

# The value of life in death: Multiple regression and event history analyses of homicide clearance in Los Angeles County

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## Abstract

While clearance rates of homicides have declined over the last three decades, there still remains limited research on the topic. In recent studies, scholars had argued that legal factors best explained homicide clearance. They stated that extralegal variables that had proven to be important and significant for explaining other processes in the criminal justice system were not as helpful in explaining homicide clearance. This article challenges those findings. Utilizing multiple regression and event history analysis techniques, this article shows that extralegal variables such as the gender and race or ethnicity of the victim affect the likelihood of clearance and time needed for solving the murder. The research examined all homicides committed in Los Angeles County from 1990 through 1994. Findings demonstrated that some victims “received more law,” as Donald Black argued, and that not all victims’ lives were equally valued.

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## Introduction

Does society value life equally? Studies of resource allocation in areas of income assistance, medical care, and social services for the aged or young suggested that government elites and the lay public regularly made judgments about who was most deserving of care or protection (Eden & Lein, 1997; Gordon, 1994; Quadagno, 1988). Even studies of the criminal justice system supported the notion that some victims and crimes against them were more worthy of protection or retribution, demonstrating differences in charging and sentencing practices. For example, death penalty studies found that some victims’ lives were more “valued,” which lead to disparate impacts and outcomes that illustrate racial and gender bias (Gross & Mauro,

1989). Baldus, Woodworth, and Pulaski (1990) showed that defendants in homicides involving a White female victim were more likely to be charged with a death penalty eligible crime and more likely to be sentenced to death. Is it possible that the processes that lead to racial and ethnic or gender differences in death penalty sentencing arise at an even earlier stage in the criminal justice system?

One important level at which to consider this question is the stage of homicide clearance. As homicide rates declined in the last three decades, from 10.1 percent in 1974 to 7.1 percent in 2001, clearance rates for homicides also fell. In 1961, 94 percent of all homicides were cleared. That number dropped to 67 percent nationally in 1996 (Bureau of Justice Statistics, 2002a; Maguire & Pastore, 2001; Wellford & Cronin, 1999). Despite this interesting trend, there still remains limited research on homicide clearance. This research, furthermore, provided some inconsistent and contradictory explanations for what leads to differences in clear-

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ance. In particular, results about racial discrepancies in clearance rates have been inconclusive. Most recent works suggested that the race or ethnicity of the victim did not affect whether the case was solved (Puckett & Lundman, 2003; Riedel, 2002). This article addresses the issue of whether some victims' cases receive "more law" (Black, 1976). The study examined what factors explained which homicide cases were solved and how quickly in Los Angeles County from 1990 through 1994 when over 9,442 homicides were committed, using multiple regression and event history analysis techniques. Multiple regression analysis with a binary outcome of homicide clearance can elucidate what best predicts the chance that a case is solved. Event history analysis can show how much time is needed to clear a case. Together, they provide a fuller picture of the processes involved in homicide clearance. This study found that extralegal variables such as gender and race or ethnicity of the victim affected the likelihood that a homicide was cleared. These factors also determined the length of time needed to solve the crime.

### Framework and previous literature

In his seminal work, *The Behavior of Law*, Donald Black in 1976 argued that law was a form of "governmental social control," which included activities such as reporting of the crime and the police's investigational efforts. Black argued that the law's response could be seen as varying according to five characteristics of social life: stratification, social control, morphology, culture, and organization. He claimed that victims and sites of victimization that occupy lesser positions in these areas of social life would receive a lesser response from law than victims and victimization areas of higher status. Arguing that law was quantifiable, he wrote that some victims and cases might receive more law so that "in criminal matters, an arrest is more law than no arrest" (Black, 1976, p. 3). In evaluating arrests as a social phenomenon with a variable response from law, Black explained that it was therefore possible "to explain arrest with the proposition that law varies inversely with other social control" (1976, p. 8).<sup>1</sup> Black's theory thus provides an opportunity to evaluate police's ability to clear homicides as a measure of law and whether different clearance rates suggest whether some victims are less valued than others (Black, 1980).<sup>2</sup> According to Black, one would predict that homicides involving victims who occupy a lower position would receive less law and be less likely cleared. Cases in which victims were non-White, female, very young, or very old, therefore, may have decreased clearance levels.

Studies of homicide clearance generally considered whether discretionary or extralegal factors, such as race or gender of the victim, determined clearance rates or if instead, nondiscretionary or legal characteristics of the crime such as the weapon used or the commission of a contemporaneous felony were more important for establishing clearance. Largely, they found little if any support for Black's theory of arrest that homicide cases involving victims of lower status, particularly racial and ethnic minorities, were less likely to be solved. One significant and notable exception was by Borg and Parker (2001). Using city-level data, they found empirical support for the claim that economic, social, cultural, organizational, and normative characteristics of urban areas affected police's chances of clearing homicides at the city level. Cities with lower adult educational attainment, lesser city spending on education, and greater racial inequalities in education, employment, income, and residence had lower clearance rates than did cities that had higher measures.

A number of studies, however, that looked at individual level data did not find support for Black's thesis, especially with respect to racial and ethnic minorities. Instead, they discovered that nondiscretionary factors mattered most. In a study of homicides in four large U.S. cities from 1980 through 1993, Wellford and Cronin (1999) found factors such as whether or not the victim was a drug user or buyer, weapon used, homicide location, and whether there was an eyewitness to be most critical in determining homicide clearance. They did not find significant race-of-victim effects influencing clearance.

Along with Wellford and Cronin (1999), Litwin (2004), Puckett and Lundman (2003), and Riedel and Rinehart (1996), also found no difference in homicide clearance with respect to race of the victim. Litwin did observe a small yet significant effect for Latino victims, finding that in such cases, the homicide clearance rate was smaller. Litwin, nevertheless, argued that nondiscretionary variables such as the location of the body found to be most crucial for predicting clearance. To varying degrees, the extent to which gender or age of the victim may impact clearance rates were shown to be significant. Cases involving very young or female victims had increased likelihood of clearance (Regoeczi, Kennedy, & Silverman, 2000), whereas cases involving elderly victims had a decreased likelihood of clearance (Wolfgang, 1958).

The relationship between the victim and offender may also affect clearance. Homicides between family members were most likely to be cleared (Riedel, 1993). Flewelling and Williams (1999) concluded that stranger

homicides were more difficult to clear. Missing data on the victim/offender relationship that were treated as stranger homicides may have created systematic bias in the analysis and interpretation. Homicides that follow robberies or other felonies may be erroneously characterized as stranger killings. What may be more important in predicting clearance may be the precipitating event and not the victim/offender relationship (Regoeczi & Riedel, 2003; Riedel, 1998, 1999).

An important preceding event shown to affect clearance was the occurrence of a concomitant felony (Regoeczi et al., 2000), but this effect was not observed in Riedel's (2002) study of Los Angeles. Other non-discretionary factors such as the strength of a case, demonstrated by the weight of evidence or willingness of eyewitnesses to come forward, were also shown to be significant. Puckett and Lundman (2003) found that homicides committed in neighborhoods with higher percentage of African American residents were less likely to be cleared than those committed in largely White neighborhoods. They suggested that this might be due to a history of antagonism between African Americans and the police. African Americans may be less willing to cooperate in a police investigation.

While the specifics varied, most of these studies claimed that non-discretionary factors, in general, were most important in predicting the likelihood of clearance. Questions and inconsistencies remain nevertheless, and they implore researchers to keep investigating. Of particular importance for the current research was Puckett and Lundman's (2003, p. 188) argument that focused attention on the effects of extralegal victim characteristics such as race and gender must continue.

## Data and methods

There were 9,442 homicides, excluding accidental, vehicular, and justifiable homicides in Los Angeles County from January 1, 1990 through December 31, 1994.<sup>3</sup> All 9,442 cases of homicide were followed through each level of the criminal justice system. As a large metropolitan area, Los Angeles County presented itself as an interesting site for examining the relationship between homicides and the criminal justice system.

Several existing databases were joined with newly coded data for all homicides. From the California state homicide records, data such as the location of the homicide, weapon used, and precipitating criminal activity were gathered. From vital statistics, information regarding the victim's place of birth, place of death, and educational attainment was collected. These data were

used to create variables on the median income by census tract for the victim and place of death. Supporting victim information was also retrieved from the California State Coroner's Office, including cause of death. For all cases that resulted in an arrest and formal charges of manslaughter or murder, court proceedings were followed for each defendant through June 1996 using the Los Angeles County court records. These records provided data on the official judicial handling of the defendants and highly detailed information about their background, including educational attainment and occupation. Information on the media's handling of the cases was also gathered. The number and placement of articles that appeared in *The Los Angeles Times* were collected in an effort to see what impact the newspaper's handling of homicides had on clearance and adjudication. With multiple databases, crucial information about the victim, defendant, and homicide were carefully matched, providing more reliable information about the cases than if just one database had been used.

The dependent variable was homicide cases cleared. Clearance was identified as true if an arrest was made or solved but no arrest was made due to suicide or if the defendant was somehow unavailable. Fifty-four percent of all cases were solved. Forty-seven percent of homicides resulted in arrests and formal charges of murder or manslaughter. Less than a third of all cases resulted in a conviction or a guilty plea. By June 1996, 7 percent of the cases had prosecutions pending, 6 percent had charges dismissed, and 2 percent were found not guilty.

Nearly half (48.8 percent) of all victims were Latino. African American victims represented 33.9 percent of the victims. Non-Hispanic Whites accounted for 13.1 percent of all victims, and 3.9 percent were Asian. Forty-six percent of African American victim cases were unsolved. Forty-eight percent of Latino victim cases and 37 percent of non-Hispanic White victim homicides were never cleared.

Victim/offender relationship was identified as spousal/partner, other familial, friend or acquaintance, stranger, or unknown. Eight percent of the victims had a partner/spousal or other familial relationship with their assailant. A quarter of them were a friend or acquaintance of the offender, and 26 percent of the victims were strangers to their attackers. Twelve percent of the victims were related to their killers through gang membership. For twenty-nine percent of the cases, a relationship was undetermined by the police.

Circumstances surrounding the homicide were also measured. Gang-related motive accounted for 39 percent of all homicides. Twenty-three percent of murders occurred following an argument or brawl. Nine percent

followed a robbery, and 5 percent were related to narcotic drugs. Four percent resulted from a domestic dispute. Seven percent of the homicides were precipitated by some other circumstance, while this information was undetermined for the remaining 13 percent of the cases.

Fifty-five percent of all homicides occurred on the street or outdoors. Twenty-six percent happened in a residence, and 11 percent took place in a vehicle. Seven percent of victims were killed at a place of business, and the remaining 1 percent of the victims were murdered elsewhere.

Two sets of analyses were done. First, a multiple regression of arrest clearances was conducted to determine what best explained which homicides were more likely to be cleared. Second, a hazard rate or survival analysis was carried out to examine which characteristics of the homicide could account for how much time was needed to solve a case. Survival analysis allows for a qualitative change in an event (in this case, clearance) to be explored as it moves from one discrete state to another (Allison, 1984, 1995; Collett, 1994). Time to an event is estimated. Piecewise exponential modeling was used to calculate the hazard of a victim's homicide being solved. For each victim, an event (murder solved) took place if a defendant was arrested. With exact dates of both the victim's death and the defendant's arrest, person/month observations were created. In piecewise exponential models, time scale is divided into intervals, and the hazard is assumed to be constant within each interval.

A new data set was constructed in which each victim could have multiple records. For time scaled by months, a data set with victim/month observations was formed with 275,530 person/month observations. Of these, 2,253 cases were non-censored, while 273,277 were right censored. Observations with missing values numbered 16,040, and 766 observations had zero or negative responses. The time intervals were set arbitrarily, thus, a model run on a data set where the time variable was scaled into quarters was also evaluated. For time scaled by quarters (each quarter was roughly three months), a data set where victim/quarter observations totaled 61,274 was structured. There were 2,253 observations that were non-censored and 92,566 observations that were right censored.

## Results and discussion

In Los Angeles County, 47 percent of homicides committed between 1990 and 1994 were cleared by June 1996. What best explained which murders were solved? If the criminal justice system treats all homicide cases similarly, then one would not expect to find

significant clearance or time to clearance outcomes to vary by extralegal factors such as race and ethnicity or gender. Extralegal variables such as race and ethnicity or gender should not determine whether a crime was solved or the length of time needed to solve a homicide. While the results were not identical in the two sets of analyses, both helped to support Black's theory that some victims' crimes "get more law" than others. These results showed that homicide clearance varied by a number of extralegal factors. Table 1 provides the results from a logistic regression with the binary outcome variable of homicide cleared ( $N = 8,991$ ).

As predicted by Black's theory, cases involving non-White victims or old victims were less likely to be solved. In cases where the victim was White versus non-White, the odds ratio that such cases would be cleared was 1.42. White victim cases had a 42 percent greater likelihood of being solved than non-White cases. Said slightly differently, non-White victim homicides were 30 percent less likely to be solved than White victim cases.

Cases involving young children or teenagers were also more likely to be solved than cases where the victim was aged twenty to sixty-four, the reference group. The variable for the very young, aged zero to twelve, was insignificant though. The old, aged sixty-five and over, were less likely to receive as much law as the young. Their cases were 35 percent less likely to be solved than younger adult (aged twenty to sixty-four) victim cases. Cases involving victims who were sixty-five and older were solved at nearly half the rate of those cases with children victims aged zero to twelve.

Table 1  
Logistic regression estimating odds of homicide clearance ( $N = 8,991$ )

Variable**	Estimate	Standard error	Odds ratio
Intercept	0.76		
Victim White	0.35	(0.08)	1.42*
Victim female	0.26	(0.08)	1.30*
Victim aged 0–12	0.13	(0.15)	1.14
Victim aged 13–19	0.22	(0.07)	1.25*
Victim aged 65–Up	–0.44	(0.16)	0.65*
Victim legal resident	0.04	(0.06)	1.04
Relation unknown	–2.89	(0.07)	0.06*
Relation stranger	–0.62	(0.06)	0.54*
Relation partner	0.46	(0.15)	1.59*
Multiple victims	0.35	(0.10)	1.42*
Gang-related killing	–0.40	(0.06)	0.67*
Robbery killing	–0.19	(0.08)	0.83*
LAPD case	0.51	(0.07)	1.67*
LASD	–0.52	(0.08)	0.60*
L.A. Times story	0.10	(0.04)	1.10*

\*  $p < 0.05$ .

\*\* See Appendix A for description of variables.

While Black's theory would predict that female victim homicides were less likely to be solved given women's lower social position, their cases were more likely to be solved than male victim cases. Female murders cases were 30 percent more likely to be solved. This finding did not necessarily negate the claim that women occupy a lower social status. Female victim cases may generate greater concern and perhaps chivalrous claims for protecting women, which could be indicative of gender bias and women's lower social status (Abramovitz, 1996; Hall, 1979).

Victim/offender relationships were also important in predicting which cases were solved. In cases where the assailant was a stranger, clearance was less likely than in cases where the victim may have been a spouse, other family member, or friend. Victims who were murdered by their partner or spouse were 59 percent more likely to have their cases solved than victims whose attacker was another family member or friend, controlling for stranger or relation unknown killings. The more intimate killings may provide the police with greater circumstantial and physical evidence.

Multiple victim cases were also more likely to be cleared. Such cases were 42 percent more likely to result in an arrest or other solved than single victim cases. These cases may have suggested greater heinousness to the police and generated greater investigational effort.

Whether a victim had legal status was not significant in determining clearance. This could be the result of its crude measurement, which was determined by whether the victim had a social security number. Despite the possible limitations of this variable, this study examined legal status given the fact that Los Angeles County was the most popular destination for undocumented immigrants throughout the 1980s and 1990s (Sabagh & Bozorgmehr, 1996; Waldinger & Bozorgmehr, 1996, p. 14).

Critics skeptical of racial differences in criminal justice system outcomes attribute them to varying crime characteristics. For example, police officers can claim that African Americans and Latinos are more likely to be victims of gang-related deaths than Whites in Los Angeles County, which may explain the racial or ethnic differences in clearance. Gang-related murders, they may argue, are more difficult to solve, because they may be anonymous, drive-by killings or involve witnesses who are unwilling to come forward. In Los Angeles County from 1990 to 1994, 39 percent of all homicides were identified as gang-related. In cases handled by the Los Angeles Police Department, 60 percent of gang-related cases and 64 percent of non-gang-related cases were solved. Results in Table 1 show that a

gang-related killing was 33 percent less likely to be cleared than a non-gang-related homicide. The effect of race or ethnicity, however, could not be "explained away" by the fact that the crime was a gang-related killing.

Another common explanation given for why non-White victim cases may have lower clearance rates is that such victims are more likely to be involved in a felony homicide. Nine percent of the homicides resulted from a robbery, the most common contemporaneous felony. The model in Table 1 examined whether the contemporaneous commission of a robbery affected the chance that a case was cleared. Though such cases were 17 percent less likely to be solved than non-robbery homicides, this variable did not remove the race-of-victim effect.

Which police agency handled the case also mattered. The reference category included all of the cases handled by city police departments other than the Los Angeles Police Department (LAPD). Some cities do not have their own police departments, and the Los Angeles Sheriff's Department (LASD) investigates their cases. LAPD cases were 67 percent more likely to be solved than cases handled by other municipal departments, controlling for cases handled by the LASD. The LAPD solved nearly three times as many cases as the LASD. The LASD was also less likely to clear cases than other city police departments.

The impact of the media on solving homicide cases could also be seen in this model. In homicides where the *Los Angeles Times* printed a story, there was a small yet significant increase in the likelihood that the murder would be solved. There was a 10 percent greater chance of such homicides being cleared. In estimating what best predicted the likelihood that a homicide was cleared, numerous variables were considered, including the weapon involved, location of the murder, and several socioeconomic measures such as the median household income by census tract for the victim. These variables did not improve the fit of the model in Table 1. Most importantly, they could not explain away the race or gender effects.

The second set of analyses examined the length of time to clearance. This was done to explore the extent to which some cases might elicit quicker response from the police or receive more law. Homicides may be solved rapidly, because they are "dunkers" (Puckett & Lundman, 2003; Simon, 1991) with more evidence or greater witness cooperation, and as such their clearance may not necessarily be the result of more law. In a specific case where investigators took longer to solve the murder in the face of less information, the victim might have garnered more

law than a victim in a case that was quickly and easily solved due to greater information. An event history analysis with systematic time series data, however, could show whether there were particular victim or crime characteristics that consistently increased or decreased the time to clearance. There was no valid reason to expect that, for example, White victim cases took less time to be solved, if the other crime characteristics were equal. Evidence of differences in time to clearance by extralegal victim characteristics such as gender or race and ethnicity would further support the claim that some victims received more law. Results from Table 1 suggested that White and female victims' lives might indeed have been more valued. Did such victims earn a more speedy response from the law as well?

If all homicides in Los Angeles County faced equal chances of being solved, then one should not find the hazard of a case being cleared varying by covariates that do not deal with the legal factors of the case. The results in Table 2 suggested that the hazards of a homicide case being solved varied greatly by a number of factors, including extralegal variables. These extra-

legal factors greatly impacted the length of time that it took for a homicide to be solved.

To see whether there was a difference associated with different time scales, the same model with time scaled into quarters was also examined. A likelihood-ratio test of models with and without the scaled time variable suggested that the hazard was not constant over time. The direction and size of the coefficients in each of the two models were about the same, thus, the remainder of the article focuses on the results of the model with time scaled to months.

White victim cases were more likely to be solved at a faster rate than non-White victim cases. White victim cases had a 21 percent decrease in time to homicide clearance. Female victim cases had shorter times to clearance than male victim cases. The decrease in time was 12 percent. These numbers suggested that there were racial or ethnic and gender disparities in the time to clearance.

Young victims, those aged less than one year up to and including those aged nineteen years, were more likely to have their cases solved faster than either the aged (sixty-five and up) or adults aged twenty through sixty-four. Murder of young victims might have evoked outrage and concern amongst members of the community, eliciting pressure upon the police or the prosecutor's office for greater action. It was unclear why the same scenario did not appear to be true for the most aged victims. It was possible that unlike the most young or adults (the reference group), the aged did not have as many family members remaining in the community who could pressure the police to investigate aggressively.

For each additional homicide victim in a case, the time to clearance increased by 8 percent. The coefficient for this variable, however, was insignificant. Likewise, the coefficient for the variable that measured the victim's legal status was also insignificant. The effects of these variables on time to clearance were inconclusive.

Whether or not the homicide case was an LAPD case or an LASD case affected times to clearance. Cases handled by the sheriff's department faced an increase of about 15 percent in time to the homicide being solved versus cases handled by non-LAPD police departments, controlling for LAPD cases. LAPD cases had a 37 percent decrease in time to a case being solved versus non-LAPD cases, controlling for LASD cases. The Los Angeles Police Department solved its homicide cases in almost half the time taken by the Los Angeles Sheriff's Department to solve its homicide cases.

The effect of media exposure also influenced the time to clearance. The variable measuring the number of *Los Angeles Times* stories printed about a case was

Table 2  
Time to homicide clearance: piecewise exponential model with time scaled into months

Variable**	Estimate	Standard error	Odds ratio
Intercept	27.8		
Victim White	-0.23	(0.07)	0.79*
Victim female	-0.13	(0.06)	0.88*
Victim aged 0–12	-0.35	(0.13)	0.70*
Victim aged 13–19	-0.13	(0.05)	0.88*
Victim aged 65-Up	0.00	(0.14)	1.00
Victim legal resident	-0.09	(0.05)	0.91
Total no. victims	0.08	(0.06)	1.08
LAPD case	-0.47	(0.06)	0.63*
LASD	0.15	(0.07)	1.15*
No. <i>L.A. Times</i> stories	0.07	(0.04)	1.07*
J (time scaled to months)	77 DF	Wald chi-square	5,293.4
1	-22.32	(26,223)	
2	-21.04	(26,223)	
3	-20.55	(26,223)	
...			
76	-0.12	(28,226)	
77	-0.09	(29,479)	
78	0.00	0.00	
Constant	5.99	(0.10)	
-2 log likelihood		24,618.53	
N		275,530	
Non-censored values		2,253	
Right censored values		273,277	
Obs. with missing, zero, or negative resp.		16,040	

\*  $p < 0.05$ .

\*\* See Appendix A for description of variables.

statistically significant. For each story written prior to an arrest, there was about a 7 percent increase in time to a case being solved. This might seem contrary to the idea that publicity surrounding a homicide may lead to quicker resolution given greater pressure on the police and the prosecutor's office. It was, however, also quite plausible that the *Los Angeles Times* ran stories on the most difficult or puzzling cases, which lacked important leads and required greater time and effort.

Some of the variables important in predicting the likelihood of clearance in the analysis above were not significant in determining the time to clearance. Variables such as gang killing or the contemporaneous commission of a robbery were less helpful in explaining the time to clearance. These variables were statistically insignificant and including them in the model did not improve the fit or remove the racial or ethnic and gender differences. As with the multiple regression analysis above, numerous models with various factors were considered. Neither the variables included in the final model in Table 2 nor others considered could remove the extralegal variable effects of gender and race or ethnicity.

## Conclusion

In evaluating what accounted for homicide clearance, this study sought to empirically address the issue of whether there were extralegal factors, particularly racial and gender, which affected clearance rates. The results demonstrating racial and ethnic bias were contrary to those found by Puckett and Lundman (2003), Wellford and Cronin (1999), or Riedel (2002) in his study of Los Angeles. Their findings might have been affected by missing data or unspecified variables. The depth and strength of the data for this study along with consistent outcomes across two types of analyses should garner confidence in the results. At the very least, this research showed that scholars must continue to investigate homicide clearance. There is still much to be learned. In particular, more multi-level and comparative studies, such as those by Litwin (2004) or Borg and Parker (2001), which investigated different time periods and cities, will be helpful in elucidating what best explains homicide clearance.

Black (1976) argued that an arrest was indicative of "more law" than no arrest in a criminal case. An arrest also makes a statement about which victims' lives are valued. Limited resources in the hands of criminal justice agencies may be directed first toward the solving of young, White, female victims. This study suggested that homicide clearance and time to clearance might

have operated within a process that created disparate outcomes along gender and racial or ethnic lines. Even controlling for gang-related activity, victim/offender relationship, media coverage, total number of victims, and the handling police department, racial or ethnic, gender, and age effects could not be explained away in clearance or time to clearance for homicide cases in Los Angeles County.

This study illustrated the disparities in treatment and handling of victims and defendants noted in other studies of the criminal justice system, especially death penalty research. The results provided crucial evidence that the criminal justice system in Los Angeles County unevenly handled homicide cases from 1990 through 1994. At the earliest stage of a potential death penalty case, discriminatory practices were underway. There was differential treatment of victims. Some victims appeared to have been more valued as evidenced by clearance and time taken to solve their homicides. Society makes choices about who deserves aid and protection in life when it provides, for example, income assistance or medical aid. Even after death, decisions about the value of life are made.

## Appendix A

Outcome variable was cleared, coded true if a defendant was arrested. All explanatory variables were dummy variables except for "total no. victims" and "no. *L.A. Times* stories," which were count variables.

Reference category for victim White was all other racial categories. Reference category for age variables was victim aged twenty to sixty-four. "Victim legal resident"-according to vital statistics, victim had a social security number. "Multiple victims" was coded true if there was more than one victim. Reference category for victim/offender relationship variables included other familial and friend/acquaintance. Reference category for circumstance variables "gang-related killing" and "robbery killing" included argument/brawl, domestic, narcotic drug-related, and other. "LAPD case"-Los Angeles Police Department handled the case. "LASD"-the Los Angeles Sheriff's Department handled the case. "*L.A. Times* story" was coded true if there was any pre-arrest story on the case anywhere in the *Los Angeles Times*. "No. *L.A. Times* stories"-count of pre-arrest homicide stories that appeared in the *Los Angeles Times* newspaper.

*L.A. Times* variables, LAPD case, and LASD case were coded by the *Los Angeles Times*. Victim's legal status was gathered from vital statistics. All other variables were gathered from the State Department of Justice, vital statistics, and the county coroner's office.

The value for variables most in agreement across the various data sets was used.

## Notes

1. For greater theoretical development and application of Black's theory of law, see Borg and Parker (2001) and Litwin (2004).
2. Though they did not explicitly test Black's theory, other studies of arrests and incarceration, which did not deal explicitly with homicide, suggested that "the amount of law" varied with stratification. Thus, factors such as high unemployment (McCarthy, 1991) or greater income inequality could lead to higher arrest and incarceration rates. Arrests and incarceration might be ways to manage not just crime but the urban underclass (Garland, 1990; Jacobs & Helms, 1996).
3. In comparison, New York City had 9,901 homicides from 1990 through 1994 (Bureau of Justice Statistics, 2002b).

## References

- Abramovitz, M. (1996). *Regulating the lives of women*. Boston: South End.
- Allison, P. D. (1984). *Event history analysis*. Beverly Hills, CA: Sage.
- Allison, P. D. (1995). *Survival analysis using the SAS system: A practical guide*. Cary, NC: SAS Institute Inc.
- Baldus, D. C., Woodworth, G., & Pulaski, C. A. (1990). *Equal justice and the death penalty: A legal and empirical analysis*. Boston: Northeastern University Press.
- Black, D. (1976). *The behavior of law*. New York: Academic Press.
- Black, D. (1980). *The manners and customs of the police*. New York: Academic Press.
- Borg, M. J., & Parker, K. F. (2001). Mobilizing law in urban areas: The social structure of homicide clearance rates. *Law and Society Review*, 35(2), 435–466.
- Bureau of Justice Statistics. (2002a). *Homicide trends in the U.S.: Clearance*. Retrieved April 12, 2004, from <http://www.ojp.usdoj.gov/bjs/homicide/tables/clearedtab.htm>
- Bureau of Justice Statistics. (2002b). *Local level homicide trends and characteristics*. Retrieved April 12, 2004, from <http://bjsdata.ojp.usdoj.gov/dataonline/Search/Homicide/Local/LocalHomicide.cfm>
- Collett, D. (1994). *Modeling survival data in medical research*. London: Chapman and Hall.
- Eden, K., & Lein, L. (1997). *Making ends meet: How single mothers survive welfare and low-wage work*. New York: Russell Sage Foundation.
- Flewelling, R. L., & Williams, K. R. (1999). Categorizing homicides: The use of disaggregated data in homicide research. In M. D. Smith & M. A. Zahn (Eds.), *Homicide: A sourcebook of social research* (pp. 96–106).
- Garland, D. (1990). *Punishment and modern society: A study in social theory*. Oxford, England: Clarendon.
- Gordon, L. (1994). *Pitied but not entitled: Single mothers and the history of welfare, 1890–1935*. Cambridge, MA: Harvard University Press.
- Gross, S. R., & Mauro, R. (1989). *Death and discrimination: Racial disparities in capital sentencing*. Boston: Northeastern University Press.
- Hall, J. D. (1979). *Revolt against chivalry: Jessie Daniel Ames and the women's campaign against lynching*. New York: Columbia University Press.
- Jacobs, D., & Helms, R. E. (1996). Toward a political model of incarceration: A time-series examination of multiple explanations for prison admission rates. *American Journal of Sociology*, 102(2), 323–357.
- Litwin, K. J. (2004). A multilevel multivariate analysis of factors affecting homicide clearances. *Journal of Research in Crime and Delinquency*, 41, 327–351.
- Maguire, K., & Pastore, A. L. (Eds.). (2001). *Sourcebook of criminal justice statistics 2000* (NCJ No. 190251). Washington, DC: U.S. Government Printing Office.
- McCarthy, R. B. (1991). Social structure, crime, and social control: An examination of factors influencing rates and probabilities of arrest. *Journal of Criminal Justice*, 19(1), 19.
- Puckett, J. L., & Lundman, R. J. (2003). Factors affecting homicide clearances: A multivariate analysis of a more complete conceptual framework. *Journal of Research in Crime and Delinquency*, 40(2), 171–193.
- Quadagno, J. S. (1988). *The transformation of old age security: Class and politics in the American welfare state*. Chicago: University of Chicago Press.
- Regoeczi, W. C., Kennedy, L. W., & Silverman, R. A. (2000). Uncleared homicide: A Canada/United States comparison. *Homicide Studies*, 4(2), 135–161.
- Regoeczi, W. C., & Riedel, M. (2003). The application of missing data estimation models to the problem of unknown victim/offender relationships in homicide cases. *Journal of Quantitative Criminology*, 19(2), 155–183.
- Riedel, M. (1993). *Stranger violence: A theoretical inquiry*. New York: Garland Publishing Co.
- Riedel, M. (1998). Counting stranger homicides: A case study of statistical prestidigitiation. *Homicide Studies*, 2(1), 206–219.
- Riedel, M. (1999). Sources of homicide data: A review and comparison. In M. D. Smith & M. A. Zahn (Eds.), *Homicide: A sourcebook of social research* (pp. 75–95).
- Riedel, M. (2002). Arrest clearances for homicide: A study in Los Angeles. In R. A. Silverman, T. P. Thornberry, B. Cohen, & B. Krisbert (Eds.), *Crime and justice at the millennium: Essays by and in honor of Marvin Wolfgang* (pp. 91–119). Boston: Kluwer Academic.
- Riedel, M., & Rinehart, T. A. (1996). Murder clearances and missing data. *Journal of Crime and Justice*, 19, 83–102.
- Sabagh, G., & Bozorgmehr, M. (1996). Population change: Immigration and ethnic transformation. In R. Waldinger & M. Bozorgmehr (Eds.), *Ethnic Los Angeles* (pp. 79–108). New York: Russell Sage Foundation.
- Simon, D. (1991). *Homicide: A year on the killing streets*. Boston: Houghton Mifflin.
- Waldinger, R., & Bozorgmehr, M. (1996). Making of a multicultural metropolis. In R. Waldinger & M. Bozorgmehr (Eds.), *Ethnic Los Angeles* (pp. 3–38). New York: Russell Sage Foundation.
- Wellford, C., & Cronin, J. (1999). *An analysis of variables affecting the clearance of homicides: A multistate study*. Washington, DC: Justice Research and Statistics Association.
- Wolfgang, M. E. (1958). *Patterns in criminal homicide*. Philadelphia: University of Pennsylvania Press.