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MULTIPLE HOMICIDE OFFENDERS

Offense Characteristics, Social Correlates, and Criminal Careers

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Because investigations of multiple homicide offenders (MHOs) are usually case studies, there is limited understanding of the linkages between them and other criminal offenders. Using data from an exploratory sample of 160 MHOs and a control group of 494 single homicide offenders, this study examines MHOs from a criminal career perspective and finds that nearly 30% of them were habitual offenders before their final homicide event. Those with prior rape convictions, misdemeanor convictions, more extensive prison histories, and current involvement in rape and burglary are more likely to kill multiple victims. Curiously, nearly 40% of MHOs had zero prior arrests. Overall, arrest onset occurs later in the life course and is not predictive of offending. In conclusion, the study of MHOs could enrich the criminal career perspective, while posing some empirical and theoretical challenges to that paradigm.

Keywords: homicide; career criminal; recidivism; violence; criminal career

Multiple homicide offenders (MHOs), defined as criminal defendants who murder more than one person during a criminal episode,¹ occupy a peculiar place in criminology. Because of their lethality, MHOs are presumably deserving of study, but

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scholarly investigations of them are far exceeded by journalistic, popular, or true-crime treatises. Many commentators have expressed that MHOs receive more attention from popular culture than criminology (Fox & Levin, 1998; Kraemer, Lord, & Heilbrun, 2004; Petee & Jarvis, 2000). The scholarly study of MHOs has also been complicated by some empirical limitations. From 1976 to 2000, the percentage of total homicides that involved multiple victims ranged from just 3% to 4% (Fox & Zawitz, 2003). Perhaps for this reason, criminologists have viewed this low-prevalence phenomenon as less deserving of attention than the larger study of homicide.²

There are additional reasons why many criminologists have not embraced the study of MHOs. For instance, detailed records and other data on MHOs are kept by criminal justice entities and are sometimes not available to researchers (Kraemer et al., 2004). Consequently, criminologists must often construct data sets from news accounts and other media sources. Alternately, some scholars (e.g., Egger, 2002; Fox & Levin, 1994; Wright & Hensley, 2003) employ case studies or profiles of MHOs. Although this approach has yielded fruitful information on individuals who have committed multiple homicides, the method is limited in its applicability to the larger study of criminal offenders. Overall, the methods used to study criminals that murder multiple victims are somewhat lacking. As expressed by Fox and Levin (2003), typical approaches to studying MHOs “generally lack any measure of reliability and predictive accuracy. Often they are constructed with items that have no empirical foundation, but merely reflect the characteristics of a troubled individual” (pp. 61-62).

The current study aimed to enhance the criminological understanding of MHOs in several ways. First, a large, purposive sample of convicted homicide offenders was used to move beyond the case study approach that characterizes much of the research on this subject. This allowed for exploratory statistical comparisons between MHOs and a control group of single homicide offenders (SHOs). In their review article on multiple homicide, Fox and Levin (1998) stressed that future research should employ comparison groups of offenders and investigate lifecycle explanations of multiple homicide offending that move beyond exploring childhood traumas and psychopathology (also see Smith, 2000). Toward

this end, the current study contained measures of social demographic variables, offense information contemporaneous to their homicide offense, and multiple measures of prior record.³ Finally, the current study viewed MHOs from a criminal career perspective, which frames individual criminal behavior, or criminal careers, longitudinally and studies how offending careers begin, persist, escalate, and end (Piquero, Farrington, & Blumstein, 2003).

DEFINITIONAL ISSUES

By and large, MHOs have been trichotomized into one of three groups: (a) serial killers, (b) mass killers, and (c) spree killers. The essential differences between these classifications pertain to the temporal nature of the killings and the time lag (or cooling off period) between them. Serial homicide offenders kill their victims during an extended period of time, spanning years or even decades, and take, at times, significant breaks between killings. This form of multiple homicide offending is intermittent and prolonged. Although unanimity does not exist, many experts have defined serial homicide offenders as persons who murder at least three victims (Douglas, Burgess, Burgess, & Ressler, 1992; Ferguson, White, Cherry, Lorenz, & Bhimani, 2003; Hickey, 2002; Keeney & Heide, 1994). Spree killers murder their victims during a truncated period of time, hours or days, often in concert with other criminal activity. According to Rush (2003), spree killers murder victims at two or more locations with little or no intervening time and as a result of a single event. Mass killers murder victims at a discrete time and place. Mass killing occurs instantaneously and often yields the most victims. Those who murdered at least four victims at one location and place have been characterized as mass killers (Chaiken, Chaiken, & Rhodes, 1994; Fox & Levin, 2003; Rush, 2003).

Unfortunately, research on semantic issues surrounding the various forms of multiple homicide has potentially slowed the broader criminological understanding of the topic. For example, Keeney and Heide (1995) reviewed 10 of the commonly cited conceptualizations of serial murder and found that each definition failed to fully capture the phenomenon. Scholars have, at times, created diverse definitions of serial homicide depending on the motive of the offender, victim

type, the offender–victim relationship, whether the offender was gender specific, the time period of the killings, and the psychological state of the killer. Others (e.g., Dietz, 1996; Fox & Levin, 1998) have similarly expressed dissatisfaction with academic quibbling over the various ways to define MHOs. Increasingly, viewing serial, mass, and spree killers as separate entities is seen as perhaps outmoded, and a broader framework may yield more fruitful, parsimonious information. The current study follows such an approach and refers to all three types simply as MHOs.⁴ In doing so, the current study empirically examines whether MHOs can or should be viewed as conventional criminals who happen to commit more than one homicide. This is important theoretically, as criminologists consider the worth of general theoretical perspectives (e.g., Gottfredson & Hirschi, 1990) versus specific, offense-driven explanations of antisocial behavior.

PSYCHOSOCIAL PROFILE OF MHOs

MHOs are neither new nor limited to American culture. For illustration, scholars (e.g., Fox & Levin, 1998, 2003; Mullen, 2004) have reported the centuries-old Malaysian phenomenon of running amok in which males (called Penamoks) with social and psychological deficits engaged in seemingly random acts of mass violence. Palermo (1997) invoked the Norse warrior Berserk, whose name was used to describe murderous predators who victimized the Viking community between 870 and 1030. Palermo examined 49 MHOs described as mass killers from 1949 to 1995 to unearth commonalities between the offenders. The killers were usually males between the ages of 19 and 54, with many being at least age 30. Their life histories reflected a *mélange* of psychopathology, including bouts of psychosis, depression, paranoia, and antisocial behavior. Moreover, the killers “through the vicissitudes of life, often came to perceive society and/or some of its members as responsible for their personal suffering” (Palermo, 1997, pp. 2-3). It was imputed that, partially from these feelings of alienation and victimization, rampages ensued.⁵

Using various sources of data and divergent theoretical and disciplinary perspectives, investigators have produced varied but similar

profiles of MHOs. Mullen's (2004; see also Cantor, Mullen, & Alpers, 2000) review of the literature and five case studies found that mass killers were isolated individuals who had rarely established themselves in effective adult roles. Persons who committed massacres were 40-year-old men who had been bullied or isolated as children, demonstrated an affinity or preoccupation with weaponry and violence, and showed personalities marked by rigid/obsessive beliefs, delusional suspiciousness, narcissism, and grandiose ideas that they had been persecuted. Importantly, Mullen (2004) noted an absence of antisocial or criminal history, serious mental disorder, or substance abuse among MHOs.

Based on the Supplementary Homicide Reports and newspaper archives, Petee, Padgett, and York (1997) examined 139 mass killers from 1965 to 1995 and found that the modal group committed felony murder (i.e., their killing rampage occurred along with other criminal activity). Moreover, they found that MHOs were usually sane males with identifiable target victims in mind when their rampages began. With a purposive sample of North American mass murderers, Hempel, Meloy, and Richards (1999) found that individuals who killed multiple victims were middle-aged, single, or divorced males who had recently suffered a work- or relationship-related setback or loss. Offenders commonly suffered from mental health difficulties, such as depression and paranoia, and some were actively psychotic at the time of their killing.

Based on a roster of 20 serial killers, McKenzie (1995) organized a profile along four axes: (a) environmental incubators, (b) childhood dysfunctional indicators, (c) floodgate disinhibitors, and (d) adulthood dysfunctional contributors. McKenzie discovered that 80% of offenders were reared in homes characterized by family violence, 93% had experienced inconsistent/chaotic parenting, and 75% had an alcoholic parent. As youths, a substantial proportion of offenders reported feelings of isolation, whereas as adults, offenders reported continued feelings of isolation, powerlessness, nihilism, impulsivity, and contempt for others. Meloy, Hempel, Mohandle, Shiva, and Gray (2001) reviewed 34 adolescent mass murderers sampled from 1958 to 1999 and found they were frequently bullied males with a history of antisocial behaviors, depressive symptoms, and some documented psychiatric history. Myers (2004) reviewed the psychiatric history, criminal

history, and family background of 16 juvenile sexual homicide offenders and discovered a laundry list of severe risk factors. The most prevalent of these traits were an impaired capacity to feel guilt, neuropsychiatric vulnerabilities, serious school problems, child abuse victimization, family dysfunction, history of interpersonal violence, prior arrests, sadistic fantasies, psychopathic personality traits (e.g., 87% of the offenders had a Psychopathy Checklist–Revised score greater than 20), and personality disorder diagnosis.

Thus, as stated by Fox and Levin (2003), “despite the popular image, therefore, the indiscriminate slaughter of strangers by a ‘crazed’ killer is the exception to the rule” (p. 51; see also Petee et al., 1997). As this quotation alludes, although they are certainly difficult to predict, researchers have found commonalities in the social backgrounds of criminal offenders who have killed more than one victim. Like many serious and violent criminal offenders, MHOs have often experienced considerable abuses and deprivations within their family, suffered from varied and at times acute mental health problems, and were more than nominally involved in antisocial behavior prior to their multiple homicide event.

CRIMINAL CAREERS OF MHOs

On reviewing an MHO’s social background, certain warning signs are often cited as distal contributors to his or her killing rampage. However, criminal history is a limited part of this mix. Often superceding criminal history variables are a combination of sociological and psychological variables that are risk factors for serious violence. As Fox and Levin (1998) assessed, “systematic research on the criminal histories of multiple murderers is lacking, among a number of well-known, ‘boy-next-door’ serial and mass murderers, the absence of any prior criminal involvement is conspicuous” (p. 449). For example, Harbort and Mokros (2001) compared SHO and MHOs on a variety of variables, including personality disorder, offender affect and demeanor, relationship to their victim, cerebral anomalies, criminal offenses related to the homicide event, employment and marital status, substance abuse history, gender, and family background. Their analyses contained only one measure of criminal history: previous convictions. They found that 51% of SHO and 79%

of MHOs—referred to in their study as serial killers—had previously been convicted of crimes. Generally, prior studies of homicide offenders have relied more heavily on psychological, sociological, and offense-specific measures than criminal history variables (Hill-Smith, Hugo, Hughes, Fonagy, & Hartman, 2002; Jenkins, 1992; McKenzie, 1995; Mullen, 2004; Myers & Scott, 1998; Myers, Scott, Burgess, & Burgess, 1995).⁶

It is important to recognize that multiple homicide offending is often itself a sensationalistic episode imbedded within a larger criminal career. For example, Jenkins (1992) found that multiple killings were frequently committed in conjunction with other serious crimes, such as abduction, rape, robbery, or residential burglary. Fortunately, a variety of investigators have examined the offending backgrounds of MHOs and found they generally have had official contacts with the criminal justice system (Myers, Burgess, & Nelson, 1998). For instance, Canter, Missen, and Hodge (1996) analyzed the offending backgrounds of 217 U.S. serial killers and found that 75% of them had previous convictions. Specifically, 22% had prior convictions for violent crimes, 24% had prior convictions for serious property crimes such as burglary, 17% had drug priors, and 16% had prior sexual offense convictions. Nearly half had been arrested as juveniles. Canter et al. (1996) concluded that “although the emphasis on their crimes is more towards violence and sexually related crimes than would be true for the criminal population as a whole they are certainly not law-abiding citizens prior to their killings” (p. 6).

Overall, there appears to be an equivocal relationship between prior criminal record and subsequent multiple homicide offending. Based on a sample of cases from the National Center for the Analysis of Violent Crime, Dietz, Hazelwood, and Warren (1990) found that 43% of their study group—referred to as sexually sadistic criminals—had a prior criminal record, but 57% had none. From a study group of 16 sexually homicidal juvenile offenders, Myers (2004) found that 88% had prior arrests and 44% had prior arrests for crimes of violence. Moreover, nearly all of the adolescent killers demonstrated a history of interpersonal violence and a significant history of fighting. Copes, Kerley, and Carroll (2002) recently conducted a descriptive analysis of 23,817 homicides committed between 1965 and 1995 that were processed by the Chicago Police Department. Importantly, they

examined the effects of prior criminal record on being a homicide offender or victim. Although their study was not one of MHOs per se, Copes et al. (2002) found that offenders with prior arrests for violent index crimes were likely to commit predatory homicides, the modus operandi of many MHOs.

Finally, case studies have also indicated that many MHOs had significant records of official and self-reported crime. For example, Egger's (2002) investigation of some of the most notorious serial killers in American history indicated that several had previously been arrested, convicted, and imprisoned for offenses including assault, rape, and kidnapping prior to their ultimate capture for multiple homicide. Similarly, Ressler, Burgess, and Douglas's (1983) case study of an offender who murdered five victims by age 19 illustrated the sustained antisocial career that MHOs can have. Specifically, the defendant's arrest record was initiated at age 12 and contained numerous arrests and incarcerations for larceny, traffic violations, burglary, multiple rapes, and attempted armed robbery.

THE CRIMINAL CAREER PARADIGM AND MHOs

Although the criminal career paradigm is currently one of the dominant frameworks in criminology (Blumstein, Cohen, Roth, & Visher, 1986; DeLisi, 2005; Farrington, 2000; Moffitt, 1993; Piquero et al., 2003), examinations of the more extreme offenders (e.g., those who commit homicide) are seriously lacking. At best, investigators have sporadically broached the subject of homicide, primarily because the preponderance of offenders never murder. For example, Le Blanc and Fréchette (1989) articulated a five-stage developmental process whereby criminals escalated their offending behavior. The end stage of this escalation process, referred to as outburst, was theorized to include homicide. With the exception of Cohen's (1986) extensive reanalysis of the RAND inmate surveys, the seminal National Academy of Sciences report (Blumstein et al., 1986) devoted scant attention to the place of homicide in criminal careers and was silent on the phenomenon of multiple homicide offending. Similarly, Piquero et al.'s (2003) recent treatise on the criminal career paradigm focused little attention on homicide offenders.⁷

The primary reason that criminal career investigators have not studied MHOs is inaccessibility to the worst types of criminal offenders. DeLisi (2001) reviewed some of the integral data sets in the criminal career literature, including the 1945 and 1958 Philadelphia birth cohorts, Sheldon and Eleanor Glueck's 500 criminal careers cohort, the National Youth Survey, and the Columbus, Ohio, Dangerous Offender Project. DeLisi documented that even these large sources of data, which at times included entire birth cohorts, contained very few criminals who committed the most violent offenses, such as murder, rape, or kidnapping. To redress this, DeLisi empirically examined the criminal careers of predatory offenders vis-à-vis habitual offenders with a minimum of 30 career arrests and found that murderers were significantly more likely to accumulate arrests for violent index crimes, compile felony convictions, and be sentenced to prison. Even among a group of extremely recidivistic offenders, those who had committed homicide were noteworthy for their recidivism.

METHOD

SAMPLE, STUDY GROUPS, AND DATA

The more extreme the criminal, the more difficult it is to sample him or her (Cernkovich, Giordano, & Pugh, 1985; DeLisi, 2001; Moffitt, 1993; Reidel, 1999). Moreover, researchers must rely on extant criminal justice records when studying extreme offenders, which necessitates the use of correctional samples. In 2003, an exploratory, stratified purposive sample of 654 convicted and incarcerated homicide offenders were selected from eight states spanning the Southern, Midwestern, and Atlantic coast areas of the United States. The states with respective counts of homicide offenders were Arkansas ($n = 31$, 5%), Florida ($n = 272$, 42%), Georgia ($n = 68$, 10%), North Carolina ($n = 80$, 12%), New Jersey ($n = 39$, 6%), Ohio ($n = 59$, 9%), Oklahoma ($n = 55$, 8%), and Texas ($n = 50$, 8%). These states were selected because they provided biographical information (e.g., name, gender, race, date of birth) on homicide offenders that could be used to purchase their publicly available criminal records.⁸

Public access to information on incarcerated homicide offenders varied by state. For example, records maintained by the Florida Department of Corrections permitted searches by offense conviction. Other states organized homicide offenders according to their sentence (e.g., death or life imprisonment) or mixed them within the general offender roster. Overall, the sample yielded 494 SHOs and 160 MHOs. Records contained correctional and court information and were produced by a clearinghouse with access to criminal justice information in 45 states and Washington, DC. The records service updated its database monthly, producing criminal records that, although not as reliable as National Crime Information Center rap sheets, were reasonably valid measures of the offenders' official criminal histories.⁹

MEASURES

Gender. Although some MHOs have been female (see S. T. Holmes, Hickey, & Holmes, 1991; Keeney & Heide, 1994; Messing & Heeren, 2004), the overwhelming majority of them are male. Thus, it was expected that males would be more common among both homicide groups, and indeed nearly 95% ($n = 618$) of the current offenders were men and more than 5% ($n = 36$) were women. Gender was coded *male* = 0 and *female* = 1.

Age. MHOs tend to be older than most conventional criminal offenders (Egger, 2002; Fox & Levin, 1994; Hickey, 2002; R. M. Holmes & Holmes, 2001). The current sample was similarly older than most offender samples ($M = 39.12$, $SD = 10.77$, range = 18 to 82) at the time of their most recent homicide event.

Citizenship, race, and ethnicity. Although the most notorious MHOs have been Caucasian, MHOs come from an array of ethnic backgrounds (Egger, 2002; Fox & Levin, 1994; Hickey, 2002; R. M. Holmes & Holmes, 2001). Thus, four dichotomous racial groups were created for Caucasians ($n = 264$, 40%), African Americans ($n = 275$, 42%), Hispanics ($n = 101$, 15%), and a residual category comprising offenders from Middle Eastern and Asian descent ($n = 14$, 2%). An additional dummy variable for citizenship (U.S. citizen:

$n = 595$, 91%; foreign national: $n = 59$, 9%) was also created. In regression analyses, Caucasians served as the omitted reference group.

Onset. Although onset is often delayed among MHOs (Fox & Levin, 1998), an early onset is one of the most powerful correlates of habitual and serious criminal offending (Farrington & Hawkins, 1991; Moffitt, 1993; Nagin & Farrington, 1992; Piquero & Chung, 2001; Wolfgang, Figlio, & Sellin, 1972). In the present study, onset was operationalized as a ratio-level variable ($M = 21.70$, $SD = 7.52$, range = 13 to 73) measuring age at first arrest.

Gang involvement. Street gang involvement ($no = 0$, $yes = 1$) was included as a control variable because it is a known correlate of serious violence (see Heide, 2003). Ninety-one percent ($n = 595$) of the sample was not involved in gangs at the time of their homicide event ($M = 0.09$, $SD = 0.29$).

Contemporaneous offenses. MHOs frequently commit other crimes during the course of murdering their victims (Egger, 2002; Fox & Levin, 1994; Hickey, 2002; R. M. Holmes & Holmes, 2001). A variety of crimes dubbed contemporaneous offenses were included to explore correlates of multiple homicide offending. With descriptive statistics, these were attempted homicide ($M = 0.22$, $SD = 0.60$, range = 0 to 5), carjacking ($M = 0.02$, $SD = 0.17$, range = 0 to 3), rape ($M = 0.21$, $SD = 0.86$, range = 0 to 13), robbery ($M = 0.76$, $SD = 1.68$, range = 0 to 21), aggravated assault ($M = 0.34$, $SD = 1.01$, range = 0 to 9), child molestation ($M = 0.06$, $SD = 0.70$, range = 0 to 12), kidnapping ($M = 0.32$, $SD = 1.12$, range = 0 to 15), burglary ($M = 0.34$, $SD = 0.82$, range = 0 to 6), drug violations ($M = 0.07$, $SD = 0.42$, range = 0 to 6), and weapons violations ($M = 0.24$, $SD = 1.01$, range = 0 to 21).

Prior criminal history. As described earlier (e.g., Egger, 2002; Hickey, 2002; R. M. Holmes & Holmes, 2001), research has produced mixed findings regarding a relationship between criminal history and multiple homicide offending. Thus, 16 measures of prior convictions (with descriptive statistics) were included. These were prior prison sentences ($M = 1.43$, $SD = 1.81$, range = 0 to 11), felony convictions ($M = 3.22$, $SD = 4.05$, range = 0 to 28), probationary sentences

($M = 2.09$, $SD = 2.77$, range = 0 to 21), misdemeanor convictions ($M = 0.27$, $SD = 1.01$, range = 0 to 10), murder ($M = 0.13$, $SD = 0.35$, range = 0 to 2), rape ($M = 0.16$, $SD = 0.73$, range = 0 to 14), robbery ($M = 0.44$, $SD = 1.11$, range = 0 to 10), aggravated assault ($M = 0.47$, $SD = 1.09$, range = 0 to 8), kidnapping ($M = 0.07$, $SD = 0.35$, range = 0 to 4), child molestation ($M = 0.03$, $SD = 0.25$, range = 0 to 4), narcotics use ($M = 0.28$, $SD = 0.94$, range = 0 to 8), narcotics trafficking ($M = 0.17$, $SD = 0.75$, range = 0 to 8), burglary ($M = 0.68$, $SD = 1.45$, range = 0 to 10), larceny ($M = 0.70$, $SD = 1.52$, range = 0 to 16), weapons offenses ($M = 0.29$, $SD = 0.71$, range = 0 to 8), and career arrests ($M = 3.69$, $SD = 4.97$, range = 0 to 36).

ANALYSIS STRATEGY

Data are presented and analyzed in three ways. Table 1 contains prevalence and incidence counts of homicide offenders and victims. Table 2 displays the arrest chronicity of SHOs and MHOs.

TABLE 1: Prevalence and Incidence of Completed and Attempted Homicides

<i>Homicide Victims</i>	<i>Homicide Offenders</i>	<i>Prevalence (%)</i>	<i>Incidence</i>
1	494	75.54	494
2	104	15.9	208
3	39	5.96	117
4	8	1.22	32
5	4	0.61	20
6	2	0.31	12
7	1	0.15	7
8	1	0.15	8
9	1	0.15	9
Total	654	100.0	927

<i>Attempted Victims</i>	<i>Homicide Offenders</i>	<i>Prevalence (%)</i>	<i>Incidence</i>
0	552	84.4	0
1	72	11.01	72
2	20	3.06	40
3	8	1.22	24
4	1	0.15	4
5	1	0.15	5
Total	654	100.0	145

TABLE 2: Prior Arrest Totals for Single Homicide and Multiple Homicide Offenders

<i>Prior Arrests</i>	<i>Single Homicide Offenders</i>		<i>Multiple Homicide Offenders</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
0	199	40.3	61	38.1
1	46	9.3	11	6.9
2	33	6.7	13	8.1
3	29	5.9	16	10.0
4	22	4.5	12	7.5
5	22	4.5	7	4.4
6	22	4.5	11	6.9
7	26	5.3	4	2.5
8	18	3.6	5	3.1
9	8	1.6	4	2.5
10 or more	61	12.4	16	10.0
Total	494	100.0	160	100.0

TABLE 3: Difference of Means Between SHOs and MHOs

<i>Variable</i>	<i>SHOs</i>	<i>MHOs</i>	<i>t</i>
Gender (<i>male</i> = 0)	0.06	0.03	1.52
Race (<i>Caucasian</i> = 1)	0.39	0.43	0.82
Race (<i>African American</i> = 1)	0.42	0.43	0.27
Ethnicity (<i>Hispanic</i> = 1)	0.17	0.09	2.40***
Age	38.96	39.61	0.66
Onset of arrest	21.68	21.80	0.18
Prior arrests	3.70	3.65	0.11
Prior prison	1.40	1.54	0.84
Prior felony convictions	3.29	3.01	0.74
Prior probation	2.16	1.84	1.27
Prior murder arrest	0.12	0.16	1.48
Prior rape arrest	0.12	0.27	2.24**
Prior robbery arrest	0.43	0.46	0.33
Prior assault arrest	0.49	0.44	0.49
Prior kidnapping arrest	0.08	0.05	0.84
Prior burglary arrest	0.69	0.66	0.27
Prior theft arrest	0.68	0.76	0.57
Prior weapons arrest	0.32	0.20	1.85*
Prior narcotics sale arrest	0.20	0.11	1.32
Prior narcotics use arrest	0.31	0.16	1.74*

Note. MHOs = multiple homicide offenders; SHOs = single homicide offenders.
 * $p < .10$. ** $p < .05$. *** $p < .01$.

TABLE 4: Contemporaneous Offense Logistic Regression Model

<i>Variable</i>	<i>Odds Ratio</i>	<i>SE</i>	<i>z</i>
Gender (<i>male</i> = 0)	0.43	0.22	-1.62*
Citizenship	0.71	0.32	-0.76
Age	1.00	0.01	-0.06
Onset	1.02	0.02	1.06
Gang	0.32	0.15	-2.44***
African American	0.98	0.20	0.09
Hispanic	0.52	0.20	-1.72*
Other race	3.23	1.87	2.03**
Attempted homicide	1.27	0.19	1.53
Carjacking	0.65	0.59	-0.47
Rape	1.27	0.15	1.96**
Robbery	1.06	0.07	0.90
Assault	1.00	0.11	0.04
Kidnapping	1.03	0.09	0.36
Burglary	1.44	0.17	3.15***
Weapons	0.96	0.10	-0.39
Drugs	0.80	0.25	-0.72
Model χ^2	48.04***		
Pseudo R ²	.07		
Log likelihood	-339.18		

* $p < .10$. ** $p < .05$. *** $p < .01$.

Differences of means *t* tests between SHOs and MHOs for demographic and criminal history information are shown in Table 3. Finally, logistic regression models examining the effects of contemporaneous offenses (Table 4), prior record (Table 5), and a full model (Table 6) were conducted. For each, the dependent variable was a dichotomous term for multiple homicide offending (*no* = 0, *yes* = 1).

RESULTS

Table 1 contains prevalence and incidence information for total homicide offenders and their victims, as well as attempted homicides and victim totals. From the total sample of 654 convicted murderers, slightly more than 75% ($n = 494$) of them murdered a single victim. The remaining 160 killers (24%) murdered between two and nine victims (i.e., were MHOs). The modal MHO murdered two

TABLE 5: Prior Record Logistic Regression Model

<i>Variable</i>	<i>Odds Ratio</i>	<i>SE</i>	<i>z</i>
Gender	0.43	0.22	-1.64*
Citizenship	0.91	0.39	-0.22
Age	0.99	0.01	-0.76
Onset	1.01	0.02	0.63
Gang	0.37	0.17	-2.14**
African American	1.06	0.23	0.27
Hispanic	0.60	0.22	-1.36
Other race	2.82	1.73	1.69*
Prior prison	1.26	0.13	2.20**
Prior felony	0.83	0.09	-1.67*
Prior probation	0.89	0.08	-1.32
Prior misdemeanor	1.21	0.13	1.84*
Prior murder	1.51	0.44	1.39
Prior rape	1.69	0.35	2.50***
Prior robbery	1.07	0.14	0.54
Prior assault	1.08	0.15	0.59
Prior burglary	1.13	0.15	0.91
Prior theft	1.25	0.15	1.90**
Prior weapon	0.92	0.19	-0.43
Prior molestation	0.30	0.26	-1.40
Prior drug sale	1.06	0.22	0.28
Prior drug use	0.97	0.18	-0.14
Model χ^2	49.38***		
Pseudo R^2	.07		
Log likelihood	-339.19		

* $p < .10$. ** $p < .05$. *** $p < .01$.

victims, and the prevalence of multiple homicide offending declined as victim counts increased. For example, defendants who killed two victims were 104 times more common than defendants who murdered seven, eight, or nine victims. Overall, the 654 homicide offenders murdered 927 victims. Table 1 also contains information on attempted homicides committed by the offenders during their lethal crimes. Most homicide offenders (more than 84%, $n = 552$) did not attempt to murder additional persons during their lethal criminal episode. However, about 15% ($n = 102$) of the convicted murderers in the sample attempted to kill between one and five additional victims. Overall, 145 persons were the victims of attempted homicide.

TABLE 6: Full Logistic Regression Model

<i>Variable</i>	<i>Odds Ratio</i>	<i>SE</i>	<i>z</i>
Gender	0.44	0.23	-1.57*
Citizenship	0.70	0.32	-0.80
Age	0.99	0.01	-0.69
Onset	1.02	0.02	1.07
Gang	0.33	0.16	-2.24**
African American	1.03	0.23	0.14
Hispanic	0.59	0.23	-1.37
Other	3.22	2.02	1.86*
Attempted homicide	1.29	0.21	1.61*
Carjacking	0.60	0.56	-0.55
Rape	1.20	0.14	1.54
Robbery	1.04	0.07	0.66
Assault	1.01	0.11	0.15
Kidnapping	1.07	0.11	0.65
Burglary	1.52	0.19	3.39***
Drugs	0.90	0.26	-0.36
Weapon	0.98	0.10	-0.23
Prior prison	1.28	0.14	2.32**
Prior felony	0.86	0.10	-1.31
Prior probation	0.89	0.08	-1.33
Prior misdemeanor	1.24	0.14	1.98**
Prior murder	1.55	0.47	1.44
Prior rape	1.50	0.32	1.90**
Prior robbery	1.03	0.14	0.18
Prior assault	1.09	0.16	0.66
Prior kidnapping	0.90	0.32	-0.29
Prior molestation	0.30	0.25	-1.42
Prior drug sale	1.08	0.23	0.38
Prior drug use	0.96	0.18	-0.19
Prior burglary	1.02	0.14	0.11
Prior theft	1.19	0.14	1.45
Prior weapon	0.88	0.19	-0.60
Model χ^2	75.93***		
Pseudo R^2	.10		
Log likelihood	-325.91		

* $p < .10$. ** $p < .05$. *** $p < .01$.

As shown in Table 2, the majority of SHOs and MHOs had been arrested prior to their final homicide event. Forty percent of SHOs ($n = 199$) and 38% of MHOs ($n = 61$) had no previous arrests, whereas 60% of SHOs ($n = 295$) and 62% of MHOs ($n = 99$) had

previously been arrested. In fact, these arrest data indicated that both types of homicide offenders were extensively involved in crime prior to their most recent offense. For instance, using the standard measure of five arrests or police contacts to delineate a chronic or habitual offender (Wolfgang et al., 1972), nearly 32% of SHOs ($n = 157$) and more than 29% of MHOs ($n = 47$) were career criminals before they committed their homicides. Moreover, more than 12% of SHOs ($n = 61$) and 10% of MHOs ($n = 16$) had accumulated 10 or more arrests during their offending careers before the most recent offense.

As shown in Table 3, in terms of demographics and criminal history, there were relatively few differences between SHOs and MHOs. However, compared to MHOs, SHOs were more likely to be Hispanic, $t(654) = 2.90$, $p < .01$, averaged more prior arrests for weapons, $t(654) = 1.85$, $p < .10$, and had more prior arrests for narcotics use, $t(654) = 1.72$, $p < .10$, although the latter two findings only approached statistical significance. MHOs had significantly more prior arrests for rape, $t(654) = 2.24$, $p < .05$, than defendants who killed only one victim. Otherwise, both SHOs and MHOs demonstrated fairly extensive criminality prior to their homicide events. Regardless of their number of victims, the average murderer in the present sample had more than three prior felony convictions, more than one previous prison sentence, and approximately two probationary sentences. Their arrest histories contained a mix of violent and property index offenses in addition to weapon and drug violations. The modal murderer was a nearly 40-year-old male whose onset of arrest did not occur until after age 21. Both homicide groups contained roughly the same number of Caucasians and African Americans.

Moving to multivariate analysis, Table 4 contains a logistic regression model that regressed homicide offender status on contemporaneous criminal offenses and controls. The purpose of this model was to examine whether various nonlethal crimes were likely to contribute to an offender murdering multiple victims. Four significant effects emerged and two effects approached significance. Those who also committed rape during their homicide event were significantly more likely to be MHOs, $Exp(B) = 1.27$, $z = 1.96$, $p < .05$. Similarly, defendants who committed burglary in concert with homicide were more likely to murder multiple victims, $Exp(B) = 1.44$, $z = 3.15$, $p < .01$. Although none of the remaining offenses

were significantly predictive of multiple homicide offending, males, $Exp(B) = 0.43$, $z = -1.62$, $p < .10$, and members of the residual Other race category, $Exp(B) = 3.23$, $z = 2.03$, $p < .05$, were more likely than females, Caucasians, and African Americans to commit multiple murder.¹⁰ Hispanic offenders were less likely to murder multiple victims, $Exp(B) = 0.52$, $z = -1.72$, $p < .10$, as were gang members, $Exp(B) = 0.32$, $z = -2.44$, $p < .01$.

As shown in Table 5, assorted measures of prior criminal record were predictive of multiple homicide offending. Four of these measures were significant and four approached statistical significance. Defendants who had previously been imprisoned, $Exp(B) = 1.26$, $z = 2.20$, $p < .05$, had prior misdemeanor convictions, $Exp(B) = 1.21$, $z = 1.84$, $p < .10$, prior rape convictions, $Exp(B) = 1.69$, $z = 2.50$, $p < .01$, and prior theft convictions, $Exp(B) = 1.25$, $z = 1.90$, $p < .05$, were more likely to commit multiple homicide. Curiously, prior felony status was negatively related to multiple homicide offending, $Exp(B) = 0.83$, $z = -1.67$, $p < .10$. As was the case with the previous model, males, $Exp(B) = 0.43$, $z = -1.64$, $p < .10$, members of the residual race category, $Exp(B) = 2.82$, $z = 1.69$, $p < .10$, and nongang members, $Exp(B) = 0.37$, $z = -2.14$, $p < .05$, were more likely to commit multiple homicides.

The full model (shown in Table 6) contains controls, contemporaneous offenses, and prior records as potential predictors of multiple homicide offending. Five measures achieved statistical significance, and three measures approached statistical significance. Homicide offenders who committed burglary, $Exp(B) = 1.52$, $z = 3.39$, $p < .01$, and attempted to murder additional victims, $Exp(B) = 1.29$, $z = 1.61$, $p < .10$, were more likely to have multiple victims.¹¹ Among the prior record variables, three significant effects emerged. Offenders with prior prison records, $Exp(B) = 1.28$, $z = 2.32$, $p < .05$, misdemeanor convictions, $Exp(B) = 1.24$, $z = 1.98$, $p < .05$, and rape convictions, $Exp(B) = 1.50$, $z = 1.90$, $p < .05$, were significantly more likely to murder more than one victim. None of the remaining criminal history variables were significantly related, positively or negatively, to multiple homicide offending. Finally, men, $Exp(B) = 0.44$, $z = -1.57$, $p < .10$, nongang members, $Exp(B) = 0.33$, $z = -2.24$, $p < .05$, and members of the residual Other race category, $Exp(B) = 3.22$, $z = 1.86$, $p < .10$, were more

likely to have multiple victims. None of the other social demographic variables were significantly related to multiple homicide offending.

DISCUSSION AND CONCLUSION

Because of the rarity of multiple homicide offending, study of the offenders who commit it has been largely idiographic or case study driven. Although this has produced an impressive knowledge base, it has retarded an understanding of the potential linkages between rare MHOs and vastly more common conventional criminals. Using a criminal career perspective, the current study sought to enrich the study, and further the understanding, of MHOs.

One in four killers in the current sample was an MHO. Nearly all MHOs murdered two or three victims. That an offender murdered more than three victims was statistically rare even among this sample of homicide offenders. The modal MHO was a 40-year-old male. Although 38% of MHOs ($n = 61$) had no official criminal history before their homicide event, the majority of them had persistent and even extensive prior records. That is, they averaged nearly four arrests (just under the standard criterion for habitual criminality), three felony convictions, and one prison sentence. Taken together, these estimates indicate considerable continuity in antisocial behavior. Similarly, it has been shown that habitual offenders have sustained, often lifelong, documented histories of antisocial and criminal behavior (Blumstein et al., 1986; DeLisi, 2001, 2003, 2005; Farrington, 2000; Le Blanc & Fréchette, 1989; Moffitt, 1993; Nagin & Farrington, 1992; Piquero et al., 2003; Wolfgang et al., 1972).

Offenders who had committed rape or burglary in concert with their homicide event, as well as those who had prior rape convictions, were significantly more likely to ultimately kill multiple victims. Given the predatory nature of offenses such as rape and residential burglary (particularly when the burglary is instrumental for the commission of rape or murder), these findings make intuitive sense. The strong empirical link between the brutal interpersonal crime of rape and multiple murder squares with the profiles of MHOs created by special agents in the Federal Bureau of Investigation's Behavioral

Science Unit (e.g., Hazelwood & Douglas, 1980; Prentky et al., 1989; Ressler et al., 1983; Ressler, Burgess, Douglas, Hartman, & D'Agostino, 1986). Moreover, this illuminates a potentially fruitful basis for collaboration between popular and academic investigations of MHOs. In their popular work, Douglas and Olshaker (1998) described the importance of burglary as a meaningful criminal history harbinger of future lethal violence, just as the current logistic regression models provide an empirical link between burglary, rape, and multiple homicide. Because of the current use of convenience sampling, this finding should be viewed as a speculative but interesting future avenue of research.

The substantive significance of other effects is more difficult to explain. For example, as shown by the full model in Table 6, having prior misdemeanor convictions was predictive of multiple homicide offending, but other forms of violent offending (e.g., murder, robbery, assault, molestation) were not. Because the current study did not contain important clinical variables, the true importance or spurious nature of these criminal history effects is unknown. As mentioned by others (e.g., Fox & Levin, 1998; Heide, 2003), future research should ideally include clinical, behavioral, and criminal history variables from all segments of the life course to better explain multiple homicide offending.

Three additional limitations of the current study should be considered. First, it is common for mass killers and spree killers to commit suicide or to be killed by police (Hickey, 2002). Thus, the current sample omitted MHOs whose deaths terminated their homicide events. This is a potentially important source of sample selection bias. Second and relatedly, convenience sampling poses obvious concerns about the data that should be addressed by replication or improved probability sampling techniques. Third, despite the substantive and statistical rationales for combining serial, spree, and mass killers into one group of MHOs, researchers conventionally study homicide offenders separately as typological groups. Future research should address the benefits and limitations of operationalizing criminal offenders, even murderers, in general terms (e.g., Gottfredson & Hirschi, 1990), as was done here.

Perhaps the most vexing finding was the delayed arrest onset among MHOs and the nonsignificant effects between onset and

crime. Although others have also expressed surprise over the delayed arrest onset of MHOs (e.g., Fox & Levin, 1998), that MHOs had a delayed onset runs contrary to copious empirical and theoretical work in the criminal career paradigm. For instance, Moffitt's (1993) developmental taxonomy effectively dichotomizes criminal offenders into the large, normative group termed *adolescence-limited offenders* and the small, pathological group known as *life-course persistent offenders*. A priori pathological offenders engage in the most serious forms of crime, such as predatory violence, and manifest antisocial behavior quite early in the life course, during childhood. Thus, criminal career researchers (e.g., Piquero et al., 2003) have documented quite impressively that the worst criminals will exhibit delinquent and violent behavior as children, yet the killers in the current study were not initially arrested until adulthood. At the very least, this constitutes a pressing research question. More dramatically and, to extrapolate further, MHOs might challenge the theoretical ideas and empirical trends developed by criminal career researchers.

NOTES

1. *Criminal episode* is defined as all criminal activity irrespective of when it was committed that comprises a single criminal case or filing. For example, a defendant who murders nine people during a 5-day span would, after capture, likely be charged with nine counts of murder. Even though the killings were committed at different times, overall the criminal episode and subsequent court filing comprises a discrete entity.

2. Although the prevalence of multiple homicides is relatively low compared to single homicides, this does not necessarily mean the phenomenon is so rare that it does not warrant study. For example, Fox and Levin (2003) reported that 599 mass killings involving 2,800 victims and 826 killers occurred from 1976 through 1999, an average of two mass murders per month. Similar estimates have been produced in the United Kingdom. Gresswell and Hollin (1994) concluded that about 3% of all homicide victims in England and Wales died in incidents of multiple homicide.

3. Studies that employ samples with large numbers of murderers, explore clinical and offense-related variables, and use a control group have been cited as methodologically superior approaches to studying homicide offenders (see Heide, 2003).

4. Despite the substantive rationales for studying MHOs aggregately, readers may have concerns about the heterogeneity of the study group. The MHOs contained 66 spree killers, as well as just 10 serial and mass killers. The latter figures precluded separate analyses.

5. The importance of social isolation and a traumatic, precipitating trigger event characterize both male and female MHOs. For example, Messing and Heeren (2004) recently analyzed 32 female murderers who killed more than two people between 1993 and 2001. They found that women often viewed their domestic status as central to their lives, and when that

status was seriously threatened, multiple murder was selected as a means to save face. According to Messing and Heeren (2004), "in many instances, these women believed that they had some unassailable proprietary right to their children's lives . . . and believed unquestionably that, as mothers, they owned their children" (pp. 152-153). Thus, women usually selected their children as victims of multiple murder, whereas men commonly selected their entire family or some other close relationship group, such as coworkers.

6. That much of the research on homicide offenders downplayed or omitted information on criminal history is understandable given the sampling problems these offenders pose. If researchers must construct databases from secondary news sources, then it should be expected that investigators would have limited access to criminal history information. In this sense, variables selected for inclusion in a research study will be those that can be garnered from archives (e.g., Messing & Heeren, 2004).

7. It is interesting that some researchers have examined homicide within the criminal career context as a likely cause of death for chronic offenders (Laub & Vaillant, 2000).

8. Readers might inquire about state differences in homicide offenders. To examine this, dichotomous codes for each state were included in preliminary logistic regression models. Controlling for the state in which an offender was processed did not substantively change the results. Moreover, no significant statistical effects emerged for the state dummy variables.

9. Others have written about the sampling difficulties posed by extreme and rare offenders, such as those who commit homicide. For instance, Reidel (1999) advised that

homicide researchers operate under a severe constraint from the outset; given its rarity, researchers are unlikely to directly observe the subjects in their studies. Instead, researchers interested in the quantitative analysis of homicide have to depend on secondary data, that is, information gathered for some other purpose. Because of the character of secondary data, information about homicide events are filtered through layers of reporters who answer to the demands of organizations that may or may not be concerned with the criteria for research data. (p. 75)

10. The residual race category contained 14 offenders of Middle Eastern and Asian descent. Of the 14, 7 were SHOs and 7 were MHOs. Proportionately, the Other race category contained the highest number (i.e., 50%) of MHOs.

11. The zero-order correlation between the attempted homicide charge and multiple homicide offender status was $r = .07$, $p = .06$.

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