rape and kidnapping.

Lucas’ crimes are typical of the power/control motive described by Holmes & DeBurger (1988), although they lack the process-focused criterion (e.g. torture and “crime-scripting”) that the authors specify. Indeed, many of the cases held up as sadistic sexual murderers show strikingly little evidence of process in the crimes (e.g. J. Gacy, T. Bundy and H. Lucas). Many of their crimes are instrumental, rather than process-focused, in that they allow sexual relations to be carried out that would otherwise be impossible; many offenders say they are unable to have sex with a living human. Levin & Fox (1985) suggest that

sexually sadistic serial killing constitutes only 28% of serial murder. It is thus surprising that serial murder research has become so preoccupied with the sadistic sexual killer. Hedonistic elements are certainly present in H. Lucas' crimes, but Holmes & DeBurger's (1988) typology again specifies a process-focused act.

It becomes clear then, that as soon as we begin to examine case-studies, that serial murderers do not fall easily into nomenclative pigeon-holes, and instead fit better into a hybrid typology. Current typologies are inadequate in dealing with such difficulties. Furthermore, serial murder research suffers from theoretical divergence with research into sexual assault (especially with rape), that suggests the sexual activity during assaults is generally instrumental in expressing power/dominance, rather than in obtaining sexual gratification. This distinction has been identified by researchers such as Cohen *et al.* (1971) who distinguish the "rape murderer" or "displaced anger murderer" (e.g. H. Lucas) from the "lust murderer", but has been confused by later authors. Gekowski (1996) further distinguishes sadistic (e.g. F. & R. West) from non-sadistic lust murder (e.g. P. Sutcliffe, D. Nilsen).

Crime characteristics

Holmes & Holmes (1996) identify five "windows" in serial murder:

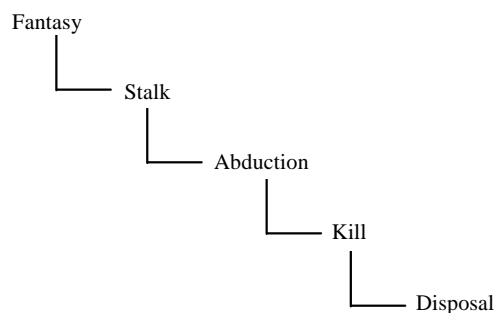


Figure 3: *Windows in serial murder*

The offence thus begins with the abduction of a victim, triggered by fantastic urges experienced by the offender. An ideal victim may be sought, but often the offender will “make do”, especially if no opportunity to seize an ideal victim has recently occurred. Victims may be tricked into accompanying the offender (who may impersonate someone in authority, especially police; many serial murderers are described as “police-groupies”). Victims may be held captive for varying periods of time, sometimes days or weeks. Evidence of pre-/post-mortem mutilation are common (at the crime-scenes of erotophonophiliacs), generally of the breasts, genitals, rectum, and/or abdomen. Methods of torture include the use of hammers, pliers, whips, and burning by flame or electric shock (quantitative data on such phenomena are presented in Table 2). Bite marks may be found, and evidence of vampirism (drinking of blood) or anthropophagy (cannibalism) is sometimes reported. Victims may be tortured until unconsciousness and then revived. Evidence of pre-/post-mortem sexual activity may be evident, often of masturbation rather than penetrative intercourse. Equipment to restrain the victim may be used e.g. rope or duct tape (which are often found in the “rape kits” carried by many such offenders, particularly by the organised type), reflecting a theme of domination and humiliation.

Serial sexual offenders will often kill by “hands-on” methods such as strangulation, asphyxiation and mutilation rather than use firearms. This “*modus operandi*” (MO) tends to remain constant throughout offences, deviating (if ever) only towards the end of an offender’s murder series as he becomes more disorganised. Organised offenders may take time to “stage” the murder scene. Evidence of “overkill” is particularly likely at the crime scene of the visionary serial killer. Souvenirs/trophies may also be taken. Detailed sexually sadistic offence characteristics are given in Table 1, however, Dietz *et al.* (1990) do not provide a breakdown by offence and number of victims which would assist in such an analysis. An analysis of offences by *typology* (e.g. organised/disorganised), or indeed exclusively of serial

killers, would also be of considerable use. Dietz *et al.*'s (1990) sample is selected from cases identified as possible sexual sadistic criminals referred to the NCAVC between 1984 and 1989 and identified by the authors as displaying sexual arousal to images of suffering or humiliation. Evidence was obtained from interviews, police reports, court reports, crime scene photographs etc.

<i>Characteristic</i>	<i>n</i>	<i>%</i>
A partner assisted in offence	11	36.7
Careful planning of offence	28	93.3
Impersonation of police in commission of offence(s)	7	23.3
Victim taken to preselected location	23	76.7
Victim kept in captivity for 24 hours or more	18	60.0
Victim bound, blindfolded or gagged	26	86.7
Sexual bondage of victim	23	76.7
Anal rape of victim	22	73.3
Forced victim to perform fellatio	21	70.0
Vaginal rape of victim	17	56.7
Foreign object penetration of victim	12	40.0
Variety of sexual acts with victim	20	66.7
Sexual dysfunction during offence	13	43.3
Unemotional, detached during offence	26	86.6
Told victim what to say during assault	7	23.3
Intentional torture (<i>see below for methods used</i>)	30	100.0
<i>Instruments</i>	8	26.7
<i>Painful insertion of foreign objects</i>	7	23.3
<i>Beating</i>	6	20.0
<i>Biting</i>	5	16.7
<i>Whipping</i>	5	16.7
<i>Painful bondage</i>	5	16.7
<i>Electrical shock</i>	4	13.3
<i>Twisting breasts until victim unconscious</i>	4	13.3
<i>Asphyxiation until victim unconscious</i>	4	13.3
<i>Burning</i>	3	10.0
<i>Other e.g. amputation, injection, immersion</i>	7	23.3
Murdered victim (<i>see below for cause of death of 130 murder victims total</i>)	22	73.3
<i>Ligature strangulation</i>	42	32.3
<i>Manual strangulation</i>	34	26.1
<i>Gunshot wounds</i>	32	24.6
<i>Cutting and stabbing wounds</i>	13	10.0
<i>Blunt force trauma</i>	4	3.1
<i>Hanging</i>	2	1.5
<i>Suffocation</i>	1	0.8
<i>Torture</i>	1	0.8
<i>Exposure</i>	1	0.8
Committed serial murder (3 or more victims)	17	56.6
Concealed victim's corpse	20	66.6
Victim beaten (blunt force trauma)	18	60.0
Recorded the offence (writing, drawing, videotape etc.)	16	53.3
Kept victim's personal item	12	40.0

Table 2: *Offence characteristics of sexually sadistic criminals (n=30), including murderers and serial murderers, in Dietz et al.'s (1990) sample.*

The characteristics of the serial sexual murderer

Brittain (1967) has warned against treating sadistic sexual murderers as a homogenous group, but common characteristics do emerge from studies such as that of Ressler *et al.* (1988), who administered a 57 page questionnaire to 36 convicted, captive sexual murderers (29 of whom were serial murderers).

The great majority of serial sexual killers and their victims were white, less than 35 years old and begin their criminal careers in their '20s, however, some may commit murder as juveniles (Burgess *et al.*, 1986). Most offend alone, though approximately one quarter to one third offend in the company of others (Hickey, 1991). Most are of average or above average or above average intelligence, with 33% having superior intelligence (Ressler *et al.*, 1988). In general, appearance is normal, with few physical defects and normal heights and weights (Myers *et al.*, 1993). Only 20% have a history of psychiatric treatment (Hickey, 1991), although 70% "underwent some kind of psychiatric assessment as a child" (Burgess *et al.*, 1986). Control samples of normal individuals are needed before such statistics can be correctly interpreted. A comparison between type of background and type of offence would also be of great use.

Although familial demographics are ostensibly normal (57% began life in a two-parent home, 52% of mothers were housewives, 74% of families had stable incomes and 86% had self-sufficient economic level [Ressler *et al.*, 1988]), a more detailed picture of serial murderers' early environment does not appear so idyllic. 53% reported a family history of psychiatric disturbance (Hickey, 1991). Family problems with alcohol (69%), drug abuse (33%) and criminality (50%) were commonly reported (Ressler *et al.*, 1988). Abuse was also common (42% were physically abused, 74% were emotionally abused and 42% reported sexual abuse). Importantly, perceived relationships with family members, especially mothers, were of poor quality; for example, mothers were uniformly portrayed as cool and

distant in Ressler *et al.*'s (1988) study. The same study further showed that 72% believed they had a bad relationship with their fathers, who left the family before the age of 12 in 47% of cases. 40% of subjects left the family home before the age of 18.

35% of Ressler *et al.*'s sample reported witnessing sexual violence as a child. 79% relied upon autoeroticism as the sole means of sexual release. 71% engaged in voyeurism and 81% made regular use of pornography (particularly of a violent and sadistic nature). 72% engaged in fetishistic behaviour. 61% fantasised about rape. 56% never had consenting sex as teenagers, and 44% believed they were sexually incompetent. 44% of serial murderers committed sex offences previous to serial murder (Hickey, 1991).

Over 50% of Ressler *et al.*'s sample reported (in ascending order of frequency): poor body image; cruelty to other children, fire-setting; nightmares, behavioural problems; enuresis; chronic lying; and compulsive masturbation. 46% reported cruelty to animals in adolescence.

The characteristics represented by the above samples may not generalise well to other serial sexual murderers, as subjects tended to be included in each study on criteria such as ease of access rather than being systematically sampled etc. Generalisation of Ressler *et al.*'s (1988) sample to a population of serial murderers is almost impossible, as many will be in institutions other than prison (especially psychiatric institutions), and it may be argued that serial killers who have been caught differ fundamentally from those who have not been captured. However, they do allow examination of basic offender characteristics as in Table 2, which relies on the same sample described above (Dietz *et al.*, 1990). A comparison group (of other offenders or normals) is not provided in Dietz *et al.*'s study.

<i>Characteristic</i>	<i>n</i>	<i>%</i>
Male	30	100.0
White	29	96.7
Parental infidelity or divorce	14	46.7
Physically abused in childhood	7	23.3
Sexually abused in childhood	6	20.0
Married at time of offence	13	43.3
Incestuous involvement with own child	9	30.0
Known homosexual experience (excluding childhood sex play)	13	43.3
Known cross-dressing	6	20.0
Known history of peeping, obscene telephone calls, or indecent exposure	6	20.0
Shared sexual partners with other men	6	20.0
Education beyond high school	13	43.3
Military experience	10	33.3
Established reputation as "solid" citizen	9	30.0
Drug abuse (other than alcohol)	15	50.0
Suicide attempt	4	13.3
Excessive driving	12	40.0
Police "buff" (excessive interest in police activities and paraphernalia)	9	30.0

Table 3: *Offender characteristics of sexually sadistic criminals (n=30), including murderers and serial murderers, in Dietz et al.'s (1990) sample.*

CHAPTER 3: SOCIO-CULTURAL APPROACHES TO SERIAL MURDER.

“When once a certain class of people has been placed by the temporal and spiritual authorities outside the ranks of those whose life has value, then nothing comes more naturally to men than murder”. Simone Weil (1909–43), French philosopher, mystic. Letter, c. 1938, to author Georges Bernanos.

Introduction

Socio-cultural theories of serial murder have been largely overlooked in the current literature, possibly because of a feeling of both lay and academic unease that such a horrific crime could be a product of an individual’s social milieu. However, it is possible to identify important sociological theories that might have some bearing upon an explanation of serial killing. In attributing the effects of the environment/social milieu, we must be careful in attributing consciousness and free-will. The serial killer may be a *victim* of his environment. I thus do not agree with the statement of Samenow (1984), or the context in which Holmes & Holmes (1996) cite it:

It is not the environment that turns a man into a criminal. Rather, it is a series of choices that he makes starting at a very early age (Holmes & Holmes, 1996, p. 29).

Structural/functionalist approaches

According to writers such as Durkheim (1965), deviance and crime represent a breakdown in a social consensus regarding societies goals and values. Serial murder lends itself well to Durkheim’s idea that a high rate of crime in mechanistic (those which have advanced from an organic basis) societies represents a feeling of *anomie*, or helplessness or

normlessness, in such societies. Such an idea might explain the “emergence” of serial murder in highly modernised societies such as the U.S., and also fit well with the ideas of authors such as Unnithan *et al.* (1994) who see equivalence of suicide and homicide as lethal violence. Perhaps suicide is more easily understandable as an expression of anomie, but further research and theorisation into the role of homicide and serial homicide as a consequence of anomie would be of great interest.

Strain theory

Merton (1968) sees social ends and the means to achieve those ends as learnt. Some people have high aspirations; others do not. However, if cultural goals exceed structural opportunities, then *anomie* is overcome by “innovation” (e.g. using illegitimate means to obtain legitimate goals). In Western society, personal fulfilment is deemed to be a socially approved goal. In the absence of the ability to obtain such fulfilment by normal means (i.e. sex with a consenting partner), it may be that the serial murderer resorts to illegitimate means to achieve this socially approved goal (i.e. feels justified in “taking” if blocked from “earning”).

A predisposition to resort to illegitimate means to obtain social goals may be confirmed by 60% of serial murderers having previous criminal convictions (Myers *et al.*, 1993). Although it might be possible to identify a relationship between serial murder and social class, any relationship might be spurious (perhaps due to a third factor); for example, Brown (1984) presents evidence of a relationship between social class, child abuse and delinquency.

Differential association

Sutherland (1937) asserts that criminal behaviour is learned in primary group relationships rather than through secondary sources such as television etc. The rationalisation and realisation of criminal motives and drives occurs at a conscious level. This theory is an attractive one in relation to serial murder. Many offenders are incarcerated prior to their first murder, and it may well be that they learn techniques and conceptualise their intentions during prison stays and in resultant associations (serial murder may be a crime particularly susceptible to social transmission). Indeed, Holmes & Holmes (1996) suggest that the application of duct tape to restrain victims is a technique likely to be learned in prison and is thus a useful profiling element. Holmes & Holmes (1996) give weight to a model of “social transmission” through relating a conversation between two rapists:

We've got to do this the right way. You blew it but you were inexperienced. The first thing to do is to get a house with a windowless, underground basement. Equip it with steel cages (for holding victims)...we'll keep her locked up before you kill her and grab another. But if we torture, we'd best grab two so that we will always have one recovering while we're busy with the other (p. 50).

Societal bonds

Hirschi (1969) asserts that law abiding behaviour depends upon the bonds between people and conventional society. *Attachment* refers to a person's sensitivity to others' perception of him/her; *commitment* is the extent to which individual social rewards are connected to social conformity; and *involvement* refers to the individual's immersion in

conventional activity. The greater levels of these bonds, the lower the probability of criminal activity.

It is likely that serial murderers would score low on any of these constructs, and continued killing in a series would dynamically affect the nature of the offender's bonds to society. Many serial killers attest to a feeling of severing societal bonds after their first murder (e.g. Masters, 1993). Indeed, a propensity for such cognition may distinguish the serial from the single murderer. Might the level of societal bonds have a role to play in temporal and geographical distribution of serial murder? Investigation into such propositions is required.

Subcultural Theory

Wolfgang & Ferracuti (1967) describe a subculture in which violence is not seen as antisocial or morally wrong. Danto (1982) provides some support for this theory in stating "Estimates reveal from 25 to 67% of murderers have a childhood history of violence" (p. 5). Sexual serial killers may be exposed to *sexual* violence in particular (see above). However, many serial killers do not grow up exposed to such violence. Furthermore, although a predictor of murder rate in U.S. communities is Afro-American population proportion (e.g. Blau & Blau, 1982) which is often seen as due to differential subculture and socio-economic status, few cases of Afro-American serial killers have been recorded. I would advocate this as a particularly pertinent research point.

Inadequate socialisation

Reinhardt's (1962) case studies of mass and serial murderers showed that:

They gave preponderant evidence of never having experienced normal communication with a dependable, understanding part of the social world about them. They had no workable system of social or personal frames of reference (p. viii).

Many other researchers have similarly advocated a lack of socialisation as an aetiological factor in both murder and serial murder. For example, Hazlewood & Douglas (1980) state:

Seldom does the lust murderer come from an environment of love and understanding. It is more likely that he was an abused and neglected child who experienced a great deal of conflict in his early life and was unable to develop and use adequate coping devices (p. 4).

Clearly, not everyone growing up in an environment of abuse or neglect becomes a serial murderer. Furthermore, the studies from which these observations are drawn suffer from a lack of comparison with adequate control groups. It is likely that the *effect* of socialisation relies upon complex interaction between psychological and biological predispositions and development.

Gender roles

Only a few examples of female serial murderers exist, and even fewer female serial sexual/sadistic killers (with most female multicide offenders being healthcare poisoners, or mass murderers). R. West and M. Hindley are seen as subservient in offending partnerships, being less blameworthy than their male partners. Other female serial killers are described as

being of the *comfort* type (e.g. A. Wuornos [Kennedy & Nolin, 1992) and D. Puente [Blackburn, 1990]). Why are serial killers predominately male?

The feminist political agenda analysis has reframed the problem of violence against women as one of misuse of power by men who have been socialised into believing that they have a right to control the women in their lives, even through violent means (Walker, 1990, p. 695).

The predominance of female victims fits with such an analysis. Sexual murder is seen as an act of violence exercised to override not only a woman's sexual choices, but also her choice over life or death. This links with the notion of serial murder as a patriarchal act of "sexual terrorism" (Caputi, 1988).

Sexual sadism actualizes male identity. Women are tortured, whipped, and chained; women are bound and gagged, branded and burned, cut with knives and wires; women are pissed on and shit on; red-hot needles are driven into breasts, bones are broken, rectums are torn, mouths are ravaged, cunts are savagely bludgeoned by penis after penis, dildo after dildo—and all of this to establish in the male a viable sense of his own worth (Dworkin, 1975).

If violent behaviour is learnt within the family (e.g. Farrington, 1991), from peer groups (e.g. Cairns & Cairns, 1991) and from media (e.g. Goldstein, 1986), then part of that process of learning is due to differential male and female socialisation (with males being taught to "take" and strive for power and women taught subservience and obedience). Such socialisation is achieved through reinforcement via punishment and reward (Bandura, 1973) in the classroom, family, peer, and cultural settings. A huge literature exists on masculine aggression and dominance (such as violence as an expression of traditional warrior values e.g. McCarthy, 1994), both in a social and biological capacity, all of which may be applied in

extreme form to serial murder. Power expression during sex is particularly applicable to serial murder, and is a theme that has been mentioned anecdotally in many studies on sexual murder such as that of Bartholomew (1975), but rarely in connection with the large body of work that relates to aggression, power and dominance.

Obviously, serial murder itself is not socialised, but important precursors, such as a propensity for violence and entitlement to sexual relations, perhaps are. Thus serial murder may be *expressive of* rather than *alien to* mainstream culture. Again, we are faced with the difficulty that hundreds of millions are exposed to such a cultural environment, yet only a very few practise serial murder. However, a feminist approach to serial murder may have much to offer in terms of a social analysis.

Ideology

Ratner (1996) argues that serial murder represents an “ideological leakage” - a tear in the fabric of the net of ideological hegemony that maintains the *status quo*. The early environment of the serial murderer, Ratner believes, is conducive to the absence/erosion of ideological controls. Furthermore, serial murder may be a regulatory breakdown expressing a bourgeois vision of utopia - a homeostatic mechanism. Ratner illustrates his point with Ewen’s (1972) analysis of C. Manson’s ideology that supposedly led to his involvement in 9 killings:

Manson is acting out all the myths that societies which are formulated on unfreedom create about freedom, about ‘human nature’, without the safeguards of controlling authority...outside of the operational terminology of technological capitalist society (p. 35-36).

Of course, such word-extensive (a common problem in serial murder research) and dangerously glorifying arguments may be easily countered by promoting Manson's popular depiction as a drug-crazed hippie, rather than an intellectual crusader for social reform. A further danger in serial murder research is thus to attribute motives in the absence of verification. For example, Leyton's (1988) claim that serial murder is a form of social protest needs careful qualification.

Glorification

Gresswell & Hollin (1994) report that a need to generate and maintain public interest may supersede the original motivation for serial murder. Several of Ressler *et al.*'s (1988) sample followed the reporting of their crimes in the media (or even attempted involvement in police investigations), which served to maintain post-offence excitement. We are also faced here with changing motivation, which is not accounted for in any existing typology.

Public and media interest also serves to glorify the act of serial murder. Major films such as *The Silence of the Lambs* and *Henry: Portrait of a Serial Killer* have kindled and maintained public fascination with serial murderers, and have sometimes portrayed offenders as pseudo-heroes, by placing an emphasis on their positive characteristics and portraying their criminality in grandiose terms. Serial killer trading cards (with a higher body-count "trumping" a lower one) are now a collector's item. If we are to believe Dietz (1996, p. 117) that we should "Recognize that much of what is done by these killers is done in the service of fame and attention seeking", then irresponsible media interest in the serial murderer may be extremely dangerous. A brief Internet search for "Serial Killer" reveals a large number of

World Wide Web sites with slogans such as “Serial killing can be FUN”. One site⁴ contains a detailed comparison between the serial killer and the mass murderer in which the serial killer’s crimes are hailed as “superior”. If nothing else, then such reports of violence may have a direct result on level of violence and other homicide (which would lead us into the debate on media violence and its effects e.g. Berkowitz, 1993).

Copy-cat emulation of crimes is a further danger and a well-established phenomenon. Tarde (1912) referred to Jack the Ripper copy-cat killings in suggesting “epidemics of crime follow the line of the telegraph”. A paradoxical desire for “labelling” and killing as many as is needed to meet the serial killer criterion may also be evident (which is a further reason to avoid a body-count mentality and inflating unnecessarily the number of victims required for inclusion as a serial killer - the less exclusive a club is seen to be, the fewer will make the effort to join). Such phenomena require proper investigation.

The role of religion

There is some debate about whether religion (particularly Satanism) plays a role in serial murder beyond the “God told me to do it” motivation of those killers suffering from psychotic symptoms (especially the visionary serial killer). Of a large catalogue of serial murderers only a few (e.g. H. Lucas) claim satanic links. R. Ramirez became infamous when he flashed an inverted pentagram drawn on the palm of his hand as he walked into a Los Angeles courtroom. Terry (1987) has claimed that a satanic sect links D. Berkowitz’s crimes with those of the Manson “family”.

It is more likely that adoption of satanic religion (and its citation as a motive) is more a function of the morbid interests and psychological deficiencies of the serial murderer, rather

⁴ <http://www.ucsub.colorado.edu/~mcelroy/serial.html>

than a prime-motivating force. Nazi imagery is another common interest of the serial murderer. However, it is interesting to note that many serial murderers, who feel unable to explain their actions, adopt demonic possession as an explanation. For example, J. Dahmer, who came from a religious family, is quoted as saying at interview:

Am I just an extremely evil person or is it some sort of satanic influence or what? I have no idea...do you? I know that sounds like an easy way to cop out and say I couldn't help myself, but from all that the Bible says, there are forces that have a direct or indirect influence on people's behaviour (Masters, 1993, p. 112).

An analysis of the role of religion in the life of the serial murderer and its relationship to internal justification of his crimes would be of considerable interest.

CHAPTER 4: PSYCHIATRIC APPROACHES TO SERIAL MURDER.

“There is only one difference between a madman and me. I am not mad”. Salvador Dali (1904-89), Spanish painter. *Diary of a Genius* (1966), entry for May 1952.

The place of psychiatry in explaining serial murder

If psychiatry’s role is to explain and treat human behaviour that deviates from the norm, then shedding light on serial murder must surely be an ultimate goal.

While only 20% of serial murderers have a history as a psychiatric patient (Myers *et al.*, 1993), psychiatry has been a constant paradigm in explaining serial murder. The acts of the serial murderer are often seen as so horrific and beyond understanding that the perpetrator *must* be insane. This “*re ipsa loquitur*” (the act speaks for itself) heuristic approach is a dangerous one, as a large range of studies (e.g. Teplin, 1985) do not support the stereotype of mentally ill persons as violent and dangerous. Perhaps we resort to psychiatric approaches because the serial murderer represents a potent Freudian *id* residing in all of us (Myers *et al.*, 1993). Furthermore his act offends the cognition that the world is a predictable, stable place - a cognition that we place great emphasis on protecting (Heider, 1958). However, much of the behaviour and cognition reported of serial murders does lend itself to immediate psychopathological explanation. This chapter examines aspects of serial murder that might properly be studied through an illness model.

Psychosis and schizophrenia

Clearly, overt psychotic illness (especially that characterised by a predominance of

positive symptoms of a paranoid nature) has a direct influence on some acts of serial murder (e.g. those of P. Sutcliffe and other visionary serial murderers), but this type of influence is either uncommon, or evidence testifying to that effect is simply ignored in a court of law.

Lunde (1976) asserts that all mass killers are insane, and this madness takes one of two forms: (i) paranoid schizophrenia characterised by positive psychotic symptoms (auditory and visual hallucinations and delusions particularly of a persecutory, grandiose, religious, suspicious, and aggressive content); or (ii) sexual sadists (a condition characterised by torturing, killing and mutilating other persons). Lunde is, however, making the ultimate psychiatric error - that because behaviour deviates from the norm, mental disorder must be present. Simple deviance cannot be instantly equated to illness.

D. Berkowitz claimed to have been told to commit his crimes by a 6,000 year old man who spoke through his neighbours' dogs, but may have been seeking mitigation of culpability through mental illness. C. Manson may have suffered from drug-induced psychosis. H. Mullin was almost certainly a paranoid schizophrenic although we should be careful of anecdotal case abstraction without detailed clinical information. More serial murderers might be found Not Guilty By Reason of Insanity if there was not such public and legal pressure to have their crimes punished, so we should be careful in interpreting court reports that find a defendant "sane". MacCulloch *et al.* (1983) have suggested that even if psychotic illness is present, it may be parallel and unrelated to sexual sadism. Any role of psychosis as an aetiological factor in the offences of any particular serial murderer will usually be easy to detect, but will not assist us in explaining serial murder generally. In any event, psychosis is not readily compatible with the crimes of serial murder - the debilitating effects of serious schizophrenic illness do not assist in evading capture.

Multiple personality disorder (MPD) and dissociative disorders

The diagnosis of MPD has been raised in conjunction with the defences of a number of captured serial murderers, most notably in the case of K. Bianchi. MPD is a psychological disorder, sometimes occurring as a symptom of schizophrenia, in which a person exhibits two or more disassociated personalities, each functioning as a distinct entity. The construct has received much criticism in psychiatry, and many refuse to accept it as a valid disorder.

Orne *et al.* (1984) note that post-homicide reports of amnesia (a symptom of MPD) range from 40% to 70%. However, it may be that the serial murderer's distant and inhuman manner during his crime is conducive to such memory problems (which may thus, for example, be explained in terms of state-dependent recall). While many serial murderers appear to have "two sides" - a presentable side to society and a side that commits unspeakable crimes - we must obtain corroborating evidence concerning distinct pre-existing personalities with specific behaviour patterns and social relationships prior to offending (Myers *et al.*, 1993). Inconsistencies in clinical presentation failed to convince K. Bianchi's court that he suffered from MPD. T. Bundy talked of his crimes in the third person, although this was probably a legal ploy. Hickey's (1991) assertion that no well-documented cases exist of serial murderers suffering from MPD holds true.

Dissociation (the lack of integration of thoughts, feelings and experiences into consciousness) is an often observed phenomena in the life of a serial murder, especially in the commission of his offences (Egger, 1990). The disorder may be regarded as an example of spontaneous self-hypnosis (Bliss, 1986). However, the dissociative demeanour of the serial murderer may also arise from psychopathy (Giannangelo, 1996), and rarely reaches the level where a DSM-IV diagnosis of fugues, amnesias, depersonalisation or post-traumatic stress syndrome may be made. The term "doubling" has also been coined to describe the two "functioning wholes" that allow a person who can function normally on one hand whilst

committing unspeakable horror on the other (Lifton [1986] discusses the principle in relation to Nazi war criminals who led otherwise respectable lives). It is unlikely, however, that the expression of such a phenomena could warrant psychiatric diagnosis.

Neurotic disorders

Hirose (1979) has associated homicidal behaviour with depression. Murderers have higher scores on both psychoticism and neuroticism inventories than other subjects (Singh, 1979). Although mood is not traditionally thought of as having a direct role in serial homicide, many authors (e.g. Holmes & Holmes, 1996) talk of a “psychological fall” which precipitates the homicidal act in a series of murders. Indeed the following quote comes from a serial murderer:

Just prior to his every decision to victimize, a serial killer always first experiences a sudden and precipitous psychological fall, an extreme low, which he can neither tolerate nor deal with in any rational fashion (Holmes & Holmes, 1996, p. 75).

Little connection has been made, particularly concerning the role of cognition in serial murder, with the extensive literature that exists on clinical depression and associated cognitions (e.g. Teasdale, 1983). As an extreme example, perhaps serial murder can be reduced to a process analogous to the depressed patient’s resort to alcohol, in a vain attempt to restore normal mental health. The serial murder cycle may have equivalence to the mood fluctuations seen in cyclothymic disorder. A model based on such a supposition would be of considerable research value. The model of Holmes & Holmes (1996) depicted in Figure 4 may provide a starting point. The usual state of the serial murder is distorted thinking that

allows him to believe he is naturally superior and dominant to others around him. When challenged by a real or imaginary stimulus (“the fall”, better termed “cognitive decline”) violence is the result in an attempt to restore self-status. The misery and terror of the victim confirm his cognitive distortion that “he is the magnificent, all-powerful creature he always knew himself to be” (words of a serial murderer, quoted in Holmes & Holmes, 1996, p. 76).

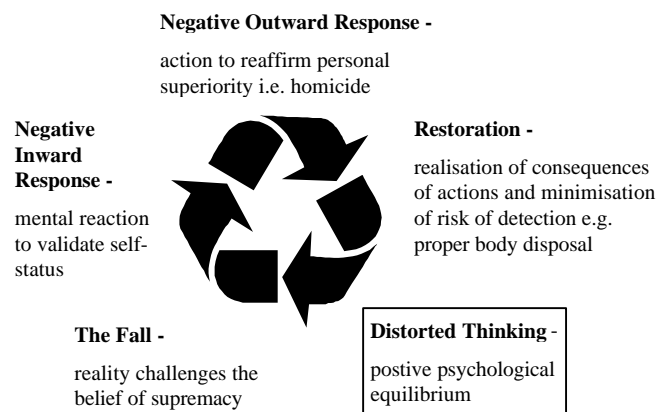


Figure 4: Holmes & Holmes’ (1996) “process” model of violence

The analogy also works well with other neurotic disorders, such as obsessive-compulsive disorder. Both Bartholomew *et al.* (1975) & Myers *et al.* (1983) believe that although some serial sexual crimes do show evidence of compulsive behaviour, they “are not true compulsions because the person derives pleasure from the activity and may wish to resist it only because of its secondary deleterious consequences” (Myers *et al.*, 1983).

I believe, however, that the “challenge to supremacy” described above has considerable parallels with the negative automatic thoughts seen in patients suffering from obsessive-compulsive disorder [OCD] (e.g. Salkovskis, 1985). The act of murder serves an instrumental purpose in silencing such thoughts (albeit temporarily), similar to the compulsive acts of the OCD patient, and reinforced in the same manner. This reinforcement takes the role of a reduction of anxiety, which builds up before the release obtained during

and after the offence. Thus a “catathymic crisis” is evident (Wertham 1949), involving outward expression of aggressive impulses. While Skrapec (1996) is quite correct in asserting that “we risk being counterproductive if we reduce serial murder to an addiction or compulsion”, the use of such a model to drive research will certainly not be counterproductive. Suicide and homicide may be two equivalent forms of dealing with neurosis. Of course, only the latter can assume a serial form.

The role of psychopathy

Psychopathic personality disorder (PPD) is a persistent disorder or disability of mind resulting in abnormally aggressive or irresponsible behaviour that is not the product of psychosis or other illness. Psychopaths (also termed sociopaths) behave in a socially unacceptable manner (though they may show superficial charm and good intelligence) often with adverse affects on themselves and others; they may leave behind them a characteristic “chain of chaos” (Reid, 1978). They may show lack of remorse, shallow affect, impulsivity, a grandiose sense of self worth, and a lack of long-term goals (items from the revised Hare Psychopathy Checklist [PCL-R] - Hare, 1991).

Criminal behaviour is often seen as a *symptom* of psychopathy (DSM-IV describes “repeatedly performing acts that are grounds for arrest” as a diagnostic category for Antisocial Personality Disorder - a condition analogous to PPD). PPD is particularly associated with a propensity for violent crime (e.g. Serin, 1991).

Immediate similarity is apparent between the characteristics of serial murderers and those of the psychopath. However, even if the psychopathic construct fits the serial murderer, then it gives us no information on causality. Is serial murder an extreme form of psychopathic behaviour, or do serial killers merely share common characteristics with the

psychopath? Certainly, not all serial killers are psychopaths (e.g. J. Dahmer who showed considerable remorse for his acts), and only a very few psychopaths are serial killers (e.g. C. Olson, who continues to torment the families of his victims through letter-writing etc.).

Meloy (1992) stresses the boredom experienced by the psychopath as “a restless anhedonic feeling that is acted out through aggressive, hypomanic activity”. Skrapec (1996) suggests that serial sexual murder may be the outlet for such feelings of boredom. More likely, however, is the role of such boredom in the crime of the thrill sub-type of hedonistic murder. For the erotophoniliac, paraphilic disorder is perhaps of greater aetiological importance than psychopathy. Psychopathy is likely to play a role in the internal justification of serial murder, and may well predict serial rather than single homicide offenders. Those who feel guilt about their crimes are less likely to commit them again. However, the reduction of serial murder to a psychopathic act is dangerous. Unlike the psychopath’s crimes, serial murder is often meticulously planned, rarely does anger surface, and the perpetrator may function normally in other areas of life e.g. relationships and work skills. If narcissistic elements are present (e.g. lack of empathy with victims), then narcissistic personality disorder cannot be presumed - rather dehumanisation of victims may be to protect the offender’s fragile mental health. I have observed that medical students, when dissecting dead bodies, show evidence of dissociation and dehumanisation of their subjects in order to avoid empathic cognitions that might be upsetting.

It appears that psychopath is a term used to label those whom we cannot understand. Egger (1994) posits that “Psychologists use the word psychopathic to describe the behaviour of the motiveless serial murderer”. In the course of my reading on the subject, I have yet to come across a case of “motiveless” serial murder. Instrumentality is a defining feature of serial murder - the motive is rarely as obvious in the case of murdering for money, but simply because a crime has an internal motive it should not be described as "motiveless". Crimes that appear motiveless might include murder for thrill, or sexual gratification, or for

expression of dominance. While psychopathy has much to bring to a research agenda on serial murder, we should avoid seeing direct equivalence between psychopathy and serial murder. MacCulloch *et al.*'s (1983) assertion that psychosis plays only a secondary role (if at all) in the genesis of serial murder might also be extended to psychopathy. Labelling as a psychopath must, in any case, be through proper clinical procedure (e.g. administration of PCL) rather than merely through anecdotal description as is commonly seen in the literature (e.g. Myers *et al.*, 1993). Care must be taken to avoid "circular labelling" - people committing violent crimes are psychopaths and psychopaths are people who commit violent crimes.

The role of paraphilias

Studies such as that of Ressler *et al.* (1988) have uncovered a wide range of expressions of sexual behaviour in which 81% of offenders ranked pornography as their highest ranking sexual interest. This pornography often reflects the range of paraphilias that serial murderers indulge in: necrophilia, sadism, exhibitionism, transvestism, voyeurism, frotterism, compulsive masturbation, piquerism (sexual excitement from stabbing/blood letting), coprophilia (use of faeces in sex) and zoophilia (sexual activity with animals).

Prentky *et al.* (1989) have indicated a significantly higher incidence of paraphilias in serial murderers compared to single murderers, especially fetishism (71% vs. 33%) and transvestism (25% vs. 0%). Dietz (1990) reports an average of 2.7 paraphilias in 30 sexual sadistic offenders (of which 22 had committed murder), concluding that paraphilias rarely existed in isolation in such offenders. Dietz (1990) does not consider the severity of the paraphilia to be important, but rather the character pathology that allows its expression. And so it may be with erotophonophilia - a paraphilia that many may harbour, but only a very few

act upon. The incidence of paraphilia played an important role in Brittain's (1967) classic portrayal of the sadistic murderer.

Such incidence is likely to have a reciprocal relationship with the role of fantasy for such individuals - Brittain (1967) sees this fantasy life as "in many ways more important than is his ordinary life". The elevated role of fantasy for the serial murder may be due at (a) a personality structure conducive to fantasy; or (b) childhood/adult circumstances causing fantastic withdrawal and daydreaming (e.g. to shut out the effects of child abuse/deprivation). This has led MacCulloch *et al.* (1983) to conclude that the crimes of the sexually sadistic and serial murderer appear to be driven by "internal circumstances". Fantasies are bred in mind and initially enacted in mind. Early behavioural mock trials then give way to directly assaultive behaviour.

The role of the paraphilia in serial murder may be so extreme as to make us question whether murder is not merely incidental to the violent/sexual episode. Holmes & Holmes (1996) quote the words of a particularly eloquent serial murderer:

...his victim may be likened to a disposable paper cup, from which he takes a long and satisfying drink of water. Once the water is gone, his thirst quenched, the cup has served its purpose; it is useless and therefore can be crushed without thought and thrown away, as if it never existed....similarly, once a serial killer's violence has run its course, his battered victim is of no more use to him than a soggy, used-up paper cup (p. 76).

This is consistent with the crimes of P. Kürten, who's piqueristic tendencies were indulged (through stabbing or blows to the head with a hammer) for only as long as was necessary to reach orgasm (Berg, 1954). If gratification came after only a few stabs or blows, then the victim often survived. He thus killed by *circumstance*, not *design* (Skrapec,

1996). I believe this to be a most important distinction that may be teased apart by future research.

The increasing extremity of fantasies may be caused by what I shall term a “cycle of decreasing masturbatory satiation”. Mild fantasies give way to increasingly extreme ones due to desensitisation through masturbation. To obtain the same satisfaction from each masturbatory episode, the fantasy must be elaborated. Serial murderers may have a tremendous capacity for visualisation, possibly enhanced through exposure to violent pornography (Skrapec, 1996); this eidetic memory allows recall of crimes in extraordinary detail. The cycle of decreasing satiation also holds true for offences - since fantasy can never truly be realised in reality, the search for a bigger high will perpetuate the continuation of a series of murders. Empirical testing of the proposition that episodes will become more extreme with increasing time would lend credence to such an hypothesis.

How is the offence of serial murder triggered? Only 16% of Ressler *et al.*'s (1988) sample regarded their offences as unplanned. A further 34% described themselves as entering emotional states such as frustration, hostility, anger etc. that made them “open for opportunities” (these states are possibly analogous to Holmes & Holmes' [1996] stage of “the fall” [depicted in Figure 4]). Prentky *et al.* (1989) have found fantasy rehearsal to be correlated with the degree of organisation of the crime. Mawson (1987) sees a “stressful event combined with the simultaneous absence or destruction of social bonds” as a possible cause of a criminal event committed by previously law-abiding persons. Money (1990) sees serial killing episodes as precipitated by “episodic seizures of sexual sadism” in a similar manner to epileptic seizures, due to pathological activation of brain messages of attack whenever messages of sexual arousal are transmitted.

The main problem with emphasising the role of fantasy in serial murder is that many harbour sexually sadistic fantasies yet would never consider operationalising them. Indeed, fantasy may be a *substitute* for behaviour. Others do practice sexual sadism, but in a

controlled manner with consenting partners - mild sexual sadism is increasingly less of a taboo in modern society. Furthermore, violent pornography finds a much wider audience than the serial murderer. Further investigation into the serial murderer's *indulgence* of his fantasies is thus required, not just their simple occurrence. It is necessary for us to discover why the serial murderer's behaviour is so inextricably linked to his cognitions.

Gender identity disorder, homosexuality, and sexual dysfunction

Some interest has been expressed in the role of gender identity disorder and homosexuality as predisposing factors for murder and serial murder, as a number of murders have occurred involving such individuals (Lowenstein, 1989). However, no studies have yet shown an elevated risk for such offences in these individuals. If such an elevated risk is shown, it may be possible to speculate that the sexuality of such individuals may make normal sexual relations difficult during critical periods of development. Thus J. Dahmer's crimes of subduing, killing and raping young males may have reflected the thwarted want to own them when he was also an adolescent (Masters, 1993).

Other offenders may practise what initially appears to be paraphilic behaviour but is in fact behaviour indirectly due to sexual dysfunction. For example, H. Lucas practised necrophilia, not because he preferred necrophilia *per se*, but because he was unable to obtain an erection with a live human. Sexual dysfunction is often reported by serial murderers - often penetrative sexual intercourse is not attempted with victims. Thus, we should be careful in attributing motives to behaviours that appear highly deviant ("above and beyond" normal sexual intercourse) that in fact may be instrumental for "normal" sexual intercourse in particular individuals.

Substance abuse

Some studies find a prevalence of substance abuse disorders as high as 50% in serial murderers (e.g. Dietz, 1990). Many serial killers report the use of drugs and alcohol before their crimes (Sears, 1991). H. Lucas claims to have drunk significant quantities of alcohol prior to most killings, and used amphetamines, marijuana or PCP to travel all day and night in order to commit offences. C. Manson's ideologies were almost certainly due in no small part to the effects of drugs.

Disorders of substance abuse may, however, affect a person's social situation leading, for example, to subcultural immersion (see Chapter 2). J. Dahmer often blamed his adolescent drinking for never having had a girlfriend that he felt might have steered him away from his crimes (Masters, 1993). While alcohol and other drugs are almost certainly a facilitator of offences, it is more likely that they are incidental to (rather than causal of) serial murder. However, studies correlating geographical prevalence of alcoholism and serial murder might show that there is some relation between the two (although this relationship might well be spurious).

CHAPTER 5: DEVELOPMENTAL AND PSYCHOLOGICAL APPROACHES TO SERIAL MURDER.

“Fantasy abandoned by reason produces impossible monsters. United with her, she is the mother of the arts and the origin of their marvels”. Francisco Goya: preface to *Los Caprichos*.

Introduction

If psychiatry’s models are based on illness, then psychology’s models are based upon essentially “normal” behaviour. While many psychological aetiological theories stray into the domains of psychiatry and sociology, the psychiatry/psychology distinction is one that is rarely made in serial murder research. It is made here to distinguish that research that bases itself on empirically and experimentally derived models of human and animal behaviour. Much of what is described below (e.g. child abuse) might sit equally comfortably in Chapter 3: Socio-cultural approaches to serial murder. It is discussed here as a contributory factor to a distorted developmental psychological profile and associated cognitions, rather than in terms of simple “inadequate socialisation”.

Psychodynamic theories

Lowenstein (1989) invokes the Freudian concepts of unresolved sexual conflict, infantilisation, and maternal over-protection or outright rejection, in explaining serial murder. Gallagher (1987) asserts that abnormal and violent behaviour stems from a conflict between the *id* (basic human needs and desires) and the *superego* (the moral part of oneself) due to unresolved childhood experiences. Other psychodynamic constructs are invoked by

authors such as Sears (1991), who describe how the murderer's guilt prevents him from full sexual satisfaction, and that he must inflict suffering to the level that his victim is forced to "forgive" him. Inferiority complexes find their way into Levin & Fox's (1985) assertion that intercourse is more attractive to the necrophiliac because the corpse cannot reject him, is never unfaithful, and makes no sexual demands. Furthermore, it may be that the serial murderer is "creating" something by murdering (which is echoed in the sometimes staged crime scenes of such offenders), which overcome feelings of inadequacy and inferiority. The taking of trophies from the victim and/or recording of the offence may serve to remind the serial murderer of his "creation".

Hatred of a significant female and/or oedipal complexes have also been reported by many serial killers (usually of the mother). T. Bundy's victims closely resembled a woman he had been engaged to and subsequently spurned by. E. Kemper maintained that if he had killed his mother first, his other victims might have been spared. Displaced aggression is thus acted out on other women. Many serial killers, however, show no sign of hatred of women (and there is also the confounding homosexual murderer). Weinschel & Calet (1972) see mutilations as a wish to re-enter and explore the mother's body.

Some researchers advocate that homicidal and normal males show significant differences on one of the favourite investigative tools of Freudianism, the Rorschach inkblot test (e.g. Bukowski & Gehrke, 1979). Homicidal males apparently show factors characteristic of sadism and severity of environment, whereas normals show factors representative of insight and atonement. However, like most tools of the Freudian, the Rorschach does not lend itself well to scientific validation.

Frustration/aggression hypothesis

Freud, in his hydraulic model of aggressive energy build-up, deemed that such energy must be periodically released before reaching dangerous levels (catharsis). This pattern of build up and release seems to be borne out in the reports of serial murderers themselves (e.g. D. Berkowitz in Abramamsen, 1985). Others believe that such frustration dissipates naturally without violent acts, and that the theory cannot help us explain serial murder (e.g. Bartol, 1980).

A revised theory takes into account such criticism. The frustration/aggression hypothesis advocates an increased *likelihood* of aggressive behaviour with increasing frustration, rather than simple causality. Other responses to frustration include withdrawal, frustration dispersal through more compromising methods, or simply doing nothing. Whichever route is chosen depends on individual differences and situational factors. Serial murderers, for example, may be more likely to choose the aggressive route to frustration dissipation than “normals” due to inadequate socialisation or lack of coping responses. The hypothesis is thus a hybrid one, borrowing from sociology, psychodynamics, and developmental approaches.

Developmental approaches

In spite of the widely recognised difficulties with psychodynamic explanations, the debate does lead onto a fairly consistent finding of serial killer research, the presence of the “MacDonald Triad” in serial killers. MacDonald (1963) found early childhood behaviours such as enuresis (bed-wetting), firesetting and torturing animals to be common in the background histories of multiple sadistic killers. Hellman & Blackman (1966) believe bed-wetting to be a form of sadistic and hostile rebellion towards parents (by damaging bed and sheets and causing parental concern). Fire-setting is associated with violence and torturing

animals is a further form of rebellion against the norm of keeping pets as cherished friends. Although the MacDonald triad may represent a repetitive finding (an oddity in a sea of characteristics posited as important in the development of serial murderers that in reality only occur anecdotally in one or two cases), we should be careful not to reduce the finding to the cartoon depicted in Figure 5:

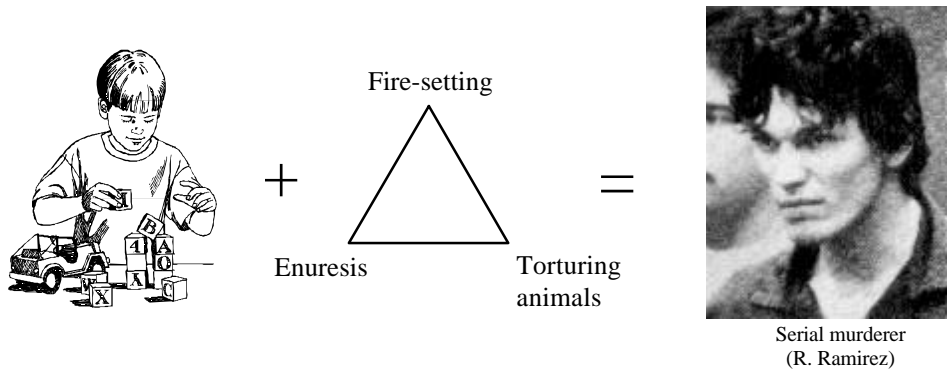


Figure 5: *Cartoon depiction of the MacDonal Triad's contribution to the development of a serial murderer*

This is the mistake made by Hellman & Blackman (1966) who advocate careful monitoring of any child displaying the MacDonald symptomatology. A retrospective study is needed to examine the prevalence of the MacDonald triad in a population of children that have grown up to become normal adults.

Unconscious conflict in the first two years of a child's life has been further advanced as causing proneness to homicidal behaviour (Abrahamsen, 1973). The childhood elements that may also lead to such proneness include: (i) sexual abuse; (ii) beating (physical abuse); and (iii) abandonment.

If, as Jung has posited, it is the tortured that turn into torturers, then child abuse must assume a particularly prominent role in the genesis of a serial murderer. Abuse breeds mistrust, an inability to establish meaningful interpersonal or sexual relationships, feelings of low self-worth, lack of social skills, a sense of helplessness, inability to make decisions,

inability to plan life goals and difficulty in expressing theories (Sears, 1991). Abuse is also likely to play a role in the development of psychiatric morbidity (e.g. psychopathic disorder). Brown (1984) finds that emotional abuse correlates with later delinquent behaviour, but (perhaps surprisingly) physical abuse does not. This may tend to play down the role of modelled parental deviance (Prentky *et al.*, 1989).

Sexual abuse in particular, may invite withdrawal into a fantasy life. To protect mental health, the victim may pretend that the abuse is actually happening to someone else. Such withdrawal may sow the seeds of the rich fantasy life reported by many serial murderers. Fantasies may involve a power/dominance content, something so lacking in reality for an abused child (Gresswell & Hollin, 1984).

Abandonment, like abuse, may take an emotional rather than physical form. Retvitch (1980) describes ambivalent maternal relationships characterised either by maternal overprotection, infantilisation and seduction, or outright rejection. The paternal relationship may be particularly cold, distinct, authoritarian and (often physically) punitive (Brittain, 1967).

Personality approaches

Aside from psychopathic personality disorder (discussed in a clinical context in Chapter 4), other personality variables have been identified as contributing to homicidal behaviour, and serial homicidal behaviour in particular. Traits of impulsiveness, low empathy and poor (affiliative) social skills have been noted in Type A males (Price, 1982). Type A's are well noted for competitive and aggressive behaviours, typical of some serial murderers such as J. Gacy. Type A behaviour has also been connected with antisocial and

narcissistic behaviours, egocentrism and hypersensitivity to criticism (which may, as we have seen, come from the self, precipitating cognitive decline).

A propensity for over-control and release through aggressive behaviour may also increase the propensity for homicide, although no differences on personality dimensions such as extroversion and depression were found by Lester & Wright (1978) in their study of over- and under-controlled convicted murderers (n=16). Daly & Wilson (1994) do, however, discuss violent aggressivity as a personality variable, which is again likely to correlate with psychopathic disorder. Berkowitz (1993) distinguishes the Instrumental Aggressor from the Emotionally Reactive Aggressor. The serial killer is likely to be a hybrid of these two types - aggression may be instrumental, but often in an emotionally reactive capacity (as an attempt to halt progression of negative cognitions).

If intelligence may be described as a personality variable, then average to high intelligence is likely to assist a serial criminal in avoiding police detection and capture. This might explain why such levels of intelligence are found in serial murderers (Ressler *et al.*, 1988). Intelligence may also be a predisposing factor for elaborate fantasies. Conversely, Holmes & Holmes (1996) suggest that a low IQ may predispose an individual to a delinquent lifestyle (and thus subcultural immersion etc.).

Rhue & Lynn (1987) investigated developmental antecedents to a “fantasy prone personality”. Although without mentioning serial murder (or, indeed, of any type of offence), their study showed that those adults who were particularly fantasy prone reported more physical abuse in childhood than medium range and non-fantasy prone individuals. Fantasy-prone individuals also reported a greater frequency and severity of physical punishment, greater use of fantasy to block the pain of punishment, more thoughts of revenge for punishers, and greater loneliness.

The role of personality in the aetiology of crime is an area of continual debate, but one with much to contribute to a serial murder research agenda. Proper testing of relevant offenders has yet to be forthcoming.

The addiction approach

The frustration/aggression hypothesis, with discomfort between offences being cured by the aggressive “fix”, lends itself to immediate comparison with addictive behaviour (e.g. alcoholism). Indeed, one serial murderer likened increasing tension between offences to a “growing need for a drink” (Skrapec, 1996). A feeling of calmness after an offence may be reported (with associated tension release allowing relaxation and proper sleep). Stress may be both the stimulus for indulgence in a substance addiction (e.g. an alcoholic binge) or a process addiction (e.g. a gambling “fix” or episode of serial murder). As with addiction to pornography or sex, so the serial murderer may be addicted to his peculiar activity. Gresswell (1991) talks of parallels between the experiences of addicted gamblers and serial killers, especially in explaining the processes by which fantasy and try-outs are maintained.

The analogy of serial murder with addiction is a very interesting one, but until research can elucidate the factors by which such a destructive addiction is maintained, it must remain an analogy. There are considerable differences between “normal” addictions and serial murder - if only in the frequency of the “fix” and the length of the refractory period. It may be, however, that some serial murderers do experience addictive urges, particularly towards the end of their career, when the element of planning and control begins to wane and disorganisation becomes the norm. J. Dahmer, for example, talked of his final murders thus:

Nothing else gave me pleasure towards the end, nothing, not the normal things, especially near the end when things just started piling up, person after person, during the last six months. I just felt...driven to continue doing it...more frequently and more frequently until it was just too much - complete overload. I couldn't control it any more (Masters, 1993, p. 189).

Further research into additive processes in serial murder is of importance, but we should be careful not to invoke such an intuitively appealing analogy as a sole aetiological cause or excuse for serial murder.

Behavioural or operant processes

The addiction approach to serial murder acknowledges operant conditioning - the reward (pleasure) gained from the offence causes positive reinforcement and increases the likelihood of a repeat offence occurring. The processes of reward and punishment may have considerable roles in the maintenance of fantasy, trial runs, and actual murder. The reward from non-punishment ("getting away with it") may also be a significant source of motivation for future offences.

The process of classical conditioning, in particular, may be responsible for *sensitisation* to violent pornography and subsequent orgasmic conditioning. Abel & Blanchard (1974) note that repeated pairing of fantasised cues with orgasm results in their acquiring sexually arousing properties. Juvenile masturbation may be conditioned to elements of violence by the "detective" or "true crime" magazine (typically having a cover format depicting a scantily clad woman being attacked by a male aggressor holding a gun or knife). Increased production of snuff films (in which an actor/actress is actually murdered during a sex-scene) suggests that a market exists for such material (Skrapec, 1996). Money's

(1990) “pathological activation” (involving the transmission of brain messages with an attack content at the same time as those of a sexual content - see above) may be due to classical conditioning by such material. However, assertions such as that of Wilson & Seaman (1992) that “The crimes of (H. Lucas) are a simple case of imprinting” are premature in the extreme.

The increased prevalence of serial murder may also be due to *desensitisation* to violence and sex through the media (e.g. Wilson, 1988). Both of these traditional taboos are now increasingly accepted in modern Western society, and may erode societal constraints against sexual crime. Again, this leads us into a debate on the negative effects of violence and pornography, for which there is too little space here (see, for example, Archer [1994]).

Cognitive approaches

The role of fantasy in serial murder (see above) immediately attests to the importance of considering cognition in any synergistic approach. It is likely that serial murderers share common attitudes and beliefs e.g. devaluation of people, the world viewed as unjust, authority and life viewed as inconsistent, an obsession with dominance through aggression, autoerotic preference, and that fantasy *is* reality (Federal Bureau of Investigation, 1985a). We may presume either that to perform his crimes, a serial murderer: (a) has never acquired an inhibitory belief system; or (b) has had to develop a means of *overcoming* such a system. Gresswell & Hollin (1994) thus consider the effect of cognitive processes to be two-fold: in *overcoming* or *preventing* learning inhibitions to aggression.

1) *Cognitive inhibitory processes* - Alienation and social isolation allow “filtering” of social feedback that might inhibit aggression (Burgess *et al.*, 1986). Lack of empathic ability

allows the holding of cognitions such as “victims deserve it” and that violence against others is legitimate. Devaluation of the victim may be so successful as to warrant the belief that further attacks are deserved (on this or other victims). It may be that the single murderer who “externalises blame” in this way ultimately becomes a serial offender. Just as the level of global, stable, internal attributions can predict the outcome (in terms of length and severity) of a depressive episode (Beck, 1967), so we may also predict quantitative and qualitative aspects of a murderer’s career on the basis of initial cognitions. Such a theory has very significant application in psychological profiling techniques, and should be tested in empirical research.

2) *Cognitive facilitatory processes* - Fantasy. Refer to discussion of the role of fantasy in Chapter 4.

Archer (1994) sees facilitator processes in violence to be:

- (i) *sensitivity to external cues* (signalling threat and opportunity)
- (ii) *heightened arousal* (increasing level of frustration, for example)
- (iii) *cognitive evaluations* (controlling judgements of self-esteem, for example)
- (iv) *coping evaluations* (what is likely to obtain reward?)
- (v) *coping behaviour* (a limited ability to resolve conflicts or obtain incentives)

Inhibitory processes are listed as follows:

- (i) *perceived costs* of violence
- (ii) *affect* (e.g. anger causes fear, empathy for victims makes attack less likely)
- (iii) *cognitive processes* (e.g. association of violence with a lowering of self-esteem)

(iv) *cognitive evaluations* (reducing the value of certain incentives)

(v) *coping behaviour* (e.g. internal conflict resolution skills)

It is likely that such processes play a significant role in the offence of serial murder, especially offences that are planned. Serial murder may also be modelled upon rational choice theory, with perceived benefits [e.g. sexual satisfaction, cognitive restoration] outweighing perceived costs [e.g. risk of capture]). It may be possible by examining such processes that we may start to build a “cognitive map” of the serial murderer. For example:

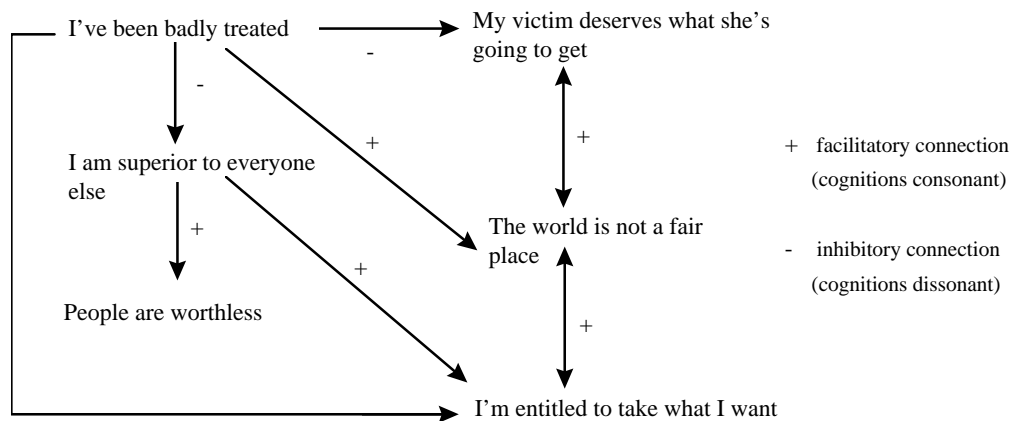


Figure 6: A small area of an hypothesised "cognitive map" of a typical serial sexual murderer

The role of attributions and cognitive distortions in forming and maintaining such a cognitive map would make for an area of particularly interesting research. It may be that precipitation of an offence in a series of murders is caused by disruption or ablation of an area of the map. For example, if increased weights are given to one connection in the map, then two beliefs may become incompatible. This “cognitive dissonance” is likely to be associated with negative affect and may precipitate the Holmes & Holmes (1996) “fall”. Mawson (1987) incorporates such a notion into his model of stress-induced transient criminality (although serial murder is by definition intransient). We may also apply a large

body of literature on attitudes and attitude change from social psychology (e.g. Stroebe & Jonas, 1988) to examine how beliefs and attitudes co-exist in the offender's mind. Novaco's (1978) model of anger and stress emphasises the role of interpretations and appraisal of provocative stimuli (after the cognitive theory of emotional disorders proposed by Beck [1967]). Such a model has considerable relevance to the negative inward response of Holmes & Holmes (1996) which is discussed in Chapter 4.

However, we may not need to look for complicated relationships to explain the serial murderer's aggression. Many authors (e.g. Berkowitz, 1993) advocate negative affect as a root of emotional aggression or "aversely stimulated aggression". This theory holds that the instigation to aggression can be as a result of an unpleasant or aversive state. Animal studies show that a variety of species will begin to fight other animals when cooped up and exposed to noxious stimuli (e.g. electric shock). In humans, aggression may increase as a result of unpleasantly high temperatures, cigarette smoke, and "disgusting scenes" (Berkowitz, 1993). Such stimuli may produce both "fight" (via anger) and "flight" (via fear) tendencies. Through the network model of emotion (Bower, 1980), initial feelings of anger and distress will facilitate and activate further mood-congruent cognitions and reactions. Berkowitz (1993) suggests that "Violence-associated thoughts and actions activate further aggressive ideas and angry feelings". Perhaps the serial murderer has particularly "strong" connections in such a network, and an inability to prevent a progression to behavioural expression of such activated emotions.

CHAPTER 6: BIOLOGICAL APPROACHES TO SERIAL MURDER.

“One must feel sorry for those who have strange tastes, but never insult them. Their wrong is Nature’s too; they are no more responsible for having come into the world with tendencies unlike ours than are we for being born bandy-legged or well-proportioned”. Marquis de Sade (1740–1814), French author. Le Chevalier, in *Philosophy in the Bedroom*, “Dialogue the Fifth” (1795).

Introduction

Biological theories of crime have received a somewhat bad press (e.g. Goring, 1913) ever since the crude attempts at correlating criminality with physiological indices by Cesare Lombroso in his 1876 positivist thesis *L’Uomo Delinquente* (The Criminal Man). Although hardly a detailed physiological study, Ressler *et al.* (1988) found no significant abnormalities in terms of external appearance among serial murderers - as hinted at by Brittain (1967) in stating that a “preconception might be to think of him as a large, hulking brute”. However, more detailed studies (made possible by rapidly improving biomedical technology) have identified some genetic, anatomical, biochemical and physiological differences that might be candidates for *increasing* the risk of certain criminal behaviour. Those studies with relevance to serial murder will be examined here.

Evolutionary and ethological approaches

The wish for power may have its roots in the natural world when one individual achieves fitness-related goals (those aims that are linked to survival and offspring-generation) at the expense of another individuals. Such behaviour is evolutionarily stable - that is, it will be selected for in any population. Darwin (1871) identifies the process of sexual selection as

the competition between males for access to receptive females. In order to secure copulative rights, coercion and force are commonly observed in non-human animals. Such observations have led some authors such as Smuts (1992) to formulate male violence against women in evolutionary terms. Other authors (e.g. Lorenz, 1966) discuss violence as a complex behavioural adaptation, rather than as pathology. While a phenomenon such as serial murder may equally lend itself to such a formulation, it would be naïve simply to suggest that serial murderers are individuals unable to ignore their evolutionary roots. The main objection to such an approach is that rarely in such acts is there transfer of genetic material, and even if there is, the object of the act is killed. Therefore, the serial murderer's activities are contrary to evolutionary survival, unless rapes are committed that do not lead to murder.

Washburn & Hamburg (1968) argue that non-human animals fight not only out of a desire for the tangible resources that are afforded to high ranking individuals, but because of a *desire* to be dominant:

Being dominant appears to be its own reward - to be highly satisfying and to be sought, regardless of whether it is accompanied by advantage in food, sex, or grooming (p. 473).

This observation allows us to dissociate the paradoxical behaviour of injuring or killing a mate from evolutionary processes. A further result from animal experiments may have relevance in particular to serial murder - mice that have won fights tend to seek them out subsequently, and those that have lost fights avoid them (Ginsberg & Allee, 1942). We might draw the analogy that because an initial murder might prove highly satisfying (in terms of achieving dominance and sexual satisfaction), further murders are sought. Indeed, those killers who do not find their initial murder at all satisfactory might stop there and not become serial offenders.

Male humans have evolved the morphological, physiological and psychological means to be effective users of violence (Daly & Wilson, 1984). This species-typical sex-difference in violent aggression is one that is shared with other animals with effectively polygynous mating systems. Although generally ignored by authors writing on the subject, this explanation may be significant enough to account for the vast majority of serial killers being male. In human society, males and females are supposed to overcome biological and evolutionary behavioural precedents and behave instead as society deems acceptable. However, such order rarely prevails in the sex-roles observed in modern societies around the world - where females still face discrimination in male dominated societies. Social researchers generally have little difficulty in relating such behaviour to biological precedents; perhaps researchers on serial murder should be similarly generous in acknowledging the contribution of biology.

Applying results from animal experiments to an abstract concept such as serial murder is, however, difficult. It is easy to find an animal experiment that provides an instantly appealing analogy with most forms of human behaviour, although the two might be mediated by very different processes. Non-human animals do not suffer legal and moral proscription against killing - their bio-social goals are achievable without societal constraint. However, an extensive investigation into the ethological and evolutionary literature pertaining to serial murder has yet to be realised.

Neurological contributions

Many case studies have been discussed in the serial murder literature in which the offenders had a history of head trauma and abnormality on Computerised Tomography (CT) scans, Electroencephalography (EEG) scans and neuropsychological testing. Another

neuropsychological explanation of sexual serial murder is Money's (1990) assertion that the "paraphiliac attacks" supposedly suffered by serial sexual murderers find a parallel in the psychomotor seizures of temporal lobe epilepsy.

Neurological retardation has been advanced as an explanation for aggressiveness. Williams (1969) reports that habitually aggressive prisoners have a greater incidence of EEG abnormality (57%) than other prisoners who had perpetrated a single major crime (12%). The EEG abnormality focused on the temporal lobe - an area associated with personality, emotion and behaviour. The EEG patterns of psychopaths who were charged with murder are reported as particularly abnormal (Stafford-Clark & Taylor, 1949). Abnormalities in psychopaths appear to diminish or completely disappear with age. This is consistent with (but not necessarily causal of) the attenuation of the antisocial behaviour of the psychopath at this age.

The serial murderer shares many common characteristics with the psychopath, although as we have seen in Chapter 4, we must not equate the two. Furthermore, no comprehensive neurological studies have been carried out upon a representative sample of serial murderers.

In terms of serial sexual murderers, Money's (1990) assertion that messages of attack may be pathologically transmitted along with messages of sexual arousal has already been discussed in Chapter 4. Classical conditioning was a mechanism for such pathology discussed in Chapter 5. Maclean (1962) has displayed the anatomical basis for a further mechanism - the proximity and interconnection of limbic structures linked with feeding and aggression (the amygdala), with structures controlling sexual functions (the hippocampus and septum).

Attention has also focused on the diencephalic structures of the thalamus and hypothalamus, which have been suggested as having a direct role in aggressive behaviour, as well as a role in associating positive or negative emotions with incoming stimuli. Thalamic

abnormality might explain the serial murderer's inability to maintain personal relationships or display empathy for his victims (Sears, 1991). Furthermore, the thalamus has also been associated with pathological activation of fearful and combative behaviour (aversive experiences) along with oral and sexual functions (pleasant experiences). When one area is stimulated, arousal may extend to other areas, producing pleasurable feelings associated with violent acts (Maclean, 1962).

When certain areas of the hypothalamus (particularly the ergotropic zone) are stimulated, aggressive behaviour is displayed (Restak, 1984) - especially with stimulation to posterior areas. Indeed, different forms of aggression may be elicited. Some areas elicit violent, hostile outbursts of rage, while others provoke more predatory, calculated aggression, typical of that associated with serial murder.

The hypothalamus also plays a role in the reticular activating system (RAS), which may block otherwise stimulating activity from reaching the cerebral cortex. It has been suggested that such a mechanism may be responsible for chronic underarousal in the psychopath, leading to antisocial behaviour in an attempt to increase cortical levels of arousal (Bartol, 1980). Such an hypothesis is particularly appealing in explaining thrill-oriented serial murder, and the increasing intensity and frequency of murders as the offender's career progresses (in order to maintain optimal arousal because the RAS prematurely adapts to the murderous event). Sears (1991) contrasts the "model-prisoner" status of serial killers after their capture with such an hypothesis; it appears that antisocial or violent activity is not continued in captive conditions. Such an observation is at odds with chronic underarousal, as intensive stimulation-seeking activity and misbehaviour might be predicted in the barren conditions of prison. Furthermore, as with most hypotheses mentioned here, the theory of cortical underarousal represents a theory that has not been researched using a representative sample of serial murderers.

An abnormal genetic constitution may be indicative of neurological damage. For example, Norris (1988) points out several physical abnormalities of C. Gary (of which 5 or more often indicate neurological dysfunction): long second or small toe; pterodactyloid fingers (long and clawlike); webbed fingers; earlobes connected to the side of the head; and bulbous extensions of the fingertips.

The role of head trauma may cause a vast range of cognitive and behavioural deficits. Exposure to toxins or drugs may also cause brain damage. Otnow Lewis *et al.* (1986) found that a sample of 15 inmates convicted of murder each had at least one instance of suffering a severe blow to the head - usually sustained as a result of a fall, an car accident, a playground injury, or physical abuse. However, such studies are of limited use without data from CT scans showing any physical consequences of such blows. Few serial murderers have documented neurological damage, with the exception of H. Lucas who shows marked widening of temporal lobe sulci and irritative lesions in or near the limbic cortex, probably due to trauma sustained as a result of physical abuse (see Chapter 2). Other serial murderers such as B. Long and G. Shaefer are also deemed to have suffered neurological damage (Norris, 1988). Otnow Lewis *et al.*'s (1986) study also suffers from the lack of any control group. While possibly having a significant role in the crimes of such individuals, neurological impairment cannot be advanced as a general theory of serial murder.

Biochemical approaches

Recent studies have shown that a number of neurotransmitters may influence cortical and subcortical mechanisms for aggression and violence (e.g. Dorfman, 1984). In particular, 5-hydroxyindoleacetic acid (5-HIAA), a metabolic bi-product of the neurotransmitter serotonin, may have an abnormally low concentration in the cerebrospinal fluid of

persistently aggressive and anti-social males. This has led to speculation of the role of serotonin in aggressive behaviour and antisocial disorders (serotonin has been implicated in almost every biochemical theory of mental disorder). Serotonin and other neurotransmitter abnormalities may thus play a role in the offence of serial murder. The direction of causality is not, however, known, and should be a research priority (with relevant testing of a population of serial murderers).

Hormonal factors may also play a role. Androgens (or “male” hormones, e.g. testosterone), like other hormones, may either have a direct influence on physiological mechanisms governing behaviour or organise the developing human brain to make particular behavioural responses more likely. Females exposed to excess androgenic activity show male characteristics such as increased aggression (Money & Erhardt, 1972), but such effects may be due to differential treatment during upbringing. No data on plasma testosterone levels in serial murderers are available, although Rada *et al.* (1983) indicate that levels of testosterone are abnormally high in particularly violent rapists compared to “non-violent” rapists. Again, the direction of causation in any such relationship is not known, although castration has long been advocated as an extreme form of therapy for sex offenders.

Olweus (1987) has found a negative relationship between adrenaline (a hormone responsible for arousal) and aggression. This finding is compatible with the hypothesis that some individuals (and possibly serial murderers) require (and seek) stimulation through violent activity. Low adrenaline production may be a causal factor in the boredom and anhedonia experienced by psychopaths. Again, carefully controlled studies of adrenaline production in serial murderers is required.

The role of other chemicals has also been discussed in relation to disorders of aggression. Norris (1988) cites experiments in which violent delinquents have shown abnormally elevated lead and cadmium levels (a biochemical profile that was displayed in the serial murderer H. Lucas).

Such abnormalities may either be due to toxic exposure or to dietary factors. Shoenthaler (1982) claims that antisocial behaviour of detained juveniles may be decreased by lowering daily sucrose intake. Cholesterol, vitamin deficiencies and food allergies have all been discussed in relation to criminal behaviour, and violent behaviour in particular. While anecdotal stories of nutritional abnormalities (especially in the course of childhood development) in serial murderers are common, research on any crime-nutrition relationship is still in its infancy. At the population level, Mawson & Jacobs (1978) indicate that countries with significantly high homicide rates also have significantly high corn consumption. Such results, as perhaps with many correlations found between nutrition and criminality, may be spurious.

The possible role of genetics

Selective breeding is known to influence aggressive behaviour in species as distinct as crickets and dogs (Huntingford & Turner, 1987). Aggressive lineage is difficult to study in humans due to difficulties of measurement and distinguishing genetic from environmental effects. It is, of course, clear that there is no “serial killing gene”; however, a large literature exists on the genetics of criminality in general. Adoption studies have shown that children, separated from their parents at birth, are up to 4 times as likely to offend if their biological parents were themselves offenders (Dorfman, 1984). Many such studies exist, but are generally not deemed applicable to a crime such as serial murder. There is, however, little basis for treating serial murder as a crime so different from others; for example, serial murder is generally not the offender’s sole crime in their career. Many serial murderers come from families with a history of aggression and criminal behaviour, although it is difficult to separate environmental effects from those of underlying genetic processes.

Studies of criminality in monozygotic (MZ) twins (those who share 100% of their genes) versus dizygotic (DZ) twins (those sharing on average 50% of their genes) have generally shown a greater concordance in MZ twins (e.g. Christiansen [1968] found criminality concordance rates of 35.8% MZ but only 12.3% DZ). However, Dalgaard & Kringlen (1976) suggested that such concordance may be due to a greater similarity in the upbringing of identical twins. Indeed, they found no difference in concordance by zygosity when twins were grouped according to mutual psychological closeness. Adoption studies (e.g. Hutchings & Mednick, 1977) have showed that adoptees are more likely to be criminal if their biological father is criminal rather than their adoptive father (22% versus 12%). Dorfman (1984) suggests that a predisposition for fearlessness may be inherited, which may express itself as heroism or criminality according to environmental effects.

. The role of chromosomal disorders has been implicated in criminality. The XYY chromosome abnormality (where males are born with an extra “Y” or “male” chromosome) has been associated with “supermaleness” and thus increased aggressiveness and criminality. Jacobs *et al.* (1965) found that such a condition was over-represented in mental institutions, and that the afflicted had dangerous, violent or criminal propensities. Other studies have found no basis for such an assertion (e.g. Sarbin & Miller, 1970), although Witkin *et al.* (1976) found that 41.7% of a very small sample of XYY subjects (n=12) had criminal convictions compared to only 9.3% of a matched XY sample (n=4111). However, XYY subjects were no more likely than their XY counterparts to have convictions for violent offences. The prevalence of chromosomal abnormality in a suitable sample of serial murderers has not yet been established.

Race and serial murder

Compared to other forms of crime, ethnic minorities are underrepresented in the offence of serial murder. Only a few cases of Afro-Caribbean serial murderers exist in Western society, for example, E. Nelson and C. Gary. If Whitney (1990) is correct in saying that the overrepresentation of the Afro-Caribbean population in “traditional” crime is due to genetic differences between racial groups, then why does this not hold true for serial murder? Perhaps it is because Whitney’s theory is wrong; increased criminality amongst ethnic minorities may be related to their environmental circumstance, whether it be theft due to poor socio-economic status or violence in gang territorial disputes. Offences such as serial murder have no comparable socio-cultural/economic instrumentality, and therefore may not be a criminal activity “of interest” to ethnic minorities. This is an hypothesis that deserves considerable attention and research, as it may not only help us understand crimes such as serial murder, but also elucidate the overrepresentation of ethnic minorities in crime statistics in general as well as helping understand the genes versus environment debate. It seems that we may learn about “lesser” crimes by studying serial murder, thus denying the pervasive status of serial murder as a “crime apart from other crimes”.

CHAPTER 7: MAKING SENSE OF DISPARATE THEORIES: TOWARDS AN INTEGRATED MODEL

“To insure the adoration of a theorem for any length of time, faith is not enough, a police force is needed as well”. Albert Camus (1913–60), French-Algerian philosopher, author. *The Rebel*, pt. 3, “The Regicides” (1951; tr. 1953).

Why an integrated model?

It is clear from Chapters 3, 4, 5 and 6 that a single socio-cultural, psychiatric, psychological, developmental or biological theory is not sufficient to explain the aetiology of serial murder. Indeed, a single approach is unlikely to explain *any* single human behaviour, especially one as complex and abstract as serial murder. To do such a phenomenon justice, an integrated model is required. Gilbert (1994) is, however, pessimistic about the degree to which such a statement is acknowledged:

Although theorists are moving away from simple, single-component process models for understanding human behaviour, we are still a long way from agreeing on what models are the most useful, and there are few educational efforts to teach multi-process working (p. 367).

Without an integrated approach, it is unlikely that a model will either account properly for observed phenomena or gain widespread acceptance from researchers in other disciplines. In particular, social scientists and biologists may be particularly suspicious of each other’s models (Caudhill & Roberts, 1951).

Hinde (1987) developed a multi-process model (derived from ethology) for outlining complex biopsychosocial interactions and the dialectical relations between successive levels

of social complexity. The model outlines the interactions between an individual's biological state, the relationships sought and elicited, and how they are embedded in a socio-cultural milieu. The model is depicted in Figure 7.

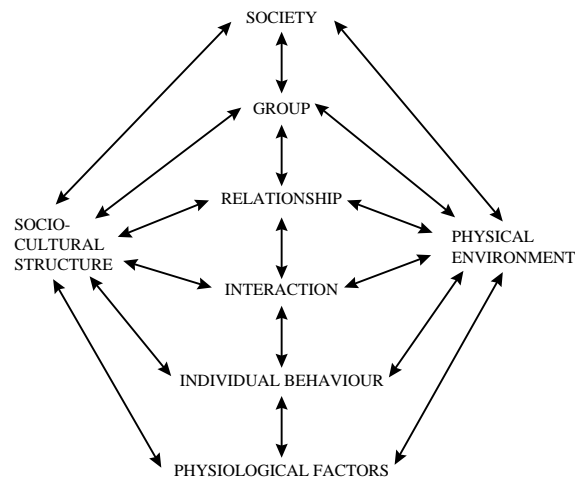


Figure 7: *The dialectical relations between successive levels of social complexity.*

An integrated model of any facet of human behaviour should take into account the various levels and interactions specified in Hinde's model. The elements particularly important to an aetiological model of serial murder are physiological factors, socio-cultural structure, society and individual behaviour.

Two levels of explanation

Any act of serial murder can be explained along two fundamental levels. The first is the background of the offender, his biological predisposition to aggressivity etc., that makes an individual capable of committing serial murder. This is a "traditional" aetiological explanation. The second level involves examining the immediate triggers that cause such an individual to actually commit an offence. Any integrated model should incorporate both levels and indicate any interactions between the two.

Such a distinction is represented in the model proposed by Giannangelo (1993). The model contains the following three elements: (i) the foundation, or primal basis of the pathology; (ii) the path of the stressors, which combine with the foundation (predisposition) to elicit the first murder; and (iii) the obsessive-compulsive and ritualistic cycle of serial murder (that is responsible for subsequent murders).

Foundation of pathology A biological predisposition combined with environmental trauma/stressors cause diathesis-stress syndrome (essentially an “explosive mix” of biology and environment).

Path of stressors leading to first murder The development of maladaptive coping skills and a retreat into a fantasy world cause minor crime and dissociative processes, leading to the first murder.

Obsessive-compulsive ritualistic cycle The kill is followed by a cooling-off period, followed by continuation of the cycle and a renewed homicidal urge.

Unfortunately, Giannangelo’s model suffers from a lack of detail, and an explanation of how, for example, the urge to kill renews itself. The labelling of the maintenance cycle as the obsessive-compulsive ritualistic cycle may also be misleading. The model is, however, useful, especially in representing the interaction between biology and environment that I also believe to be responsible for the development of the serial murderer.

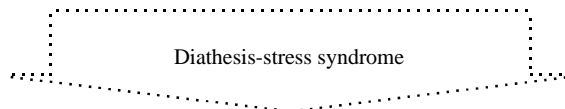
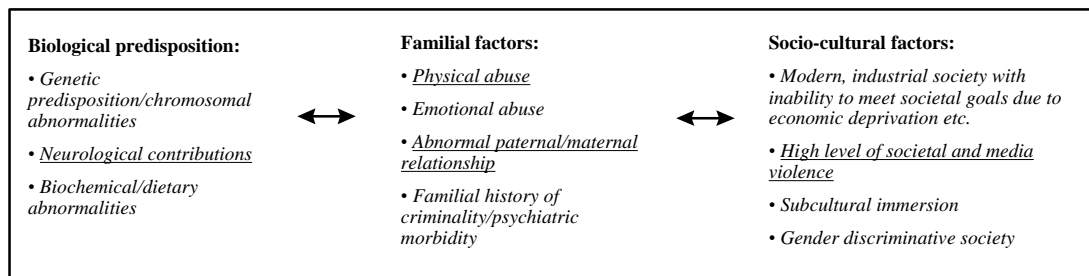
An integrated model

Depicted in Figure 8 is a model of serial murder that integrates pathological foundations with developmental consequences and also proposes a cycle of maintenance for serial murder. Important contributory factors are underlined.

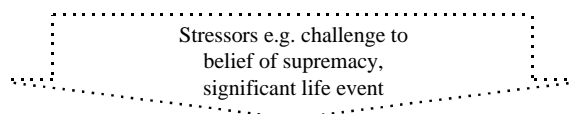
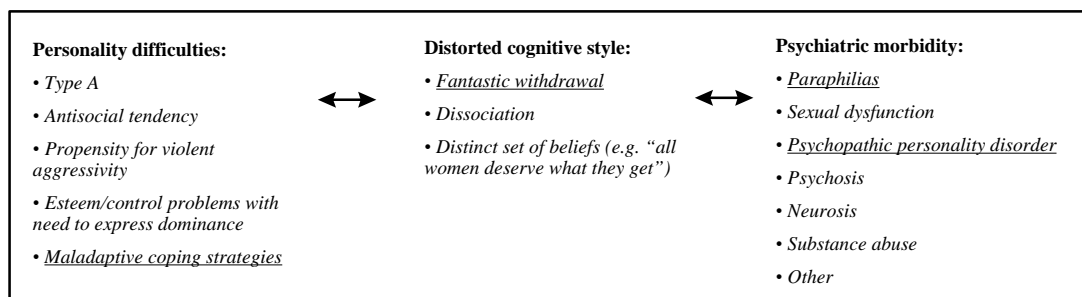
Foundation of pathology Biological predispositions (such as genetic constitution) interact with familial factors (e.g. physical abuse) and socio-cultural factors (e.g. a violence prone society) to cause diathesis-stress syndrome (a complex interaction between biology and environment). *Either* environmental trauma or biology *on their own* are not seen as sufficient to cause the development of a serial murderer. It is their chaotic interaction that is important.

Developmental consequences The effect of biology and the environment in the normal individual is to produce personality characteristics, cognitive style and mental health. However, diathesis-stress causes personality difficulties, distorted cognitive style, and psychiatric morbidity. These arise from the interaction between their pathological antecedents and through interaction between themselves (e.g. there are likely to be significant and magnifying interactions between fantastic withdrawal and paraphilic development).

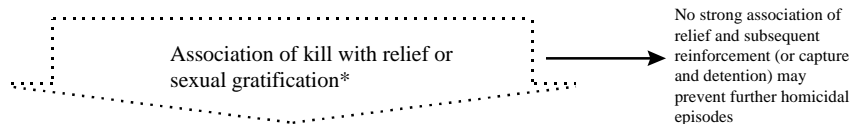
Foundation of pathology



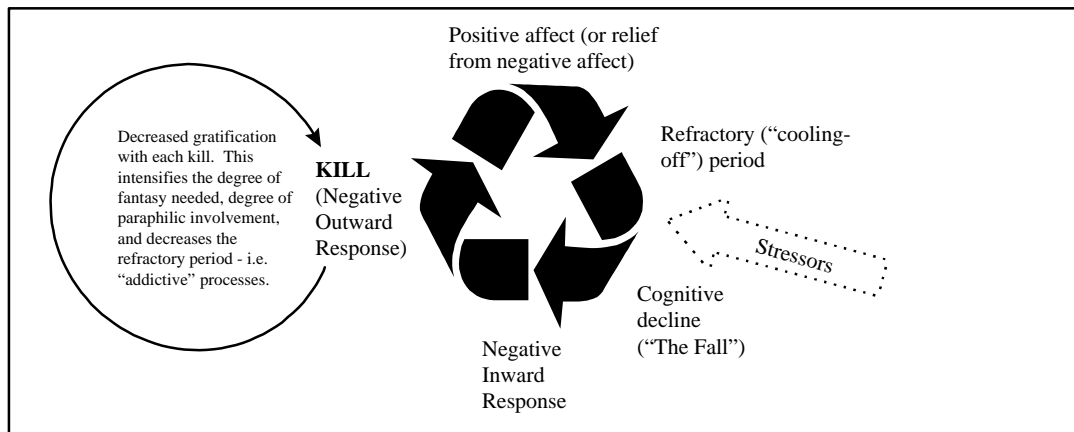
Developmental consequences



Initial homicidal episode



Maintenance cycle



*in the visionary serial murderer, relief from psychotic symptoms (e.g. voices) may provide gratification and the link into the maintenance cycle.

Figure 8: An integrated model of serial murder

Initial homicidal episode The effect of stressors (e.g. a significant life event such as rejection, maternal death etc.) causes an initial homicidal episode. Such an episode may differ from subsequent murders in its level of planning and instrumentality; it may be particularly unplanned (e.g. J. Dahmer's first murder [Masters, 1993]) or perhaps to silence a rape victim. However, if the murder is associated with relief (from stress), sexual gratification, relief from positive psychotic symptoms (in the case of a visionary killer) and also success in evading capture ("I got away with it"), then these operant processes will contribute to a cycle of maintenance. Otherwise, the potential serial murderer may remain a single murderer.

Maintenance cycle The positive affect (or relief from negative affect) is followed by a refractory period in which there may be relief from the "compulsion" to kill. Reliving the crime through "trophies" from the crime scene and mental imagery with masturbation reinforces the association between killing and positive experiences. Eventually, the offender's cognitive state will be challenged by an aversive experience (stressors), leading to cognitive decline. A negative inward response will be followed by a restorative attempt - the negative outward response, or homicidal episode. The relief provided by the homicidal episode is sufficient to restart the cycle. In some cases, there need be no stressors to precipitate a further homicidal episode - merely a desire for further gratification in the absence of cognitive decline.

I believe that this model is sufficient to account for the aetiology of many thrill, sexual, missionary, and, in some cases, comfort serial murderers. It may also be a useful as a starting point for professional and gang-related serial murder. Such offenders may have similar developmental antecedents to serial sexual murder, and the reinforcing "relief" may

be financial, or reassertion of territorial rights (which are both subsequently vulnerable to external “stressors”). It may also be useful as a framework for examining the visionary serial murderer (although in such cases there is likely to be a more direct relationship between psychiatric morbidity and crime). The model is also easily modified and imbued with much greater detail (for example, indicating the relationships between individual components of the model such as fantasy and paraphilic behaviour), but unfortunately space for such elaboration is not available here. In observing that one particularly appallingly treated child becomes a serial murderer, yet another similarly treated one does not, many authors propose that there is some unknown factor (a factor “X”) that is responsible for such development. Through adoption of an integrated model, we may do away with such a supposition. It is not the *components* of a model that make a serial murderer, but rather their *interaction*. This is the factor “X”.

What do we know? What do we need to know? How can we find out?

The integrated model greatly adds to our knowledge of the aetiology of serial murderers and thus has significant theoretical and policy implications in areas as diverse as offender profiling and legal defences. The model does not fully *explain* and certainly does not *excuse* serial murder (through mitigation of personal blame - the offender usually not simply a passive product of genes and environment), but it significantly enables us to examine the crime and its perpetrator in terms of a coherent model. If research should be theory driven, then such a model will assist in hypothesis generation and the establishing of a proper multi-disciplinary research programme.

What components should such a research programme include? Throughout this thesis, research recommendations have been made. Some of the questions that remain

unanswered are fundamental to future study; for example, accurate determination of the prevalence of serial murder in various geographical regions, and perhaps as importantly, how many victims fall prey to different types of serial murderers. The integrated model may drive other research: What is the neurological contribution to serial murder? What part does media violence play? What are the psychological effects of abnormal parental relationships? Do serial murderers have “easily conditionable” personalities that facilitate the connection between sexual gratification and violence? Do serial murderers have a history of subcultural immersion? Why are ethnic minorities underrepresented in numbers of serial murderers compared to many other crimes?

Other, more policy oriented questions may also be asked: Who is at risk for victimisation? To what extent does linkage blindness aid the serial murderer to escape detection? How can linkage blindness be reduced? What components of the integrated model are useful to offender profiling techniques? Can offender profiling be performed by neural network computer systems? What areas of psychology, or biology, or geography are relevant to serial murder? How can the serial murderer be treated once captured? How does the integrated model assist our understanding of the serial murderer’s culpability for his crimes?

The major challenge is not generating such questions, but answering them. To do so will require access to a representative sample of serial murderers, or carefully compiled material pertaining to them. Careful statistical analysis should be applied to the results of such studies, and suitable sample sizes should be selected. Even though serial murder may be on the increase, it can thankfully still be called a rare crime. This rarity, combined with difficulties of access, makes it very difficult to establish the large sample sizes that are needed for reasonable statistical power. Access should be made easier by those responsible for the incarceration and well-being of the captured serial murderer, if offenders are willing

to submit to extensive biological, psychological and sociological testing (as many are). Access, for most, is currently too daunting a task to attempt.

Those who require access to second-hand materials (especially data sets on serial murderers) will find them fastidiously guarded by those who have taken the time to compile them. The paucity of validated information available does not invite sharing of data (an upsetting state of affairs given that research may be most instrumental in reducing the number of victims claimed by the crime). Such problems are responsible for the lack of rigorous research and theoretical knowledge concerning this highly prominent crime, as well as the predominance of a journalistic style in serial murder research. I am confident that if such issues could be resolved, the crime would prove one that would yield much to proper research. This thesis is hopefully a starting point and stimulus for such investigation.

BIBLIOGRAPHY AND REFERENCES.

- Abrahamsen, D. (1973). *The Murdering Mind*. New York, NY: Harper & Row.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders*, 4th Edition (DSM-IV). Washington, DC: American Psychiatric Association.
- Archer, J. (1994). *Male Violence*. London: Routledge.
- Arieti, S. & Shreiber, F.R. (1981). Multiple murders of a schizophrenic patient: a psychodynamic interpretation. *Journal of the American Academy of Psychoanalysis*, **9**, pp. 501-524.
- Bandura, A. (1973). *Aggression: A Social Learning Analysis*. Englewood Cliffs, NJ: Prentice Hall.
- Bartholomew, A. A., Milte, K. L. & Galbally, F. (1975). Sexual murder: psychopathology and psychiatric jurisprudential considerations. *Australia and New Zealand Journal of Criminology*, **8**, pp. 143-152
- Bartol, C. R. (1980). *Criminal Behaviour: A Psycho-social Approach*. Englewood Cliffs, NJ: Prentice-Hall.
- Beck, A. T. (1967). *Depression: clinical, experimental, and theoretical aspects*. New York, NY: Harper & Row.
- Berg, K. (1954). *The Sadist* (O. Illner & G. Godwin, trans.). New York, NY: Medical Press of New York (originally published 1932).
- Berkowitz, L. (1993). *Aggression: Its Causes, Consequences and Control*. New York: McGraw-Hill.
- Blackburn D. (1990). *Human Harvest: The Sacramento Murder Story*. New York, NY: Knightsbridge.
- Blau, J. R. & Blau, P. M. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review*, **47**, pp. 114-129.
- Bliss, E. C. (1986). *Multiple Personality, Allied Disorders and Hypnosis*. New York, NY: Oxford University Press.
- Bower, G. H. (1980). Mood and memory. *American Psychologist*, **36**, pp. 129-148.
- Brittain, R. P. (1967). The sadistic murderer. *Medicine, Science and the Law*, **10**, pp. 198-207.
- Brown, S.E. (1984). Social class, child maltreatment and delinquent behaviour. *Criminology*, **22** (2), pp. 259-278.

Bukowski, N. T. & Gehrke, R. (1979). The Rorschach in homicides. *Psicologia*, 16, pp. 5-27.

Burgess, A. W., Hartman, C. R., Ressler, R. K., Douglas, J. E. & McCormack, A. (1986). Sexual homicide: a motivational model. *Journal of Interpersonal Violence*, 1, pp. 251-272.

Canter, D. (1989). Offender profiles. *The Psychologist*, 2 (1), pp. 12-16.

Caputi, J. (1988). *The Age of Sex Crime*. London: The Women's Press.

Caudhill, W. & Roberts, B. H. (1951). Pitfalls in the organisation of interdisciplinary research. *Human Organisation*, 10 (4), pp. 12-15.

Christiansen, K. O. (1968). Threshold of tolerance in various population groups illustrated by results from the Danish Criminological Twin Study. In A. de Ruck & R. Porter (eds.) *The Mentally Abnormal Offender*. Boston, MA: Little Brown.

Dalgaard, S. O. & Kringlen, E. (1976). A Norwegian twin study of criminality. *British Journal of Criminology*, 16, pp. 213-218.

Daly, M. & Wilson, M. (1984). Evolutionary psychology of male violence. In J. Archer (ed.) *Male Violence*. London: Routledge.

Danto, B. L., Bruhns, J. & Kutcher, A. H. [eds.] (1982). *The Human Side of Homicide*. New York, NY: Columbia University Press.

Darwin, C. (1871). *The Descent of Man, and Selection in Relation to Sex*. London: Murray.

Dietz, M. L. (1996). Killing sequentially: expanding the parameters of the conceptualisation of serial and mass killers. In T. O' Reilly-Fleming [ed.] *Serial and Mass Murder: Theory, Research and Policy*. Toronto: Canadian Scholar's Press.

Dietz, M. P. (1990). Sexual sadism and serial crime. Conference of Sexual Sadism and Serial Murder, New York, NY., January 20.

Dietz, P. E. (1986). Mass, serial and sensational homicides. *Bulletin of the New York Academy of Medicine*, 62, pp. 477-91

Dietz, P. E., Hazlewood, R. R. & Warren, J. (1990) The sexually sadistic criminal and his offenses. *Bulletin of the American Academy of Psychiatry and the Law*, 18 (2), pp. 163-178.

Dorfman, A. (1984). The criminal mind, body chemistry and nutrition may lie at the roots of crime. *Science Digest*, 92, pp. 44-49.

Douglas, J. & Olshaker, M. (1996). *Mindhunter*. London: Heinemann.

Durkheim, E. (1965). *The Division of Labour in Society* (G. Simpson, Trans.). New York, NY: Free Press.

Dworkin, A. (1975). "The Root Cause," speech, 26 Sept. Massachusetts Institute of Technology, Cambridge, MA.

Egger, S. A. (1984). A working definition of serial murder and the reduction of linkage blindness. *Journal of Police Science and Administration*, **12** (3), pp. 348-357.

Egger, S. A. (1990). *Serial murder: An Elusive Phenomenon*. New York, NY: Praeger.

Farrington, D. P. (1991). Childhood aggression and adult violence: early precursors and later life outcomes. In D. J. Pepler & K. Rubin. (eds.) *The Development and Treatment of Childhood Aggression*. Hillsdale, NJ: Lawrence Erlbaum.

Farrington, D.P. (1993). Have any individual, family or neighbourhood differences on offending been demonstrated conclusively? In D. Farrington, R. Sampson and P. Wilkstrom (eds.) *Integrating Individual and Ecological Aspects of Crime*. Stockholm, Sweden: National Council for Crime Prevention.

Federal Bureau of Investigation (1985a). The men who murdered. *FBI Law Enforcement Bulletin*, **54** (8), pp. 2-6.

Federal Bureau of Investigation (1985b). The split reality of murder. *FBI Law Enforcement Bulletin*, **54** (8), pp. 7-11.

Federal Bureau of Investigation (1985c). Crime scene and profile characteristics of organised and disorganised murderers. *FBI Law Enforcement Bulletin*, **54** (8), pp. 18-25.

Fox, J.A. & Levin, J. (1994). *Overkill: Mass Murder and Serial Killing Exposed*. New York: Plenum.

Gallagher, B. J. (1987). *The Sociology of Mental Illness*. Englewood Cliffs, NJ: Prentice-Hall.

Gebreth, V. J. (1986). Mass, serial and sensational homicides: the investigative perspective. *Bulletin of the New York Academy of Medicine*, **62** (5), pp. 492-496.

Gekowski, A. R. (1996). *British Serial Killing*. Unpublished M.Phil. thesis, University of Cambridge.

Giannangelo, S. J. (1996). *The Psychopathology of Serial Murder: a Theory of Violence*. Westport, CT: Praeger.

Ginsberg, B. & Allee, W. C. (1942). Some effects of conditioning on social dominance and subordination in inbred strains of mice. *Physiological Zoology*, **15**, pp. 485-506.

Godwin, M. & Canter, D. (in press, 1996). Encounter and death: the spatial behaviour of U.S. serial killers. *Policing: An International Journal of Police Strategy and Management*.

Goldstein, J. H. (1986). *Aggression and Crimes of Violence*, 2nd edn. Oxford: Oxford University Press.

Goring, C. B. (1913). *The English Convict: A Statistical Study*. London: H.M.S.O.

Gresswell, , D. M. (1991). Psychological models of addiction and the origins and maintenance of serial murder. In M. McMurrin & C. McDougall (eds.) *Proceedings of the First DCLP Annual Conference* (Vol. 2). Leicester: British Psychological Society.

Gresswell, G. M. & Hollin, C. R. (1994). Multiple murder: a review. *The British Journal of Criminology*, **34** (1), pp. 1-14.

Hare, R. D. (1991). *The Hare Psychopathy Checklist - Revised*. Toronto: Multi-Health Systems.

Hazlewood, R. & Douglas, J. (1980). The Lust Murderer. *FBI Law Enforcement Bulletin*, **49**, pp. 1-5.

Hazlewood, R. R., Dietz, P. E. & Warren, D. S. W. (1992). The criminal sexual sadist. *FBI Law Enforcement Bulletin*, **61** (2), pp. 12-20.

Hellman, D. & Blackman, N. (1966). Enuresis, firesetting, and cruelty to animals. *American Journal of Psychiatry*, **122**, pp. 1431-1435.

Hickey, E. W. (1991). *Serial Murderers and Their Victims*. Pacific Grove, CA: Brooks/Cole Publishing.

Hinde, R. A. (1987). *Individuals, Relationships and Culture: Links Between Ethology and the Social Sciences*. Cambridge: Cambridge University Press.

Hirose, S. (1979). Depression and homicide: A psychiatric and forensic study of four cases. *Acta Psychiatrica Scandinavica*, **69** (1), pp. 108-114.

Hirschi, T. (1969). *Causes of Delinquency*. Berkeley, CA: University of California Press.

Holmes, R. M. & DeBurger, J. E. (1985). Profiles in terror: the serial murderer. *Federal Probation*, **49**, pp. 29-34.

Holmes, R. M. & DeBurger, J. E. (1988). *Serial Murder*. Newbury Park, CA: Sage.

Holmes, R.M. & Holmes, S.T. (1992). "Understanding mass murder: a starting point". *Federal Probation*, **49**, pp. 29-34.

Holmes, R.M. & Holmes, S.T. (1996). *Profiling Violent Crimes*. Thousand Oaks, CA: Sage.

Huntingford, F. A. & Turner, A. K. (1987). *Animal Conflict*. London: Chapman & Hall.

Hutchings, B. & Mednick, S. A. (1977). Criminality in adoptees and their adoptive and biological parents: a pilot study. In S. Mednick & K. Christensen (eds.) *Biosocial Bases of Criminal Behaviour*. New York: Gardner Press.

Jacobs, P. A., Brunton, M. & Melville, M. M. (1965). Aggressive behaviour, mental subnormality and the XYY male. *Nature*, **208**, pp. 351-352.

Kennedy, J. & Nolin, R. (1992). *On A Killing Day*. New York, NY: Bonus.

- Lester, D. & Wright, T. (1978). Murderers and over-controlled hostility. *Psychological Reports*, **43** (3), pp. 1202-1204.
- Leyton, E. (1983). A social profile of sexual mass murderers. *In* T. Fleming and L. A. Visano (eds.) *Deviant Designations: Crime, Law and Deviance in Canada*. Toronto: Butterworths.
- Leyton, E. (1986). *Compulsive Killers: The Story of Modern Multiple Murders*. New York, NY: New York University Press.
- Leyton, E. (1988). *Hunting Humans: Inside the Minds of Mass Murderers*. New York: Pocket Books.
- Levin, J. & Fox, J. A. (1985). *Mass Murder: America's Growing Menace*. New York, NY: Plenum Press.
- Lifton, R. J. (1986). *The Nazi Doctors*. New York, NY: Basic Books.
- Lombroso, C. (1876). *L'Uomo Delinquente*. Torino: Bocca.
- Lorenz, K. Z. (1966). *On Aggression*. New York, NY: Harcourt, Brace & World.
- Lowenstein, D. F. (1989). Homicide - a review of recent research. *The Criminologist*, **13**, pp. 75-87.
- Lunde, D. T. (1976). *Murder and Madness*. San Francisco, CA: San Francisco Book Company.
- MacCulloch, M. J., Snowden, P. R., Wood, P. J. W. (1983). Sadistic fantasy, sadistic behaviour and offending. *British Journal of Psychiatry*, **143**, pp. 20-29.
- MacDonald, J. M. (1963). The threat to kill. *American Journal of Psychiatry*, **120**, pp. 125-130.
- Maclean, P. D. (1962). New findings relevant to the evolution of psychosexual functions of the brain. *Journal of Nervous and Mental Disorders*, **135**, pp. 289-301.
- Mawson, A. R. (1987). *Transient Criminality: A Model of Stress Induced Crime*. New York: Praeger.
- Mawson, A. R. & Jacobs, K. W. (1978). Corn consumption, tryptophan and cross-national homicide rates. *Journal of Orthomolecular Psychiatry*, **7** (4), pp. 227-230.
- Masters, B. (1993). *The Shrine of Jeffrey Dahmer*. London: Coronet.
- McKay, S. (1985, July 8). Coming to grips with random killers. *Macleans*, pp. 44-45.
- Meloy, J. R. (1992). *The Psychopathic Mind: Origins, Dynamics and Treatment*. Northvale, NJ: Jason Aronson.

Money, J. (1990). Forensic sexology: paraphiliac serial rape (biastophilia) and lust murder (erotophonophilia). *American Journal of Psychotherapy*, **44**, pp. 26-36.

Money, J. & Erhardt, J. J. (1972). *Man and Woman, Boy and Girl*. Baltimore, MD: Johns Hopkins University Press.

Myers, W. C., Reccoppa, L., Burton, K. & McElroy, R. (1993). Malignant sex and aggression: An overview of serial sexual homicide. *Bulletin of the American Academy of Psychiatry and the Law*, **21** (4), pp. 435-451.

National Centre for the Analysis of Violent Crime (1992). *Serial, Mass and Spree Murderers in the United States: Search of Major Wire Services and Publications on Offenders operating form 1960 to the Present*. October, 1992.

Norris, J. (1988). *Serial Killers: The Growing Menace*. New York, NY: Doubleday.

Novaco, R. W. (1978). Anger and coping with stress. *In* J. Foreyt and D. Rathjan (eds.) *Cognitive Behaviour Therapy*. Lexington, MA: Lexington Books.

O' Reilly-Fleming, T. [ed.] (1996). *Serial and Mass Murder: Theory, Research and Policy*. Toronto: Canadian Scholar's Press.

Olweus, D. (1987). Testosterone and adrenaline: Aggressive anti-social behaviour in normal adolescent males. *In* S. Mednick, T. Moffitt & S. Stacks (eds.) *The Causes of Crime: New Biological Approaches*. New York, NY: Cambridge University Press.

Otnow Lewis, D., Pincus, J. H., Feldman, M., Jackson, L. & Bard, B. (1986). Psychiatric, neurological and psychoeducational characteristics of 15 Death Row inmates in the United States. *American Journal of Psychiatry*, **143**, pp. 838-845.

Pinizzotto, A. J. (1984). Forensic psychology: criminal personality profiling. *Journal of Police Science and Administration*, **12** (1), pp. 32-40.

Podolsky, E. (1966). The lust murderer. *Medico-legal Journal*, **34**, pp. 174-178.

Prentky, R. A., Burgess, A. W., Rokous, F., Lee, A., Hartman, C. Ressler, R. & Douglas, J. (1989). The presumptive role of fantasy in serial sexual homicide. *American Journal of Psychiatry*, **147** (7), pp. 887-891.

Price, V. A. (1982). *Type A Behaviour Pattern: A Model for Research and Practice*. New York, NY: Academic Press.

Rada, R. T., Laws, D. R., Kellner, R., Stivastave, L. & Peak, G. (1983). Plasma androgens in violent and non-violent sex offenders. *American Academy of Psychiatry and the Law*, **11** (2), pp. 149-153.

Rappaport, R. G. (1988). The serial and mass murderer: patterns, differentiation, pathology. *American Journal of Forensic Psychiatry*, **9** (1), pp. 39-48.

Reid, W.H. [ed.] (1978). *The Psychopath: A Comprehensive Study of Antisocial Disorders and Behaviour*. New York, NY: Brunner Mazel.

Ressler, R. K., Burgess, A.W. & Douglas, J. E. (1988). *Sexual Homicide: Patterns & Motives*. Lexington, MA: Lexington Books.

Restak, R. (1984). *The Brain*. New York, NY: Bantam Books.

Retvitch, E. (1980). Gynocide and unprovoked attacks on women. *Corrective and Social Psychiatry*, **26**, pp. 6-11.

Rhue, J. W. & Lynn, S. J. (1987). Fantasy proneness: developmental antecedents. *Journal of Personality*, **55** (1), pp. 120-137.

Salkovskis, P. M. (1985). Obsessional-compulsive problems: a cognitive-behavioural analysis. *Behavioural Research and Therapy*, **16**, pp. 233-248.

Sarbin, T. R. & Miller, J. E. (1970). Demonism revisited: the XYY chromosome anomaly. *Issues in Criminology*, **5**, pp. 199-208.

Sears, D. J. (1991). *To Kill Again: The Motivation and Development of Serial Murder*. Wilmington, DE: Scholarly Resources Books.

Serin, R.C. (1991). Psychopathy and violence in criminals. *Journal of Interpersonal Violence*, **4**, pp. 435-448.

Singh, A. (1979). A study of the personality and adjustment of murderers. *Indian Journal of Clinical Psychology*, **6** (2), pp.201-204.

Skrapec, C. A. (1996). The sexual component of serial murder. In T. O' Reilly-Fleming (ed.) *Serial and Mass Murder: Theory, Research and Policy*. Toronto: Canadian Scholar's Press.

Shoenthaler, S. J. (1982). The effects of blood sugar on the treatment and control of antisocial behaviour: a double-blind study of an incarcerated juvenile population. *International Journal for Biosocial Research*, **3**, pp. 1-6.

Smuts, B. (1992). Male aggression against women: an evolutionary perspective. *Human Nature*, **3**, pp. 1-44.

Stafford-Clark, D. & Taylor, F. H. (1949). Clinical and electroencephalographic studies of prisoners charged with murder. *Journal of Neurology, Neurosurgery and Psychiatry*, **12**, pp. 325-330.

Starr, M. (1984, November 26). The random killers. *Newsweek*, pp. 100-106.

Stroebe, W., & Jonas, K. (1988). Attitudes II: Strategies of Attitude Change. In M. Hewstone, W. Stroebe, J. Codol, & G. M. Stephenson (eds.) *An Introduction to Social Psychology*. Oxford: Blackwell.

Teasdale, J. D. (1983). Negative thinking in depression: cause, effect or reciprocal relationship? *Advances in Behaviour Research and Therapy*, **5**, pp. 3-26.

Teplin, L. A. (1985). The criminality of the mentally ill: a dangerous misconception. *American Journal of Psychiatry*, **142**, pp. 593-599.

Terry, M. (1987). *The Ultimate Evil*. New York, NY: Bantam Books.

United States Department of Justice (1983). *Uniform Crime Report*. Washington, DC: U.S. Government Printing Office.

Unnithan, N.P., Huff-Corzine, L., Corzine, J. & Whitt, H.P. (1994). *The Currents of Lethal Violence: An Integrated Model of Suicide and Homicide*. Albany, NY: SUNY.

Washburn, S. L. & Hamburg, D. A. (1968). Aggressive behaviour in Old World monkeys and apes. *In* P. Jay (ed.) *Primates: Studies in Adaptation and Variability*. New York, NY: Holt, Reinhardt & Winston.

Weinshel, E. & Calet, V. (1972). On certain neurotic equivalents of necrophilia. *International Journal of Psychoanalysis*, **53**, pp. 67-75.

Wertham, F. (1949). *The Show of Violence*. New York, NY: Doubleday.

Williams, D. (1969). Neural factors related to habitual aggression. *Brain*, **92**, pp. 503-520.

Wilson, C. & Seaman, D. (1992). *The Serial Killers: A Study in the Psychology of Violence*. London: Virgin Publishing.

Wilson, P. R. (1988). "Stranger" child murder: issues relating to causes and controls. *Forensic Science International*, **36**, pp. 267-277.

Witkin, H. A., Mednick, S. A., Schulsinger, F., Bakkestrom, E., Christiansen, K. O., Goodenough, D. R., Hirschhorn, K., Lundsteen, S. Owen, D. R., Phillip, J., Rubin, D. B. & Stocking, M. (1976). Criminality in XYY and XXY men. *Science*, **196**, pp. 547-555.

Whitney, G. (1990). On possible genetic bases of race differences in criminality. *In* L. Ellis and H. Hoffman (eds.) *Crime in Biological, Moral, and Social Contexts*. New York, NY: Praeger.

Wolfgang, M. E. & Ferracuti, F. (1967). *The Subculture of Violence*. London: Tavistock.