

Danger and the Decision to Offend*

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Abstract

Humiliation; incarceration; stigma; loss of income, freedom, and respect: most research on offending emphasizes these sanctions. Yet classical theorists recognized other costs including physical harm. We revive this abandoned insight, arguing that danger—the possibility of pain—figures largely in people’s decisions to offend. Although modern states typically eschew violence, many victims, vigilantes, and others assault offenders. This violence is typically more certain, swift, and severe than other sanctions, and fear of injury likely deters many potential offenders. Yet the possibility of pain may be irrelevant to individuals who boldly believe in their unassailability. Consistent with our hypotheses, we find that perceptions about danger are significantly associated with involvement in theft, drug selling, and prostitution among homeless youth, and that these effects are independent of perceptions about a crime’s excitement, profit, or other returns. Our results suggest that dangers play a key but typically neglected role in the genesis of these crimes.

In the late eighteenth century Jeremy Bentham argued that danger plays an important role in the “hedonistic calculus” people use in making decisions. According to Bentham, “danger is nothing but the chance of pain” ([1789] 1996:144), and as Jaeger and his colleagues have noted, “physical harm may be one of the only consequences that (nearly) all social groups and cultures agree is undesirable” (2001:88).¹ Thus perceptions about the danger of crime, or the potential for pain, should influence people’s decisions about whether or not to break the law.

**SSHRC Canada provided funds for this project. We thank Ana Bettencourt, Jorge Fontdevila, Rosemary Gartner, Eric Grodsky, Bob Hagedorn, Mary Jackman, Robert Jackman, and Daniel Nagin for their invaluable comments on earlier drafts of this article. Direct correspondence to Bill McCarthy, Department of Sociology, One Shields Avenue, University of California Davis, 95616. E-mail: bdmccarthy@ucdavis.edu.*

At first glance Bentham's hypothesis appears to have little bearing for Western nations that replaced punishments of the body with other sanctions during the early and middle phases of the modern period (Spierenburg 1995). Consistent with this shift, most contemporary work on criminal decisions ignores danger and focuses on the economic, social, and psychological costs associated with formal and informal sanctions. Yet the state's abandonment of physical punishment has not eliminated crime's potential for pain for offenders; instead it has increased danger's exclusiveness, concentrating it in individuals' and groups' violent responses to illegal actions (Black 1993; Brown 1975; Johnston 1996).

Scholars have noted that danger should discourage offending (Black 1993; Gottfredson and Hirschi 1990), but these accounts undertheorize the ways in which *both* fear and fearlessness of physical harm may influence crime. Following Bentham, we treat danger as an indicator of potential pain, and focus on how the possibility of being harmed by others influences the decision to offend. We argue that physical harm is typically swifter, more certain, and more severe than other costs of offending, and, thus, that perceptions about danger should have a notable effect on the decision to offend. Specifically, we predict that the perception that crime is dangerous should discourage offending, whereas the intrepid view that offending is relatively safe will encourage it.

We explore our hypothesis about perceptions of danger by analyzing interview and survey data from a sample of homeless youth. People with high offense risks may fear a violent response to many types of crime, but we focus on three offenses that have a promise of economic returns: theft, drug dealing, and prostitution. We examine our respondents' views of the danger associated with these crimes and consider how these perceptions are related to offending. We conclude with an examination of the issues raised by the deterrence implications of the danger in crime.

The Disutility of Danger

A "discourse of fear" characterizes many contemporary societies (Altheide 2002; Garland 2001). This discourse involves frequent and sensational communications that heighten the symbolic awareness—and the expectation—that danger and risk are central features of modern life. As a result, people substitute a "perspective of fear" for the "fear of something." This generalized alarm increases people's trepidation about being the victim of a specific crime, as well as their dread of crime in general. Moreover, an extensive literature demonstrates that these fears strongly influence people's thoughts, beliefs, and actions.

Fear may also play a role in the decision to offend, a possibility that has received much less attention. As indicated earlier, we hypothesize that crime's potential for danger is likely to frighten people who expect that they will be physically injured during or as a consequence of offending. In most Western

nations, people's violent responses to crime are the key source of this danger. These reactions may occur in a variety of contexts. Victims may use violence to resist offenders, to defend and protect themselves and their property, or in retaliatory attacks. This violent "self help" may operate as a form of conflict management, punishment, or social control (Black 1993:27).

Other sources of physical jeopardy involve nonvictims who respond aggressively to violations of deeply ingrained sentiments that constitute the collective conscience (Durkheim [1893] 1933). Alternatively, people may be motivated by individual sympathies, whether these are based in what Smith referred to as nonvictims' "resentment" against offenders, or what Nietzsche identified as the "desire to punish" (see Garland 1990). People may also view offenders as responsible for the deterioration of their community or for harms experienced by family, friends, and neighbors. And research indicates that regardless of their reasons, some bystanders, residents, business owners, moral entrepreneurs, vigilantes, and others outraged by crime respond with violence (Jacobs 2000; Sullivan 1989). The police constitute another threat: offenders may be the victims of officers who use violence instead of, or in conjunction with, arrests (Skolnick and Fyfe 1993).

Other lawbreakers are an additional menace. Rival gang members, competitors, and people who prey on offenders (e.g., those who rob drug dealers) may use force to establish control in their interactions as they confiscate people's illegal earnings or possessions (Jacobs 2000; Sullivan 1989). Co-offenders are another source of harm. They may attack collaborators when a crime fails or when commitments are broken, as, for example, when dealers assault people who do not make the payments required for drugs that they were "fronted" (Johnson et al. 1990; Sullivan 1989). Offenders also describe attacks by extortionists who use force to access their products or services without having to pay for them (Sullivan 1989).

Three features of people's violent reactions to crime underscore the potential importance of perceptions about crime's possible danger. First, individual violence is typically more certain than other sanctions once crimes are discovered.² Compared to officials who administer state sanctions, those who respond aggressively to illegal acts are less inclined to feel constrained by legal technicalities (Black 1980). They are also less likely to be sympathetic to an offender's plea of mitigating circumstances such as a disadvantaged background or personal hardship, conditions that may protect offenders from other punishments. Second, violent reactions to crime typically occur more swiftly than other consequences. The long delays in legal sanctioning contrast sharply with the immediacy of "private" violent responses that often occur even before an offense is completed. Third, violent reactions to crime are often harsher than punishments inflicted by others (Black 1993). Current laws typically forbid direct physical punishment for all but the most serious transgressions, whereas people who respond to crime with violence are less reluctant to inflict harm, regardless of the type of offense.

Less constrained by notions of fairness, they are unlikely to feel bound to ensure that "the punishment fits the crime," and their sanctions range from temporary wounds to lasting injuries and death. Permanent disabilities and fatal violence stand in stark opposition to the more temporary pains associated with most formal and informal sanctions.

Gottfredson and Hirschi (1990:6) note that the danger of a violent response should deter a "prudent" person from offending. Yet people vary in their perceptions of the likelihood of harm from an activity or situation (Simpson 1996), and some people may believe that they possess attributes that allow them to reduce the possibility of harm. Lyng (1990; 1993) claims that a sense of invincibility is common among voluntary risk takers, including offenders (also see Jacobs 2000). High-risk activities such as skydiving, mountain climbing, and offending involve considerable unpredictability, a potential for chaos, and a clear threat to one's physical or mental well-being. According to Lyng (1990), people who engage in high-risk activities are aware of the potential danger but conclude that they possess unique abilities that allow them to circumvent it. They know that others are hurt and sometimes killed while climbing mountains, skydiving, or offending, but they boldly claim "survival skills" that they think protect them from harm. Adopting a "self-serving bias" (the perception that one is somehow better than others), these individuals maintain that injured people mistakenly assumed that they had these abilities, whereas they were actually poseurs who "did not know what they were doing" or did not possess the "right stuff" (Lyng 1990).³ People who believe that the certainty, celerity, and severity of crime's danger do not apply to them are unlikely to be discouraged by the possibility of harm; thus it is their fearlessness, rather than their fear, that influences their decision to offend. Indeed, there is likely something attractive and empowering in the perception that one is immune to danger.⁴

Our hypothesis—that perceptions of crime's potential danger influence offending—draws on insights into offending and other risky activities offered in various theories in the "rational action paradigm" (Jaeger et al. 2001). Theories in this paradigm assume that people have relatively stable preferences (or tastes) for various outcomes and can assign a measure of satisfaction to these outcomes. People's subjective expected utility functions are the product of their assessment of the likelihood of an outcome being realized and the satisfaction it will provide, together with their approach to the risk associated with obtaining the outcome and to time discounting.⁵ Rational actions reflect a decision in which people chose an action based on *ex ante* expectations that it will result in the best outcome. In other words, people act rationally when they optimize, selecting an action (from the set of feasible actions) that will maximize their expected utility.

The rational action paradigm has spawned several theories (e.g., expected utility, public choice, decision, and social choice), and theorists differ in their use of "thick" versus "thin" approaches. Thick or "soft" perspectives extend the rational choice approach by introducing psychological, cultural, and structural

factors that provide a more detailed perspective and consider a wider range of factors than expected utility theory (Gruber 2001; Lichbach 2003).⁶ We assume that we can usefully view offending as a risky decision executed under conditions of uncertainty (Bueno de Mesquita and Cohen 1995; Eide 1994; McCarthy 2002; Nagin and Paternoster 1991, 1993; Paternoster 1989; Schmidt and Witte 1984); but we recognize that a variety of factors influence people's preferences and perceptions of an outcome's utility and likelihood, and that these change as people acquire additional information, encounter new situations, and change related perceptions. Our hypotheses about perceptions of danger are consistent with a parsimonious version of rational choice that assumes relatively unambiguous preferences; that is, we assume that people usually prefer safety to harm.

Rediscovering Danger

Our emphasis on danger contrasts with most contemporary discussions on the perceptions of crime's costs. Most work on this topic has concentrated on one of four areas: formal sanctions such as arrest, incarceration, and other state penalties; informal sanctions such as social stigma and rejection by significant others; commitment to normative values and beliefs that the legal system is just and moral; and the guilt or shame that norm violations and sanctions may elicit (Becker 1976; Eide 1994; Grasmick and Bursik 1990; Meier and Johnson 1977; Nagin and Paternoster 1991, 1993; Paternoster 1989; Schmidt and Witte 1984; Tittle 1980; Williams and Hawkins 1986; Zimring and Hawkins 1973). Perceptions about these costs likely have the greatest influence on individuals who have a considerable stake in society, who are embedded in the networks of people who support the law, and whose criminal experiences are limited to a small number of common misdemeanors or petty offenses (Gottfredson and Hirschi 1990; Stafford and Warr 1993; also see Decker, Wright, and Logie 1993).

Formal and informal sanctions are likely less important for people responsible for most serious street crimes, for marginalized individuals, for those who have considerable connections with offenders, and for people who have successfully offended in the past (i.e., avoided sanctions).⁷ Economic and social marginalization minimize a person's ties to normative society and can encourage the view that crime is a legitimate means for meeting one's needs (Hagan 1992). Meanwhile, criminal associates validate offending and are less likely to see crime or arrest as a source of stigma (Hagan and McCarthy 1997; Stafford and Warr 1993). As Nagin notes: "a criminal record cannot be socially . . . isolating if it is commonplace" (1998:4). Finally, most offenders likely realize, as a result of their own and others' experiences, that few crimes result in an arrest (Horney and Marshall 1992; Piliavin et al. 1986).

Research on people who are most likely to offend supports the argument that formal and informal sanctions play only modest roles in their decisions.

In a study on the offending decisions of adolescent high-school dropouts, drug users, and adult offenders (Piliavin et al. 1986), estimates of the likelihood of formal (e.g., arrest and incarceration) and informal (i.e., loss of respect from friends or neighbors) sanctions were shown to have little influence. Research on burglars (Decker, Wright, and Logie 1993) reports that a majority were willing to commit a crime when the probability of arrest was 50% and when the possible penalty was five years' imprisonment. Similarly, Foglia's (1997) analysis indicates that perceptions of the likelihood of legal sanctions and negative responses from friends had little influence on inner-city adolescents' involvement in crime. Furthermore, several studies suggest that some, but not all, offenders substantially underestimate the likelihood of these sanctions (Shover 1996).

Other research emphasizes that some offenders *are* concerned about the danger of a violent reaction to their crimes. Offenders worry more about being injured by their victims than about apprehension by the police (Wright and Rossi 1986) and many develop protective strategies to manage the threat of harm (Katz 1988; Shover 1996).⁸ Nonetheless, their rates of assault and violent death far exceed those for nonoffenders (Sampson and Lauritsen 1990; Tremblay and Paré 2003).

In sum, physical harm may represent one of crime's key costs. The expectation that crime will result in physical harm likely discourages people from choosing it, whereas the audacious view that one possesses a set of skills that makes one immune to crime's danger likely encourages it. Indeed, we predict that the all but universal desire to avoid pain means that the perception that crime is dangerous will influence offending above and beyond the effects of perceptions about crime's other costs.

Studying Danger: Data, Variables, and Methods

Although some studies, particularly ethnographies (Shover 1996; Sullivan 1989), report that crime's danger plays a key role in the decision to offend, current research does not provide a systematic evaluation of the association between danger and offending. We address this oversight with an exploratory analysis of data from a study of street youth. A team of researchers collected the data in 1992 in Toronto and Vancouver, Canada, from respondents they encountered in service agencies (e.g., shelters and counseling centers) and street locations where the homeless often congregate (e.g., parks and street corners). Over a two-week period, researchers "saturated" the streets and social service agencies, speaking with all the homeless youth they encountered and determining their eligibility for the study (e.g., age appropriateness). The resulting sample includes male and female youth who live on the street, in shelters, in temporary housing with friends, or in hotels. We interviewed this diverse group of runaways, throwaways, and the homeless in offices provided by agencies, and the youth completed self-report

questionnaires. Four hundred and eighty-two youth participated in this part of the study. We scheduled second and third wave interviews with our respondents at one-month intervals; 78% of our respondents completed a second-wave interview, but only 53% finished a third interview (see Hagan and McCarthy 1997).⁹

The items we use to measure our key independent variables, the perceived danger of various crimes, were gathered only during the first round of interviews. Previous research had shown considerable variability in people's perceptions about the risks of crime over time (Minor and Harry 1982; Piliavin et al. 1986; Saltzman et al. 1982), a pattern that we too find for the perceptual variables for which we have multiple measures. For example, between their first and second interviews (approximately one month apart), about two-thirds of the youth in our study changed their assessments of the likelihood of arrest for each of the three crimes we monitored (theft, drug selling, and prostitution), and about one-quarter revised them by three or more points on a ten-point scale.¹⁰ This variability is consistent with the premise that people's views change as they gather new information.¹¹

The weak over-time correlations suggest that the most suitable approach to modeling perceptions in our data is to use more immediate, rather than distant, measures. It has been noted that "causally relevant perceptions are those more proximate to crime . . . distal measures of perceived risk may be irrelevant to behavior" (Piliavin et al. 1986:116). Indeed, the rational choice approach assumes that the effects of perceptions will more likely be instantaneous than lagged (Grasmick and Bursik 1990).¹² The nature of perceptions and the characteristics of our data encourage a focus on cross-sectional analysis of the first-interview data; nevertheless, we turn to our longitudinal data at the conclusion of our results. Meanwhile, our cross-sectional data offer several advantages over those used in other studies: a greater number of measures of crime's perceived costs and benefits, a more diverse set of control variables, and greater variation in involvement in crime.

The independent variables in our models are divided into two categories: a group of perceptual measures of offending's potential costs and rewards, and a set of control variables (see Table 1). Our perceptual variables include crime-specific measures about three of crime's possible costs (danger, arrest, legal concerns) and two of its potential benefits (excitement, profitability). We measure our key variable, perceptions of crime's danger, with respondents' ratings of various activities. We gave the youth in our study a list of behaviors that included recreational activities typically seen as having a high risk of physical danger (e.g., skydiving, mountain climbing), risky behaviors common among the homeless (e.g., hitchhiking, sleeping in abandoned cars or buildings) and minor and more serious crimes. Respondents rated each behavior using a ten-point scale in which 1 represented "very safe" and 10 indicated "very dangerous."¹³ We focus here on respondents' responses to questions about the danger associated with committing three types of crime: theft, drug selling, and prostitution.¹⁴ As noted earlier,

danger involves issues of certainty, celerity, and severity, and individuals may vary in their perceptions of each of these dimensions. In this initial exploration we have used a global measure of danger and assume that subsequent research will investigate more precise measures, if we find purchase with our present, more general approach.

A second cost variable measures perceptions of the likelihood of formal sanctions for each offense. To indicate their views about the individual likelihood of arrest for committing the three crimes we study, respondents selected values from a ten-point scale with 1 equal to "no chance" and 10 corresponding to certainty.¹⁵ To help us to determine the distinctiveness of the two sets of perceptions, the respondents answered questions about formal sanctions in their interviews before completing self-report items about danger.

Our third set of cost variables concerns perceptions about the unacceptability of particular crimes. Specifically, we asked our respondents about the extent to which they agreed or disagreed with statements about the wrongness of taking others' property, drug use, and prostitution. The conceptual meanings of these measures are a source of debate that is incidental to this article: they could represent the level of commitment to the normative order, moral beliefs that would encourage guilt if contravened, or support for crime-legitimizing definitions. They may be specific perceptions that are relatively mutable, or more deeply held and relatively rigid core beliefs.¹⁶ These issues notwithstanding, we assume that the view that a criminal act is wrong should discourage offending. People who believe that an offense is unacceptable may recognize that committing it would result in considerable guilt and are therefore motivated to follow the law and avoid this cost.¹⁷

Our data do not contain perceptual measures of the likelihood of informal sanctions or their associated costs; however, such estimates have shown nonsignificant effects on crime in studies of high-risk populations (Foglia 1997; Piliavin et al. 1986). Moreover, these perceptions likely play only a minor role in the offending decisions of the youth in our sample. For example, 80% of our respondents reported that the majority of their street friends had been arrested, and 75% said that 50% or more of their friends had been jailed. As well, 56% of the *nonoffenders* in our study said that the possibility of friends' disapproval had *no effect* on their decision not to offend (only 27% said that concern that their friends would disapprove "a fair bit" or "a lot" influenced this decision).¹⁸ Thus it appears unlikely that many homeless youth confront or fear stigmatization and rejection by their peers if they offend or are arrested.

Although we focus on the potential costs of crime, we also include items that measure two of crime's potential gains: financial and psychological returns. We gauged perceptions about the monetary rewards of offending by asking respondents to use a ten-point scale to estimate the likelihood of making "lots of money" from theft, drug selling, and prostitution (1 = no chance, 10 = certainty). We also asked respondents to compare perceived financial returns from illegal

and legal activities and estimate whether they could make more money from crime or from a "straight" job (Piliavin et al. 1986). To measure the "thrill" that offending can provide (cf. Cusson 1983; Katz 1988), respondents used a ten-point scale (1 = very unexciting, 10 = very exciting) to gauge the excitement of the same activities they had previously rated for danger.

Three factors encouraged us to introduce measures of crime's potential returns into our analysis. First, rewards are central to cost-benefit approaches. Second, research suggests that people—particularly youth—typically overestimate the probability of obtaining the benefits from risky behavior while underestimating the likelihood of realizing its costs (Gruber 2001; Millstein 1993). Third, studies of offenders indicate that they tend to focus more on crime's potential gains than on its possible costs (see Shover 1996: Chapter 6).

Our equations contain several control variables, the most important of which are controls for offending before leaving home. Offenders who successfully avoid harm may have heightened feelings of invincibility and a greater likelihood of viewing high-risk situations as routine (Jacobs 2000:124). Perceptions of crime's harm may thus simply be a consequence of offending, rather than an independent contributor to offending.¹⁹ We address this possibility by including measures of at-home theft and drug selling in our models of street theft and drug selling. We do not have a measure of selling sex while living at home and instead use a single item that combines involvement in theft and drug selling at home in our model of street prostitution. Our at-home theft scale combines information about the frequency of committing four types of theft: stealing goods valued between \$10 and \$50; stealing objects worth more than \$50 (both categories exclude stealing food, clothes, and tobacco products), burglarizing a home or business, and stealing objects from an automobile. Our measures of drug selling distinguish between selling marijuana or hash and dealing crack, cocaine, or hallucinogens.

Our other control variables fall into two groups. The first set of items focuses on family background: parental unemployment, maternal drug addiction, and familial criminality. The second concerns the respondent and includes measures for the following: age, gender, race, arrest while living at home, unemployment since leaving home and in the six months prior to the survey, situational adversity on the street (i.e., lack of food and adequate shelter), offense and arrest histories of friends (the proportion who had committed various types of crimes or had been arrested), illegal opportunities, and attitude toward risk-taking. These control variables represent the key factors emphasized in current research on risk taking (Bromiley and Curley 1992; Gruber 2001; Slovic 2000) and offending, particularly for homeless youth (Hagan and McCarthy 1997). Although some of our measures are correlated, there is little collinearity among our independent variables: diagnostics for the regression analyses reported below indicate that the square root of the largest variance inflation factor score is 1.4.²⁰

The measures for two of our dependent variables—frequency of committing theft and drug selling since leaving home—mirror measures for offending before

Table 1. Variables, Coding, and Descriptive Statistics

Variable	Code	X	S.D.
Independent variables			
Age	Chronological age	19.799	2.505
Gender	0 = female, 1 = male	.678	.468
Race	0 = other, 1 = white	.697	.460
Family disruption	0 = no, 1 = yes	.710	.454
Parental unemployment	0 = no, 1 = one parent, 2 = both parents	.556	.675
Maternal drug addiction	1 = very serious, 2 = serious, 3 = somewhat, 4 = nonuser	3.776	.706
Family member arrested	0 = none, 1 = sibling, 2 = parent, 3 = both	.805	.893
Theft at home	Four-item scale ($\alpha = .702$). Each item coded	3.434	5.700
Stealing goods valued \$10-\$50	0 = none, 1 = 1, 2 = 2, 3 = 3-4,		
Stealing goods valued >\$50	4 = 4-9, 5 = 10-19, 6 = 20-29,		
Burglarizing a home or business	7 = 30-59, 8 = >59		
Stealing goods from automobile			
Drug selling at home	Two-item scale ($r = .500$).	1.552	3.634
Marijuana or hash	Each item coded as for Theft at home (above)		
Crack, cocaine, or hallucinogens			
Arrested at home	See Theft at home (above)	.898	1.646
Percent of street friends who stole	0 = 0, 1 = 1% . . . 10 = 100%	53.630	25.878
Percent of street friends who sold drugs	0 = 0, 1 = 1% . . . 10 = 100%	36.863	22.839
Percent of street friends who were in sex trade	0 = 0, 1 = 1% . . . 10 = 100%	14.001	16.714
Percent of street friends who were arrested	0 = 0, 1 = 1% . . . 10 = 100%	59.021	31.786
Adversity	Three-item scale ($\alpha = .705$). Each item coded	5.048	2.982
Entire day without food	0 = never, 1 = once or twice,		
Sleeping in abandoned buildings	3 = often, 4 = a lot of the time		
Spending night walking the streets			
Months on the street	Number of months on the street since first left home (i.e., without secure shelter)	13.795	18.598
Unemployment			
(since leaving home and in the past six months)	1 = always employed,	2.077	.744
	2 = currently unemployed but had worked		
	3 = always employed		

Illegal opportunities	0 = none, 1 = rarely, 2 = a few times a month 3 = a few times a week 4 = a few times a day	2.797	1.486
Perception that			
Theft is dangerous	1 = very safe . . . 10 = very dangerous	6.156	2.494
Drug selling is dangerous	1 = very safe . . . 10 = very dangerous	6.944	2.512
Prostitution is dangerous	1 = very safe . . . 10 = very dangerous	8.348	2.164
Arrest for theft is probable	1 = 0% . . . 10 = 100%	6.786	2.490
Arrest for selling drugs is probable	1 = 0% . . . 10 = 100%	6.950	2.426
Arrest for prostitution is probable	1 = 0% . . . 10 = 100%	6.247	2.722
Theft is always wrong	1 = strongly agree . . . 5 = strongly disagree	3.851	1.213
Drug use should be illegal	1 = strongly agree . . . 5 = strongly disagree	2.811	1.362
Prostitution should be illegal	1 = strongly agree . . . 5 = strongly disagree	3.274	1.452
Theft is exciting	1 = very unexciting . . . 10 = very exciting	3.575	2.763
Drug selling is exciting	1 = very unexciting . . . 10 = very exciting	3.855	2.884
Prostitution is exciting	1 = very unexciting . . . 10 = very exciting	2.060	2.014
Theft is probably lucrative	1 = 0% . . . 10 = 100%	4.402	2.516
Drug selling is probably lucrative	1 = 0% . . . 10 = 100%	7.220	2.459
Prostitution is probably lucrative	1 = 0% . . . 10 = 100%	7.797	2.406
Crime is more lucrative than legal work	1 = a lot more in straight job, 2 = a little more in a straight job, 3 = a little more doing something illegal 4 = a lot more doing something illegal	3.861	1.535
Enjoys taking risks	1 = strongly agree . . . 5 = strongly disagree	3.311	1.163
Dependent variables			
Theft since leaving home	Four-item scale ($\alpha = .777$) (see Home items)	6.016	7.868
Drug selling since leaving home	Two-item scale ($r = .472$) (see Home items)	5.477	5.961
Prostitution since leaving home	Had sex for money (0 = no, 1 = yes)	.215	.412

leaving home.²¹ We use a single item to measure our third dependent variable, number of times the respondent sold sex since leaving home. Approximately 63% of our respondents had committed a theft since becoming homeless, and 58% had sold drugs, but only 21% had worked in the sex trade.²² Given these variables' distributions, we use tobit regression to estimate models for theft and drug selling; we dichotomized prostitution and used logit regression to estimate a model for that offense.²³ There is some evidence of heteroskedasticity in our data, so we used Huber's (1981) formula to obtain robust confidence standard errors for our results. Consistent with other studies of offending (e.g., Sampson and Laub 1993), we used tests of significance to draw attention to important effects even though our sample was not selected with a random design. We have followed Mohr in using tests of significance to help assess "whether or not a certain relationship or other quantity is worth further thought—whether it might repay additional research effort (1990:8)."

Results

TALKING ABOUT DANGER

As expected, interviews with our respondents provided many accounts of the physical hazards of offending. Stories about victim retribution were common, frequently in cases of breaking/entering and theft. As made evident in a statement by one youth, retaliation can be relatively spontaneous:

[I'd] crawl in through a window, crawl along the house on my knees and go and unhook the VCR and TV . . . [In one place] I got hit in the leg with a baseball bat and in the back once, and my buddy got cracked in the head.

Others reported attacks by victims who planned their revenge:

I robbed this place five times and what happened was, the guy got smart and he slept in the store, you know. And he [caught me and] beat the crap out of me.

Reflecting on the danger of burglary, another youth noted that people are not the only potential threat:

You got to find out if there is a dog . . . You got to make sure there's something in the house that's valuable enough, just in case you do get bit, you know. If you do get bit and you are only going in there for a damn VCR, it's pretty stupid.

Several respondents described interactions in which they or other street youth who were suspected of a crime or who had an outstanding warrant for their arrest were assaulted by police officers. For example, one youth spoke of an incident when the police stopped him and a group of street friends:

And the cops come and say, "What are you doing here?" We're just joking around with each other and whatever, right, just having a good time. We weren't being loud or anything like this. I don't know. They grabbed my friend and they beat him up and handcuffed him and told us to leave.

Another youth recounted his fear of being assaulted by police for selling drugs:

I got a lot of businessmen . . . I'd go down there at lunch hours . . . and sell hash to them. It was cool. I liked doing it that way better, because those type of people are less likely to get caught with something that I sold them and are less likely to pin it on me. [Selling] on the street, a cop gets you, takes you down to Cherry Beach [a police station], and beats you up.

Conversations about drug dealing revealed other sources of harm. One respondent's account reflects a common situation in which limited economic resources encourage people to find someone who will "front" them drugs in order to start selling:

I got in a hole. You got to go and get fronted some [drugs] to get yourself out of it and I found [that] I kept digging myself a bit deeper into this hole . . . [The people] wanted their money and I didn't pay my bill . . . I just kind of disappeared . . . If they find me it could be pretty bad . . . If I had [fronted] hundreds of dollars, I'd probably want to hurt somebody too.

Other youth recognized that some drug purchasers' desperation adds to the danger of selling. "If somebody's really dying for a hit," one explained, "you get stabbed, shot, beaten up for your drugs." Another account indicates that these are reasonable fears:

I got shot in the leg. Right there, there's one scar. And, uh, I've got two scars on my other leg. I've got one there, and there's the other one there. Someone tried to mug me [when I was] selling hash. I got shot, you know. [Another time] I got shot in the butt . . . I got so scared.

Drug dealing is not the only crime that involves hostile customers. Several youth who sell sex reported having encountered clients who attacked them. Financial gain is a common motive among these assailants:

The first night, I made \$80, but the dick robbed me. [He] put a gun to my head and took the money I made. I was really scared. It was horrible.

Some customers have even more sinister objectives.

I got tied up and had a rope tied around my neck and had this guy telling me he's gonna cut me up, but I managed to escape from him. I think that's about the scariest time I've ever had.

Offenders could also encounter danger from the activities of other offenders, albeit indirectly. One youth who worked in the drug economy offered an example:

I've done the odd [drug] "couriering." I stopped doing that after I opened . . . ah, I went down to this guy's basement to pick up the stuff and he

opens up the door and I see some AK47s. I'm like whoa, and I was like 12 or 13 at the time, and I'm looking at this and I'm going, I got to get out of this drug business, this is ridiculous.

In other situations offenders may be a more direct source of crime's danger. Competitors may be hostile to those who charge less than the going rate for an illegal product or service:

A lot of them [youth working on the street] get beat up if the word gets around [that they are selling below the norm] . . . there are warnings [but] if they tell you to "fuck off," well, then there could be some physical abuse.

This respondent added, however, that some offenders fabricate incidents to encourage attacks on others:

[Some of the time] it's just troublemakers out there that say, "Oh, this person is charging that," and the kid will get beat up for nothing. But they're just jealous because the kid is doing well.

Another mentioned that offending may also encourage coercion by more powerful offenders:

I worked independently . . . maybe about two weeks . . . trying to survive . . . and along come these people and the next thing you know, I'm forced and I'm told, "You have to do this," you know. "You're going to do this, else we're gonna hurt you." . . . A couple a times it didn't work out and I got beaten up.

Individuals repelled by specific crimes also pose a threat. Several youth we spoke with adamantly condemned particular offenses and, as demonstrated in the following conversation, reported attacking individuals involved in these activities.

Respondent: I beat up pushers. I beat up a guy, uh, not too severely, I kind of gave him a little bit of warning that if he wants to sell that stuff he goes downtown and sells it to big guys.

Interviewer: What about the police arresting you?

Respondent: What's he [the dealer] gonna say? "I was trying to push drugs in front of the school and he beat me up."

IMMUNITY AND SELF-IMAGE

Although most of our respondents appeared to be aware of some, if not all, of crime's possible danger, they differed in their reactions. At one extreme were individuals who concluded that offending would likely result in their being harmed. One former drug dealer's comment shows that some youth realize that the possibility of injury during offending outweighs any potential returns:

And like the worst feeling you can get in the entire world is to always be like watching over, like looking over your shoulder, watching your back all the time . . . You've got to be watching for robbers, right, and you've got to be watching for cops, and no matter what, after awhile, you're just kind of like, you know, always watching your back.

At the other extreme are those who conclude they are immune to the perils of crime. Remarks from these respondents suggest that although they were aware of the many sources of danger, they thought they possessed the skills, knowledge, and understanding to recognize situations or individuals that were potentially dangerous:

I kind of know how to judge somebody, or I feel I know how to judge somebody . . . It's just like vibes that you get from that person . . . If they look nervous themselves, if they don't look directly at you, or if their eyes keep shifting all the time, um, it's hard to explain. It's just like a sixth sense . . . something that you develop over time.

Some also claimed a sensitivity or instinct to foresee potential danger:

I'm a selective person . . . Usually you can tell by their opening question . . . just the way they present themselves . . . You just know, it's a gut feeling. . . . It's just like, no this is not right.

Others spoke of their physical abilities and argued they could defend themselves against attacks, as here in the words of a young woman:

I know how to handle myself in any kind of situation. I took a lot of self-defense classes. You better talk to me, instead of putting your hands on me, 'cause once you put your hands on me, I'm gonna try and hurt you . . . [and] I've beaten up a couple of people.

Another regular response reflects the confidence that youth have in their ability to escape from danger if it arises:

Interviewer: Were you worried that you were going to get beaten up or anything like that when working [in the sex trade]?

Respondent: No, 'cause you can just say no. It's easy enough to jump out of the car or whatever, so I wasn't too worried about it.

Overall, our interviews suggest that the possibility that offending would result in injury deterred many of our respondents from offending. In contrast, confidence about their ability to avoid harm appears to have increased other respondents' willingness to consider crime as an option.

PERCEPTIONS AND THEIR CONSEQUENCES

Our survey data permit a more systematic examination of the relationships suggested by our interviews. We begin the quantitative analysis presented here with an examination of the factors that influence perceptions about crime's

Table 2. OLS Regression of Background Variables' Effects on Perceptions of Crime's Danger

	Theft		Drug Selling		Prostitution	
	<i>b</i>	S.E.	<i>b</i>	S.E.	<i>b</i>	S.E.
Independent variables						
Age	.083	.047	.133*	.046	−.040	.042
Gender	−.290	.257	−.725*	.251	−.796*	.225
Race	.050	.247	.297	.242	−.007	.218
Family disruption	−.167	.249	−.317	.244	−.179	.219
Parental unemployment	.137	.168	−.018	.164	.260	.145
Maternal drug addiction	.025	.161	−.063	.158	−.123	.141
Family member arrested	−.013	.128	−.322	.126	−.166	.111
Offended at home ^a	−.081*	.021	−.158*	.032	−.008	.014
Arrested at home	−.034	.073	.044	.071	.052	.065
Constant	4.934	1.127	5.535	1.096	10.220	.980
<i>R</i> ²	.052		.102		.049	
<i>(n</i> = 482)						

^a Crime-specific (i.e., measures of theft, selling drugs, and a combination of the two in the prostitution model)

**p* ≤ .05 (two-tailed)

danger. Although that question is not a focus of this article, this preliminary analysis allows us to explore how prior offending influences the perception of danger (see Table 2). The results from OLS analyses indicate that perceptions of the dangers of stealing and selling drugs are significantly discouraged by previous involvement in these crimes (*b* = -.081, S.E. = .021 and *b* = -.158, S.E. = .032; the effect of prior offending on prostitution is not significant). However, these effects are relatively modest, and collectively our independent variables explain only a small part of the variation in perceptions (5%, 10%). These results suggest that perceptions about crime's danger are determined only partially by prior criminal experiences. They therefore support our investigation of perceptions' independent effects on offending.²⁴

Our second set of quantitative findings concerns the bivariate correlations between perceptual variables that measure various costs and benefits associated with offending. As indicated in Table 3, all but 9 of the 120 correlations are less than .3 and none are larger than .4.²⁵ The weak relationships among our perceptual variables suggest five points; three concern our measures of danger, and two apply to items that measure other perceptions. First, perceptions of a crime's danger differ from assessments about the likelihood of arrest. The correlations between perceptions about the danger of theft, drug selling, and prostitution and perceptions of the likelihood of arrest for these acts reveal sufficient independent variation to establish reliably the separate effects of each construct (Sampson and

Laub 1993:197).²⁶ Second, the view that a particular crime is dangerous does not translate into a similar fear for other offenses.²⁷ Third, the conclusion that a crime is dangerous does not correspond with the perception that it is exciting; indeed, the opposite pattern appears, suggesting that the excitement associated with offending may lie in the perception that one is immune to the danger associated with crime.²⁸ Fourth, assessment of whether crime in general is more lucrative than legal employment is distinct from perceptions about a specific type of crime's profitability. Fifth, the various perceptions about offending represent independent forces; combining them in scales may thus be inappropriate (Paternoster 1986). Overall, these patterns support our position that the danger associated with offending represents a unique cost. They also highlight the need to consider the independent effects of various perceptions on crime.

We extend our focus in Table 4, presenting tobit results that express the relationships of perceptual and other variables with theft and drug selling. Our results support our theoretical position: even with the introduction of several controls including prior offending, involvement in theft ($b = -.445$, S.E. = .198) and in drug dealing ($b = -.357$, S.E. = .160) significantly decreases as the perceptions that these activities are dangerous increase. Individuals who had rated theft and drug selling as very dangerous (10 on a scale of 10) have predicted scores for these offenses (1.342 and 1.630, respectively, with the values of all other variables set to their means) that are about three or four times smaller than the scores (5.344 and 4.851) for those who rated the offense very safe (1 out of 10).

Involvement in theft and in drug selling are shown as having been further discouraged by perceptions of the unacceptability of the particular crime ($b = -1.175$, S.E. = .384; $b = -.792$, S.E. = .292). In contrast, neither offense was notably influenced by perceptions of the likelihood of arrest. Some, but not all, of crime's potential benefits also play an important role. Theft and drug selling increase with perceptions that they are exciting ($b = .364$, S.E. = .171; $b = .614$, S.E. = .129) and with the perception that crime in general is more lucrative than legal ("straight") work ($b = .772$, S.E. = .307; $b = .707$, S.E. = .237). Net of these more general perceptions, perceptions about the *amount* of money that theft and drug selling can likely generate have nonsignificant effects on offending. The contrasting effects of these competing measures of crime's potential economic returns suggest that offenders do not expect to "get rich" from stealing or selling drugs but do anticipate that crime pays better than legal employment (McCarthy and Hagan 2001). In other words, offenders appear to adopt a relative, rather than an absolute, lens when contemplating crime's financial returns (Decker, Wright, and Logie 1993).

Several of our control variables also show significant effects on offending. As expected, offending at home increases involvement in street theft and drug dealing.²⁹ Additional effects indicate that involvement in either crime escalates with the proportion of friends involved in that particular offense and with the frequency of offending opportunities. Lack of food and adequate shelter while

Table 3. Bivariate Correlations among Perceptual Variables

	x1	x2	x3	x4	x5	x6	x7	x8	x9	x10	x11	x12	x13	x14	x15
Perception that															
Arrest for theft likely (x1)	1.0														
Arrest for drug selling likely (x2)	.337*	1.0													
Arrest for prostitution likely (x3)	.167*	.301*	1.0												
Theft is dangerous (x4)	.240*	.113*	.062	1.0											
Drug selling is dangerous (x5)	.089	.366*	.220*	.392*	1.0										
Prostitution is dangerous (x6)	.052	.046	.203*	.251*	.343*	1.0									
Theft is always wrong (x7)	.041	.001	-.049	.206*	.190*	.056	1.0								
Drug use should be illegal (x8)	.058	.101*	.171*	.276*	.399*	.114*	.091	1.0							
Prostitution should be illegal (x9)	-.004	.081	.184*	.147*	.150*	.311*	.047	.321*	1.0						
Theft is exciting (x10)	-.109*	-.139*	-.045	-.273*	-.220*	-.067	-.161*	.133*	-.036	1.0					
Drug selling is exciting (x11)	-.094*	-.116*	-.003	-.162	-.259*	-.068	-.134	.219*	-.072	.332*	1.0				
Prostitution is exciting (x12)	-.040	-.005	-.041	-.061	.003	-.246*	-.049	.007	-.131*	.278*	.288*	1.0			
Theft is lucrative (x13)	-.065	-.052	.050	-.001	.053	.166	-.052	-.048	.121*	.079	-.068	-.024	1.0		
Drug selling is lucrative (x14)	-.002	.070	-.015	-.004	-.032	.065	-.046	-.041	.100*	.061	.185*	.053	.287*	1.0	
Prostitution is lucrative (x15)	.028	-.105*	.019	-.012	.016	-.027	-.042	-.057	-.087	.027	-.009	.047	.164*	.249*	1.0
Crime is more lucrative (x16)	-.080	.013	-.084	-.172*	-.187*	-.110*	-.047	-.137*	-.129*	.113*	.221*	.120*	.064	.151*	.179*
(n = 482)															
*p ≤ .05 (two-tailed)															

Table 4. Tobit Regression Coefficients of Perceptual and Other Variables' Effects on Theft and Drug Selling

	Theft		Drug Selling	
	<i>b</i>	S.E.	<i>b</i>	S.E.
Age	-.539*	.188	.074	.162
Gender	5.560*	1.027	1.206	.802
Race	-1.586	1.077	-.308	.790
Family disruption	1.271	.950	1.367	.754
Parental unemployment	-.066	.699	-.364	.494
Maternal drug addiction	-.625	.636	-.057	.490
Family member arrested	.188	.499	-.014	.367
Offended at home ^a	.338*	.098	.481*	.081
Arrested at home	.426	.309	-.008	.224
Percentage of friends who offend ^a	.037*	.016	.056*	.014
Percentage of friends arrested	-.005	.016	-.020	.014
Adversity	.564*	.181	.372*	.136
Months on the street	.072*	.025	.043*	.020
Unemployment	.078	.633	.505	.483
Illegal opportunities	.757*	.378	1.670*	.289
Perception that				
Activity is dangerous ^a	-.445*	.198	-.357*	.160
Activity will lead to arrest ^a	-.079	.183	-.054	.161
Activity is wrong/should be illegal ^a	-1.175*	.384	-.792*	.292
Activity is exciting ^a	.364*	.171	.614*	.129
Activity is lucrative ^a	-.094	.194	.025	.151
Crime is more lucrative than legal work	.772*	.307	.707*	.237
Enjoy taking risks	.890	.474	-.067	.365
Constant	3.218	6.327	-10.461	4.963
χ^2	252.35		425.22	
Df	22		22	
-2 X log likelihood	2392.269		2074.800	

(n = 482)

^a Crime-specific**p* ≤ .05 (two-tailed)

homeless and length of time living on the street also contribute to theft and drug selling, relationships consistent with the claim that situational adversity plays an important role in the genesis of crime (Hagan and McCarthy 1997). The remaining significant effects are specific to theft: stealing is less common among older youth and is more frequent among males.

Table 5 reports results from our logit model of prostitution. Mirroring the trend reported above, our key variable, the perception that prostitution is dangerous, is negatively and significantly associated with involvement in the sex trade (*b* = -.130, S.E. = .064). Thus the odds of participating in prostitution drop by about 13% for every point increase in the perception of this crime's danger.

Table 5. Logit Regression Coefficients of Perceptual and Other Variables' Effects on Prostitution

	Prostitution	
	<i>b</i>	S.E.
Age	.044	.063
Gender	-.958*	.347
Race	.164	.327
Family disruption	.028	.306
Parental unemployment	.005	.219
Maternal drug addiction	-.400*	.184
Family member arrested	.122	.142
Offended at home	.001	.021
Arrested at home	-.124	.108
Percentage of friends in sex trade	.033*	.005
Percentage of friends arrested	-.008	.005
Adversity	.040	.052
Months on the street	-.001	.008
Unemployment	.214	.208
Illegal opportunities	.396*	.116
Perception that		
Prostitution is dangerous	-.130*	.064
Prostitution will lead to arrest	-.038	.054
Prostitution should be illegal	-.221*	.106
Prostitution is exciting	.112	.060
Prostitution is lucrative	-.052	.057
Crime is more lucrative than legal work	.100	.105
Enjoy taking risks	-.207	.151
Constant	.012	1.939
χ^2	90.33	
Df	22	
-2 X log likelihood (<i>n</i> = 482)	354.200	

**p* ≤ .05 (two-tailed)

For respondents who rated prostitution very dangerous (10 on a scale of 10), the predicted probability of offending (.116) is less than half the score (.298) for respondents who rated this offense very safe (1 out of 10).

Involvement in prostitution is also negatively related to the view that the sex trade should be illegal (*b* = -.221, S.E. = .106). All other perceptual measures, including the likelihood of arrest, have little influence on prostitution. Furthermore, only a few control variables have a direct effect on prostitution. Involvement in the sex trade is more common among females and among those whose mothers had drug problems; it is positively associated with the proportion of friends involved in this activity and with illegal opportunities.

We reestimate the above equations to pursue further implications of these patterns. In these new equations, we replace our danger measures with those used in the other equations (e.g., replacing the perception of theft's danger first with the assessment of drug selling's danger and second with the perception of prostitution's danger). We do not present a table of these results because they indicate little overall crossover between crime types (see also Paternoster 1989; cf. Montmarquette, Nerlove, and Forest 1985).³⁰ Indeed, the only significant crossover involving measures of danger indicates that theft decreases with the view that drug selling is hazardous ($b = -.709$, $S.E. = .214$).³¹

Extending our analysis, we explored whether perceptions about the danger in crime interact with other variables in our models (see also Grasmick and Bursik 1990). Interactions included our measures of danger and all of our perceptual variables, as well as any control variables that had a significant effect on any of the three crimes that we have examined. Only one of these interaction terms showed a significant effect: theft was positively influenced by the interactions between the belief that it is *not* dangerous and the proportion of friends involved in stealing ($b = .014$, $S.E. = .007$). Interaction effects are difficult to detect in survey research, particularly in studies that have samples that are in the hundreds rather than the thousands (McClelland and Judd 1993). Nonetheless, the paucity of significant interaction effects in our analysis suggests that perceived danger's strongest effects are direct.³²

We conclude this section on our analyses with a report on our longitudinal data. Our hypotheses about the effects of crime's perceived danger and the changing nature of perceptions suggest that the effects of our first-interview perceptual measures should decrease over time and work primarily through their effect on our measures of first wave offending and the harm, or lack thereof, that accompanies it. As noted earlier, we assume that people use their experiences (as well as the experiences of others and other sources of information) to update their perceptions about crime's costs and rewards. We cannot directly demonstrate updating of perceptions about danger because we do not have second wave measures. However, the change in our *other* perceptual measures suggests that, like participants in other surveys (Matsueda, Kreager, and Huizinga 2003; Pogarsky et al. 2004), our respondents update their views about crime's other risks.

With this caveat in mind, we examined the effects of perceptions about danger on second-interview measures of offending (see Table 6). Our second-interview measures parallel those we used to measure crime in the first interviews, but these are limited to offenses committed during the twelve days before the second interview. We used negative binomial regression for the count data shown here (which reflect the number of days on which the respondent offended). Our results indicate that our three first-interview measures of danger are significantly associated with second-interview offending at the bivariate level (i.e., theft, $b = -.224$, $S.E. = .080$; drug selling, $b = -.161$, $S.E. = .056$; prostitution, $b = -.262$, $S.E. = .077$). But these effects are dramatically reduced and become nonsignificant

when we control for first-interview offending (i.e., theft, $b = -.010$, S.E. = .093; drug selling, $b = -.044$, S.E. = .057; prostitution, $b = -.080$, S.E. = .048).³³ The effects of danger also decrease to nonsignificance if we introduce our other perceptual variables and our first-interview measures of street experiences (e.g., adversity, illegal opportunities, or deviant networks).³⁴

Although we cannot determine the precise causal connections, our cross-sectional and longitudinal findings suggest that perceptions about danger may play an important, and perhaps a very immediate role in offending decisions. The mechanisms by which this process occurs clearly require further study.³⁵

Discussion

The decline in Western nations' use of direct physical pain to punish lawbreakers has not eliminated crime's potential for harm, nor all potential offenders' fear of it. Instead, people's apprehensions may focus more on the danger of others who respond to crimes with severe, perhaps fatal, retaliatory violence. Our cross-sectional analyses demonstrate that perceptions about crime's danger are significantly and negatively related to offending: that is, crime decreases with the view that an offense is dangerous. This pattern occurs across the three types of crimes examined—theft, drug selling, and prostitution—and persists with controls for other perceptual variables and commonly identified correlates of offending. These perceptions are also associated with offending in the period before our second round of interviews and may have influenced subsequent offending primarily through their relationships with offending prior to the first interview. These findings suggest that perceptions about crime's danger may play an important role in the etiology of offending. Subsequent research should thus explore the effects of both distal and more proximate perceptual measures on offending, as well as the relationships between views about crime and its consequences.

This article adds to a growing literature that demonstrates that decisions by youth to engage in risky activities are influenced by perceived costs and benefits, not solely by emotional decision making that is devoid of rationality (see Gruber 2001). Youth who fear and youth who are fearless in the face of crime's potential harm both appear to use these perceptions in making decisions about offending. These findings are consistent with diverse explanations from sociology, economics, and psychology. Thus they should not be used to champion the perspective of one discipline over another but should be used to build more comprehensive theories of risk taking and decision making.

Theorists and researchers need to broaden their thinking in other ways. Sociologists have convincingly demonstrated that the potential for informal sanctions has a greater effect on criminal decisions than does the threat of formal sanctions or other factors highlighted in conventional economic analyses

Table 6. Negative Binomial Regression Coefficients of First-Interview Perceptions and Offending on Second-Interview Theft, Drug Selling, and Prostitution

	Second Interview Offending					
	Theft		Drug Selling		Prostitution	
	<i>b</i>	S.E.	<i>b</i>	S.E.	<i>b</i>	S.E.
First interview						
Perception that offense is dangerous	-.224*	.080	-.161*	.056	-.262*	.077
Constant	.494	.551	1.252	.377	1.477	.532
χ^2	7.81/1		8.28/1		11.47/1	
-2 X log likelihood	487.864		831.824		441.362	
Perception that offense is dangerous	-.010	.093	.044	.057	-.080	.048
Offending	.134*	.026	.285*	.026	.077*	.008
Constant	-2.058	.683	-2.479	.499	-2.392	.576
χ^2	34.15		148.03		87.56	
Df	2		2		2	
-2 X log likelihood	460.074		764.048		359.872	
(n = 376)						
* $p \leq .05$ (two-tailed)						

of crime. Future work on criminal decision making must consider these distal factors in concert with more proximate ones. Sanction theory's selective and heavy emphasis on legal consequences suggests an image of offenders who base their decisions to offend on weighty deliberations about the likelihood and severity of legal punishments, stigma, and ostracism. In contrast, our findings indicate that potential offenders may be more powerfully influenced by more immediate consequences of crime, that is, by their perceptions of the probability that they will be harmed by others. By comparison, the influences of the law and community seem remote and abstract.

Our research also suggests a need to move beyond factors that discourage crime among those who have a considerable stake in normative society and little criminal experience. We must examine more closely the views that influence people on the margins of society and who are more familiar with offending and punishment. Although the possibility of harm appears to play an important role in these people's decisions about offending, perceptions other than those studied here undoubtedly affect their choices as well. For example, research has indicated that offending is related to perceptions about a criminal occupation's prestige (Matsueda et al. 1992). Other views, such as the conclusion that crime will lead to the acquisition of new social criminal capital (i.e., establishing new connections with other offenders), or its human counterpart (i.e., a conduit to acquiring new skills) may also encourage people to choose offending over other

alternatives (McCarthy and Hagan 2001). Similarly, offending may be affected by the perception that particular crimes, or types of crime, may undermine or destroy social criminal capital, or may prevent the acquisition of new sources of it. Future research would be enhanced by greater attention to the consequences of these and other perceptions.

We must also explore in greater detail people's perceptions of the danger of crime. Subsequent research should investigate the similarities and differences between perceptions about crime's danger and views about its other costs. For example, deterrence research suggests that estimates of the likelihood of arrest are often independent of, and have different consequences for, offending than do conclusions about arrest's negative consequences. A similar pattern may occur for perceptions about danger. Future research should explore how perceptions about danger's certainty, severity, and celerity independently and jointly influence the decision to offend.

We also know little about the processes that encourage people to see crime as dangerous, or those that foster the view that they are able to surmount crime's potential for harm. Previous research suggests several possibilities. People vary in their access to information about crime's potential harms (Pogarsky, Piquero, and Paternoster 2004; Stafford and Warr 1993), and incomplete information may comprise their assessment of a potential victim's compliance or resistance (Anderson 1999; Gambetta 1993). Alternatively, individuals who adopt the "gambler's fallacy" (Pogarsky and Piquero 2003) may assume that crime-related harm is a rare event whose occurrence (either for themselves or others) lowers the likelihood of danger for future crimes; thus they may systematically underestimate the likelihood of their own victimization. Another approach hypothesizes that people may prefer to avoid harm and believe an act is dangerous yet commit it when they encounter a social interaction that triggers strong emotions (e.g., embarrassment) that "override" their preference to avoid danger. In other words, emergent preferences and preference switching may explain people's decisions to commit a dangerous act (Fontdevila 2002). Katz (1988) has eloquently described a "transformative" process that individuals may experience in the immediate foreground or situational dynamics of a crime. As part of this process, people redefine themselves in relation to others, the law, and their capabilities to offend. Perhaps individuals who see themselves as immune to crime's harm have undergone such a transformation of self-image but experienced the awakening over a longer period. Subsequent research should investigate the various explanations suggested here in order to clarify why some individuals view offending as inherently risky while others are convinced of their ability to evade crime's potential for harm.

Our findings suggest that the use of violence against offenders could reduce crime, but the extent of such reduction remains opaque. Increasing crime's harm, and the knowledge of it, may have limited effects on offenders who believe they are immune to harmful consequences; these people may have "stickier" perceptions

that require considerable contradiction before they change. Moreover, if these offenders believe that most crime victims will use violence, they may be more likely to use preemptive violence, thereby increasing victim costs.

Crime victims may incur other costs if they rely on violence or its threat to deter offenders. Game theory research indicates that relying on individuals to prevent and respond to crime can discourage police activity, thereby creating greater opportunities for offending (Cressman, Morrison, and Wen 1998). If Elias and others are right (see Garland 1990), most people would also receive little lasting satisfaction from resorting to violence, particularly if it is excessive or used against offenders who commit nonviolent crimes. Garland (1990:243) notes that most modern state-based punishment is "institutionally ordered and discursively represented" in ways that disguise the pains in its practices. Individual violent responses to crime could negate this protective veil. They could also result in individual remorse and guilt that may be more costly than the losses incurred (e.g., financial, minor physical injuries, or regret at not having intervened).

Mead's (1918) discussion of punitive justice points to further, macro-level consequences of punishments based on an "attitude of hostility" that may underlie individual violent responses to crime. These effects include support for the narrow beliefs that crime is caused exclusively by individual characteristics and a corresponding decrease in concerns for the social conditions that contribute to it. Sanctions communicate a society's views on crime and punishment, but they also convey assumptions about individual rights and citizenship (Duff 1996). Treating people as citizens requires that punishment create prudential incentives to obey the law, but it must supplement and not replace rational, moral persuasion. As Bentham reminds us (in the gender-specific language of the time), "it has been too frequently forgotten, that the delinquent is a member of the community, as well as any other individual . . . His welfare is proportionately the welfare of the community—his suffering the suffering of the community" (quoted in Zimring and Hawkins 1973:42). Thus, although perceptions about danger may inform the decision to offend, a sanction system that resorts to fear of pain is not a panacea for crime.

Notes

1. Jackman (2002) summarizes the complexities of defining violence, aggression, and harm and notes that people often choose to experience physical harm as a means to an end (e.g., plastic surgery). We simplify definitional issues and restrict our focus to the use of physical force against others that results in, or has a high likelihood of resulting in, injury or death.
2. For example, consider incident data from the U.S. Victimization Survey from 1992 through 1999 (U.S. Department of Justice 2001). Victims who confronted offenders chose to use a weapon or some other form of violence against the offender over calling the police in about 25% more of the incidents (2,988 compared with 2,374).
3. Lyng's (1990:872) emphasis on invulnerability resembles Claster's (1967) argument that

delinquents' lower estimates of the probability of arrest reflect a belief in their "magical arrest immunity." Yet, unlike Claster, Lyng does not attribute participation in crime to innate needs or personality traits but argues that the motivation originates in people's alienation and their opposing desires for spontaneity and control.

4. Genetics may also play a role. For example, a longer version of the D4DR dopamine receptor gene may increase the attractiveness of risk taking (Pinker 2002:48).

5. There is considerable debate about how to approach time discounting (O'Donoghue and Rabin 2001): some analysts treat it as part of a person's preferences; others assume that people's discounting factor is typically "excessively myopic"; a competing orientation assumes that people's discounting changes across decisions. We assume the latter.

6. A detailed discussion of thick versus thin rational choice theories is beyond the limits of this article (see Lichbach 2003 for a summary).

7. Other contributing factors could include individual propensity to offend as well as the possibility that offenders are present-oriented and thus unable or unlikely to consider future costs (Gottfredson and Hirschi 1990).

8. Bouffard (2003) finds that many college students also list physical injuries as an important consequence of offending when asked to generate a list of crime's potential negative consequences.

9. Comparisons between sample dropouts and those who returned for a second interview reveal significant differences for 5 of the 39 variables in our study. The latter are older, show higher scores for the perceptions that drug selling will result in an arrest and that drug use should be legal, and show lower scores for the view that prostitution is lucrative and for involvement in street theft.

10. The average correlation between first-interview and second-interview measures for perceptions about the likelihood of arrest for the three types of crime we consider is .485. The average correlation between first-interview and third-interview measures for the likelihood of arrest is .078.

11. Weak correlations over time may also reflect unreliable measures or a basic instability in a perception (i.e., a perception that varies almost randomly over time for any individual). We assume but cannot empirically demonstrate that updating explains more of the variation in attitudes over time than do a lack of reliability or constant variability.

12. Panel designs also do not solve the causal order problem because of the instability of perceptions and the variation in effects of proximate versus distal views (see Grasmick and Bursik 1990).

13. We assume that respondents interpreted danger as the possibility of physical harm. This accords with dictionary definitions (e.g., *OED*), common use (Simpson 1996), and studies on risk (Slovic 2000).

14. People's perceptions of the danger of the sex trade may also reflect fears of contracting sexually transmitted diseases, particularly HIV.

15. Our data do not contain estimates of perceptions of other formal sanctions such as incarceration, but Piliavin and colleagues' analysis (1986) suggests that estimates of arrest contribute more to perceptions of formal risk than do estimates of imprisonment.

16. We could not locate any studies that explore the differences between perceptions

and beliefs about offending, but research on environmental beliefs and perceptions demonstrates their distinctiveness (see O'Connor, Bord, and Fisher 1999).

17. The low correlations between these measures (e.g., $r = .047$ between views about theft and prostitution) suggest that individuals have varying degrees of support for different norms or laws.

18. Reports from nonoffenders indicate that other factors varied considerably in their importance. Only 20% reported that concerns about employment influenced their decision "a lot," whereas 55% said that the immorality of crime had a major influence.

19. We do not have measures of violent victimization related to offending at home or on the street.

20. Our measures of prior offending and the availability of illegal opportunities to offend should also act as reasonable proxies for variables emphasized in self-control theory (Gottfredson and Hirschi 1990).

21. Perceptions about crime's potential costs and benefits likely influence the decision to commit a specific illegal act or criminal event (Cornish and Clarke 1986), as well as general involvement in particular types of crime. We focus on the latter.

22. Sixty percent of males had committed a theft, 69% had sold drugs, and 17% had sold sex; the proportions for females are 53%, 49%, and 29%. The theft and drug selling means (ordinal variables) are significantly higher for males (6.0397 and 7.104) than for females (4.290 and 3.723), but the reverse pattern occurs for the means for prostitution (6.085 versus 11.251, interval variable).

23. The results for a tobit model of prostitution are similar to those for the logit analysis. Tobit models of logged theft and drug selling also produce results similar to those reported here.

24. Models of perceptions about arrest reveal a similar pattern. Prior theft and drug selling significantly decrease estimations of the probability of arrest for these crimes ($b = -.058$, S.E. = .021, and $b = -.141$, S.E. = .031), but our models explain only a small proportion of the variance (17% and 6%).

25. Reliability analyses indicate that combining the items by type (e.g., perceptions about danger) or by crime (e.g., all items related to theft) produces low Cronbach's alphas (e.g., .397 for theft items and .351 for danger measures). Factor analyses of the items also reveal their distinctiveness. For example, three of the five theft items have loadings of less than .35 in a factor analysis of theft items (as do two items in a factor analysis limited to perceptions about danger, arrest, and morality). Correlated attitudinal items that fall within this range typically produce an "indeterminant factor structure" (Robinson, Shaver, and Wrightsman 1999:11).

26. A chi-square test for a factor analysis of the three danger and three arrest items indicates that a one-factor model is inadequate. Moreover, the three measures of perceptions about danger have notably larger associations with offending (theft, $r = -.270$; drug selling, $r = -.327$; prostitution, $r = -.215$) than do the three measures about arrest (theft, $r = -.082$; drug selling, $r = -.149$; prostitution, $r = -.051$).

27. Indeed, a measure that combines the two danger measures with the highest correlation (theft and drug selling) has a small, nonsignificant effect in the multivariate regression analysis of drug selling we present below and provides no substantial improvement in

our analysis of theft. Jacobs (2000:31) also reports that several of the drug robbers he interviewed said that they were too scared to shoplift.

28. Questions about other activities (e.g., mountain climbing) reveal similar patterns: the correlations between perceptions that these activities are exciting and dangerous are negative and significant.

29. Analyses that replace independent measures of home offending and arrest with measures that combine the two find that being a "sanctioned offender" significantly increases street theft ($b = 4.907$, S.E. = 1.175) and drug dealing ($b = 3.758$, S.E. = 1.062), results consistent with the process identified in theories that emphasize labeling, criminal stigma, and defiance. Meanwhile, successful offending (i.e., a "nonsanctioned" offender) is positively related to subsequent offending, but the net effect is weaker for theft than drug selling and significant only for the latter ($b = 2.219$, S.E. = 1.134, and $b = 2.611$, S.E. = 1.133).

30. There are two significant effects: theft is related to the view that drug selling is exciting ($b = .350$, S.E. = .175), and drug selling is negatively related to the view that theft is profitable ($b = -.372$, S.E. = .145).

31. We also explored the possibility that some individuals may simply perceive many activities, criminal and noncriminal, as dangerous, suggesting that types of people rather than perceptions per se matter most. Factor analysis of our perceptual measures of the danger of noncriminal activities reveals three dimensions: (1) mountain climbing and skydiving; (2) hitchhiking, taking drugs, and sleeping in public places; and (3) having sex. Analyses that control for the first and third factors reproduce the substantive effects for perceptions of crime's danger reported in the text (i.e., the point estimates and level of significance decrease only slightly). Although these effects decrease more substantially in analyses that control for the second factor, they nonetheless remain significant with a one-tailed test.

32. Two effects are significant at the .05 level with a one-tailed test. The view that theft is safe (i.e., danger reverse-coded) interacts with adversity ($b = .109$, S.E. = .060) and excitement ($b = .112$, S.E. = .060).

33. Tobit results mirror those for the negative binomials.

34. In the theft equation, controls for both perceptual and street variables are required to reduce danger's effect to nonsignificance, whereas either set of controls is sufficient to reduce danger's effect to nonsignificance in the equations for drug selling and prostitution.

35. Meanwhile, as Sampson and Laub remind us, issues of causal order can never be totally resolved. Instead, we should heed Hirschi and Selvin's advice: "it is . . . wrong to let some uncertainties about causal order preclude causal inferences" (quoted in Sampson and Laub 1993:39).

References

- Altheide, David L. 2002. *Creating Fear: News and the Construction of Crisis*. Aldine de Gruyter.
- Anderson, Elijah. 1999. *Code of the Street: Decency, Violence, and the Moral Life of the Inner City*. W.W. Norton.

- Becker, Gary S. 1976. *The Economic Approach to Human Behavior*. University of Chicago Press.
- Bentham, Jeremy. [1789] 1996. *An Introduction to the Principles of Morals and Legislation*. Clarendon Press.
- Black, Donald. 1980. *The Manners and Customs of the Police*. Academic Press.
- . 1993. *The Social Structure of Right and Wrong*. Academic Press.
- Bouffard, Jeffrey A. 2003. "Individual Difference and Subject-Generated Consequences in Rational Choice Research Using Hypothetical Offending Scenarios." Paper presented at the American Society of Criminology meetings, Denver.
- Bromiley, Philip, and Shawn P. Curley. 1992. "Individual Differences in Risk Taking." Pp. 87–132 in *Risk-Taking Behavior*, edited by J. Frank Yates. Wiley.
- Brown, Richard Maxwell. 1975. *Strains of Violence: Historical Studies of American Violence and Vigilantism*. Oxford University Press.
- Bueno de Mesquita, Bruce, and Lawrence E. Cohen. 1995. "Self-Interest, Equity, and Crime Control: A Game-Theoretic Analysis of Criminal Decision Making." *Criminology* 33:483–518.
- Claster, Daniel S. 1967. "A Comparison of Risk Perception between Delinquents and Non-Delinquents." *Journal of Criminal Law, Criminology, and Police Science* 58:80–86.
- Cornish, Derek B., and Ronald V. Clarke, eds. 1986. *The Reasoning Criminal: Rational Choice Perspectives on Offending*. Springer-Verlag.
- Cressman, Ross, William G. Morrison, and Jean-François Wen. 1998. "On the Evolutionary Dynamics of Crime." *Canadian Journal of Economics* 31:1102–15.
- Cusson, Maurice. 1983. *Why Delinquency? (Délinquants, pourquoi?)*, translated by Dorothy R. Crelinsten. University of Toronto Press.
- Decker, Scott, Richard Wright, and Robert Logie. 1993. "Perceptual Deterrence among Active Residential Burglars: A Research Note." *Criminology* 31:135–47.
- Duff, R.A. 1996. "Penal Communications: Recent Work in the Philosophy of Punishment." *Crime and Justice* 20:1–97.
- Durkheim, Émile. [1893] 1933. *The Division of Labor in Society*, translated by George Simpson. Free Press.
- Eide, Erling. 1994. *Economics of Crime: Deterrence and the Rational Offender*. Elsevier Science.
- Foglia, Wanda D. 1997. "Perceptual Deterrence and the Mediating Effects of Internalized Norms among Inner-City Teenagers." *Journal of Research in Crime and Delinquency* 34:414–42.
- Fontdevila, Jorge. 2002. "Rationalities of Risk: Intimate Action in the Age of AIDS among Men on Methadone." Ph.D. dissertation, Columbia University.
- Gambetta, Diego. 1993. *The Sicilian Mafia: The Business of Private Protection*. Harvard University Press.
- Garland, David. 1990. *Punishment and Society: A Study in Social Theory*. University of Chicago Press.
- . 2001. *The Culture of Control: Crime and Social Order in Contemporary Society*. University of Chicago Press.

- Gottfredson, Michael R., and Travis Hirschi. 1990. *A General Theory of Crime*. Stanford University Press.
- Grasmick, Harold G., and Robert J. Bursik Jr. 1990. "Conscience, Significant Others, and Rational Choice: Extending the Deterrence Model." *Law and Society Review* 24:837-61.
- Gruber, Jonathan. 2001. Introduction to *Risky Behavior among Youth: An Economic Analysis*, edited by Jonathan Gruber. University of Chicago Press.
- Hagan, John. 1992. "The Poverty of a Classless Criminology—The American Society of Criminology 1991 Presidential Address." *Criminology* 30:1-19.
- Hagan, John, and Bill McCarthy. 1997. *Mean Streets: Youth Crime and Homelessness*. Cambridge University Press.
- Horney, Julie, and Ineke Haen Marshall. 1992. "Risk Perceptions among Serious Offenders: The Role of Crime and Punishment." *Criminology* 30:575-93.
- Huber, P.J. 1981. *Robust Statistics*. Wiley.
- Jackman, Mary. 2002. "Violence in Social Life." *Annual Review of Sociology* 28:387-415.
- Jacobs, Bruce A. 2000. *Robbing Drug Dealers: Violence beyond the Law*. Aldine de Gruyter.
- Jaeger, Carlo C., Ortwin Renn, Eugene A. Rosa, and Thomas Webler. 2001. *Risk, Uncertainty, and Rational Action*. Earthscan.
- Johnson, Bruce D., Terry Williams, Kojo A. Dei, and Harry Sanabria. 1990. "Drug Abuse and the Inner City: Impact on Hard-Drug Users and the Community." *Drugs and Crime: Crime and Justice* 13:9-67.
- Johnston, L. 1996. "What Is Vigilantism?" *British Journal of Criminology* 36:220-36.
- Katz, Jack. 1988. *Seductions of Crime: Moral and Sensual Attractions in Doing Evil*. Basic Books.
- Lichbach, Mark I. 2003. *Is Rational Choice Theory All of Social Science?* University of Michigan Press.
- Lyng, Stephen. 1990. "Edgework: A Social Psychological Analysis of Voluntary Risk Taking." *American Journal of Sociology* 95:851-86.
- . 1993. "Dysfunctional Risk Taking: Criminal Behavior as Edgework." Pp. 107-30 in *Adolescent Risk Taking*, edited by Nancy J. Bell and Robert W. Bell. Sage Foundation.
- Matsueda, Ross L., Rosemary Gartner, Irving Piliavin, and Michael Polakowski. 1992. "The Prestige of Criminal and Conventional Occupations: A Subcultural Model of Criminal Activity." *American Sociological Review* 57:752-70.
- Matsueda, Ross L., Derek Kreager, and David Huizinga. 2003. "Deterring Delinquents: A Rational Choice Model of Theft and Violence." Paper presented at the American Sociological Association Meetings, Atlanta.
- McCarthy, Bill. 2002. "New Economics of Sociological Criminology." *Annual Review of Sociology* 28:417-42.
- McCarthy, Bill, and John Hagan. 2001. "When Crime Pays: Capital, Competence, and Criminal Success." *Social Forces* 79:1035-59.
- McClelland, Gary H., and Charles Judd. 1993. "Statistical Difficulties of Detecting Interactions and Moderator Effects." *Psychological Bulletin* 114: 376-90.

- Mead, George Herbert. 1918. "The Psychology of Punitive Justice." *American Journal of Sociology* 23:577-602.
- Meier, Robert, and Weldon Johnson. 1977. "Deterrence as Social Control: The Legal and Extralegal Production of Conformity." *American Sociological Review* 42:292-304.
- Millstein, Susan G. 1993. "Perceptual, Attributional, and Affective Process in Perceptions of Vulnerability through the Life Span." Pp. 55-65 in *Adolescent Risk Taking*, edited by Nancy J. Bell and Robert W. Bell. Sage.
- Minor, W. William, and Joseph Harry. 1982. "Deterrence and Experiential Effects in Perceptual Deterrence Research: A Replication and Extension." *Journal of Research in Crime and Delinquency* 19:190-203.
- Mohr, Lawrence B. 1990. *Understanding Significance Testing*. Sage Publications.
- Montmarquette, Claude, Marc Nerlove, and Paul Forest. 1985. "Deterrence and Delinquency: An Analysis of Individual Data." *Journal of Quantitative Criminology* 1:37-58.
- Nagin, Daniel S. 1998. "Criminal Deterrence Research at the Outset of the Twenty-First Century." *Crime and Justice* 23:1-42.
- Nagin, Daniel S., and Raymond Paternoster. 1991. "The Preventive Effects of the Perceived Risk of Arrest: Testing an Expanded Conception of Deterrence." *Criminology* 29:561-88.
- . 1993. "Enduring Individual Differences and Rational Choice Theories of Crime." *Law and Society Review* 27:467-98.
- O'Connor, Robert E., Richard J. Bord, and Ann Fisher. 1999. "Risk Perceptions, General Environmental Beliefs and Willingness to Address Climate Change." *Risk Analysis* 19:461-71.
- O'Donoghue, Ted, and Matthew Rabin. 2001. "Risky Behavior among Youth: Some Issues from Behavioral Economics." Pp. 29-67 in *Risky Behavior among Youth: An Economic Analysis*, edited by Jonathan Gruber. University of Chicago Press.
- Paternoster, Raymond. 1986. "The Use of Composite Scales in Perceptual Deterrence Research: A Cautionary Note." *Journal of Research in Crime and Delinquency* 23:128-68.
- . 1989. "Decisions to Participate in and Desist from Four Types of Common Delinquency: Deterrence and the Rational Choice Perspective." *Law and Society Review* 23:7-40.
- Piliavin, Irving, Rosemary Gartner, Craig Thornton, and Ross L. Matsueda. 1986. "Crime, Deterrence, and Rational Choice." *American Sociological Review* 51:101-19.
- Pinker, Steven. 2002. *The Blank Slate: The Modern Denial of Human Nature*. Viking Press.
- Pogarsky, Greg, and Alex R. Piquero. 2003. "Can Punishment Encourage Offending? Investigating the 'Resetting' Effect." *Journal of Research in Crime and Delinquency* 40:95-120.
- Pogarsky, Greg, Alex R. Piquero, and Raymond Paternoster. 2004. "Modeling Change in Perceptions about Sanction Threats: The Neglected Linkage in Deterrence Theory." *Journal of Quantitative Criminology* 20:343-69.
- Robinson, John P., Phillip R. Shaver, and Lawrence S. Wrightsman, eds. 1999. *Measures of Political Attitudes*. Academic Press.
- Saltzman, Linda, Raymond Paternoster, Gordon P. Waldo, and Theodore G. Chiricos. 1982. "Deterrent and Experiential Effects: The Problem of Causal Order in Perceptual Deterrence Research." *Journal of Research in Crime and Delinquency* 19:172-89.

- Sampson, Robert J., and John H. Laub. 1993. *Crime in the Making: Pathways and Turning Points through Life*. Harvard University Press.
- Sampson, Robert J., and Janet L. Lauritsen. 1990. "Deviant Lifestyles, Proximity to Crime, and the Offender-Victim Link in Personal Violence." *Journal of Research in Crime and Delinquency* 27:110-39.
- Schmidt, Peter, and Ann Dryden Witte. 1984. *An Economic Analysis of Crime and Justice: Theory, Methods, and Applications*. Academic Press.
- Shover, Neal. 1996. *Great Pretenders: Pursuits and Careers of Persistent Thieves*. Westview Press.
- Simpson, Ruth. 1996. "Neither Clear Nor Present: The Social Construction of Safety and Danger." *Sociological Forum* 11:549-62.
- Skolnick, Jerome, and James Fyfe. 1993. *Above the Law: Police and the Excessive Use of Force*. Free Press.
- Slovic, Paul, et al. 2000. *The Perception of Risk*. Earthscan.
- Spierenburg, Pieter. 1995. "The Body and the State: Early Modern Europe." Pp. 49-77 in *The Oxford History of the Prison: The Practice of Punishment in Western Society*, edited by Norval Morris and David J. Rothman. Oxford University Press.
- Stafford, Mark. C., and Mark Warr. 1993. "A Reconceptualization of General and Specific Deterrence." *Journal of Research in Crime and Delinquency* 30:123-35.
- Sullivan, Mercer L. 1989. *Getting Paid: Youth Crime and Work in the Inner City*. Cornell University Press.
- Tittle, Charles R. 1980. *Sanctions and Social Deviance: The Question of Deterrence*. Praeger.
- Tremblay, Pierre, and Paul-Philippe Paré. 2003. "Crime and Destiny: Patterns in Serious Offenders' Mortality Rates." *Canadian Journal of Criminology and Corrections* 45:299-326.
- U.S. Department of Justice, Bureau of Justice Statistics. 2001. National Crime Victimization Survey, 1992-1999.
- Williams, Kirk R., and Richard Hawkins. 1986. "Perceptual Research on General Deterrence: A Critical Review." *Law and Society Review* 20:545-72.
- Wright, James D., and Peter H. Rossi. 1986. *Armed and Considered Dangerous: A Survey of Felons and Their Firearms*. Aldine de Gruyter.
- Zimring, Franklin E., and Gordon J. Hawkins. 1973. *Deterrence: The Legal Threat in Crime Control*. University of Chicago Press.