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Crime Victim's Self-Protection

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SCHOOL OF CRIMINOLOGY AND CRIMINAL JUSTICE

CRIME VICTIM'S SELF-PROTECTION

BY

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To my mother, Jungim Yoon,

who has never doubted my ability to achieve what I want

and who has supported me at the cost of her life

ACKNOWLEDGEMENTS

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ABSTRACT

The impact of victim SP on the outcomes in a given criminal events has rarely been examined or fully understood. This study develops a new theory of victimization, which I will refer to as the Power Advantage Theory (PAT), that holds crime victimization is completed only when there are motivated offenders who have contact to victims and possess physical or psychological power advantage over the victims. Based on PAT, this study assesses the impact of 16 types of victim self protection (SP) actions on three types of outcomes of criminal incidents: whether the incident resulted in property loss, whether it resulted in injury to the victim, and whether it resulted in serious injury. Data on 27,595 personal contact crime incidents recorded in the National Crime Victimization Survey for 1992-2001 are used to estimate multivariate models of crime outcomes with logistic regression. Results indicate that self-protection in general reduces the likelihood of property loss and injury, compared to nonresistance. A variety of mostly forceful tactics, including resistance with a gun, appear to have the strongest effects reducing the risk of injury, though some of the findings were unstable due to the small numbers of sample cases of such resistance. The appearance, in past research, of resistance contributing to injury is found to be largely attributable to confusion concerning the sequence of SP actions and injury. In crimes where both occurred, injury followed SP in only 10 percent of the incidents. Combined with the fact that injuries following resistance are almost always relatively minor, victim resistance appears to be generally a wise course of action. In two auxiliary test, it was found that victims used forceful self-protection, especially weapon use and defensive gun use, in the most adverse circumstances and that victims' perceptions of the efficacy of SP were much more favorable than those implied by rates of actual post-SP injury although two measures were highly significantly correlated. These findings imply that actual effects of SP may be stronger than they appear to be in the previous study. Taken together, the results of three empirical tests generally support the hypotheses of PAT.

CHAPTER ONE

INTRODUCTION

Each year millions of Americans confront criminal offenders and respond with various self-protective actions in order to reduce the harms of victimization. According to the 2002 National Crime Victimization Survey, more than three quarters of American criminal victims used one or more forms of self-protective action during their criminal confrontation (U. S. Bureau of Justice Statistics, 2003). Defensive gun use, the most serious form of self-protective actions, alone occurs somewhere from 600,000 to two million times per year (U.S. BJS, 2003; Kleck and Gertz, 1998).

While the prevalence of criminal victimizations and self-protective action is becoming acknowledged, the impact of victim self-protection (SP) has rarely been examined or fully understood. What should criminal victims do to reduce injury during criminal incidents? Are some types of self-protective actions more effective than others? These obvious questions remain unanswered—waiting for empirical research and theoretical development. The current study responds to this call by investigating the impact of a victim's self-protective actions on the outcome of criminal confrontation. The study also examines related issues including who is likely to resist and under what circumstances, and who has the greater perceptional gap between reality and the perceived effectiveness of SP actions.

Historical Context of Victim Self Protection Research

Research on victim self protection, often called victim resistance, was stimulated by at least three factors: victim precipitation research, the feminist movement, and the advent of national victimization surveys.

The empirical examination on the impact of victim behavior began with the victim precipitation perspective, which saw that victims' actions often provoke offenders to inflict harm back onto the victims (Laub, 1998). Most notably, Marvin Wolfgang's (1958) Philadelphia homicide research revealed that 26% of the 588 homicides in Philadelphia during the period from 1948 to 1952 were victim-precipitated cases where the victim was the first to commence the physical force. In a similar vein, Wolfgang's student Amir (1971) concluded that many rape victims were responsible for their victimization because they precipitated rape.

The victim precipitation approach involved several problems. First, it was difficult to distinguish victim precipitation from victim self protection, particularly when researchers relied on police records that did not record the victim's point of view. Heavy reliance on the police data also made the research less generalizable because incidents involving successful victims, or those who did not suffer injury, were less likely to be reported the police (Block and Skogan, 1986). More importantly, the victim precipitation perspective could easily lead to "victim blaming" (Bard and Sangrey, 1979: 65), which angered victim advocates. Particularly feminist groups were outraged at Amir's study because he overestimated victim precipitation and erroneously blamed female victims responsible for their mishaps.

As a part of the civil rights movement in the 1960s and 1970s (Blomberg and Lucken, 2000), the feminist movement provided a new perspective and motive for victims self protection research. In an attempt to promote rights of women, the advocates of the movement first wanted to reveal American women were subject to numerous types of crime and discrimination because of their gender (Wallace, 1998). Particularly, Millett's "Sexual Politics," Griffin's "Rape: The All American Crime," and Brownmiller's "Against Our Will" among others made American conscious about the fact that American women suffered from a large set of crimes including domestic violence, date rape, and sexual harassment. More importantly, feminists now saw rape and sexual assault not as sexual crime per se but as violent and political acts by ruling men to control women.

Self-defense movement and research on the impact of SP began in this feminist movement context (Searles and Berger, 1987). While conventional authority advised that women should limit mobility, depend upon men, or cooperate with the offender to prevent victimization, feminists now argued that women should fight back or actively resist offenders. This not only prevented victimization but also promoted mobility and independence (Brownmiller, 1975).

Therefore, it became vital to correctly evaluate the impact of victim self protection in criminal events, particularly those involving female victims. The majority of victim SP studies have been centered on rape and sexual assault victimization, using data from rape crisis centers, hospitals, or colleges, where (potential) victims of sexual crime were easily found (for review see Ullman, 1997). An obvious limitation of the research was that it was hard to obtain probability samples containing rich circumstantial and demographical information with which researchers could conduct valid and reliable investigations.

Given these methodological problems, the development of the National Crime Survey (NCS) in the mid 1970s was a breakthrough for victim SP research. Although the NCS was designed to produce annual estimates of change in national levels of crime (Cantor and Lynch, 2000), it soon became a major resource for new research and theory construction because it provided criminologists with the first nationally representative probability sample of criminal victims and rich information about the victims, offenders, and circumstances of the incidents. This was not available in police records such as the Uniform Crime Reports. The NCS was especially valuable for the victim self-protection research because it contained the records of both unsuccessful and successful SP. The latter was less likely to be reported to the police (Block and Skogan, 1986). Not surprisingly, the majority of researches on the impact of SP since the mid 1970s have relied on the NCS and its later version, the National Crime Victimization Survey (see Chapter 3 for a detailed review).

The earlier version of victimization data, however, was not ideal for testing the impact of SP because of the inadequate information on the circumstances of incidences. The most serious problem involving the NCS and the pre-1992 National Crime Victimization Survey was the lack of sequence data between the SP actions and the outcomes of victimization. It was a fatal problem because one could not decide which factor was cause and which was effect without knowing the sequence between them (Cook, 1986). The correlation between SP and injury could be interpreted as either (1) victims SP caused the injury because it provoked offenders or (2) the injury caused victims to employ SP.

Fortunately, the redesigned post-1992 NCVS included the needed temporal sequence information. The NCVS now asked respondents whether victims experienced injuries before, simultaneously, or after the self-protective actions. This allowed researchers to decide which

injuries might be regarded as a consequence of SP and which were not. In fact, the temporal information provided in the post 1992 NCVS was the principal stimulant of the current research.

<u>Self-Protection as a Social Control</u>

Some criminologists recognized that victim SP is a form of social control that helps victims to control potential offenders (Brownmiller, 1975; Black, 1980; Smith and Uchida, 1988; Kleck, 1988; Kleck and Gertz, 1995; McDowall and Loftin, 1983; Tewksbury and Mustaine, 2003). Others further saw that this form of social control has been "commonplace in many settings and present, to some degree, nearly everywhere" (Black, 1980: 194).

Based on this observation on the prevalence of victims SP as an informal social control, two types of studies have evolved. A group of researchers have investigated when victims resort to this private social control. Researchers hypothesized that victim SP, particularly gun use, would vary inversely with the degree of official social control. Defensive gun use, or purchase, was seen as an informal social control factor that was used to compensate for an inadequate formal social control mechanism (Kleck, 1988; Kleck and Gertz, 1995; Tewksbury and Mustaine, 2003). They then tested whether people obtained more hand-guns (license) after their faith in the police weakened (McDowall and Loftin, 1983; Smith and Uchida, 1988), or after they had experienced an increased fear of crime (Wright, Rossi, and Daly, 1983). Although some empirical support for the inverse relationship have been found in these studies, the paucity of research prevented researchers from drawing strong conclusions concerning the relationship between official and unofficial social control.

A more popular type of research was to examine whether this private form of social control was effective, i.e. whether self protection reduces injury or property loss. As discussed earlier, the idea that self-protecting victims would be less likely to experience injury than passive victims originated from feminist researchers such as Brownmiller rather than from formal criminological theories. Following the feminist perspective, researchers mainly focused on sexual crimes involving female victims to find supporting evidence (e.g., Ullman, 1997). Others widened their interest to explore the impact of SP in assault (Skogan and Block, 1983; Bachman et al., 1994) or robbery (Ziegenhagen and Brosnan, 1985; Kleck and Delone, 1993; Rand, 1995). Also, there has been ethnographical research that studies whether offenders were in fact afraid of

victims' using SP and were deterred from offending (Buck, Hakim and Rengert, 1993; Cromwell, Olson, and Avary, 1991; Nee and Taylor, 1988; Wright and Decker, 1994; Wright and Rossi, 1986).

Currently there seems to be an agreement that SP is negatively associated with the risk of crime completion such as robbery and rape (Ullman, 1997; Kleck and Sayles, 1990; Bachman et al., 2002). Some critics however contend that the avoidance of crime might come "at the price of great injury for the victim" (Bachman et al., 2002: 138), while others do not agree (Kleck and Kates, 2003). Although detailed discussion of the prior research will be followed in chapter three, the findings of the extant research can be summarized as mixed and inconclusive (Bachman et al., 2002).

Predicting the Outcome of Self-Protection

Two competing hypothesis arose predicting the impact of SP. Supporters of the "escalation hypothesis" assert that victims' SP would escalate injury because it would provoke offenders, though it might prevent completion of crimes such as robbery and rape (e.g., Bachman et al., 2002; Bachman and Carmody, 1994). Supporters of the "protection hypothesis," on the other hand, claim that SP would decrease the injury because it would physically block or psychologically deter offenders from crimes (e.g., Brownmiller, 1975; Kleck and Sayles, 1990; Kleck and Delone, 1993; Ullman, 1998).

None of the advocates argue that SP will be either provocative or relieving in all conditions. The difference between the two camps was rather the extent of successful SP and its condition. For example, supporters of the escalation hypothesis routinely argued that physical, or forceful, SP would increase the risk, while non-forceful might reduce the risk (Skogan and Block, 1983; Bachman and Carmody, 1994). On the other hand, supporters of the protecting hypothesis found that both physical and non-physical SP are beneficial (Kleck and Delone, 1993, Kleck, 1988; Ziegenhagen and Brosnan, 1985). Responding to these mixed findings, Kleck and Kates (2003) argue that the confusion was in part attributable to the questionable practice of lumping various types of SP into two or three crude categories (e.g., forceful vs. non-forceful), because doing so made it hard to find the unique effects of diverse SP ranging from cooperation to

defensive gun use. Furthermore, with the absence of sequence information between SP and injury, the validity of findings in prior research is questionable.

Another issue needed to be resolved is to find out the specific conditions on which the impact of SP may depend. Researchers seem to believe that there are certain conditions that make SP less effective or even dangerous. Some scholars have asserted that forceful SP by female assault victims, for example, increases the risk of injury, particularly against intimate offenders (Bachman et al., 2002; Bachman and Carmody, 1994). Also, it was argued that victims' SP decreases severity of injury of sexual offense victims when offenders and victims were drunk, while victim SP generally increase the risk of injury (Ullman, Karabatsos, and Koss, 1999). Others speculated that SP that is employed away from home, at night, or by women, might also influence the outcome of an incident. Since the research on conditional effects of SP have been limited, it is impossible to draw firm conclusions.

Given the disputes between the two opposite sides and the uncertainty concerning the conditional effects, there is an urgent need to conduct sound research that considers all circumstantial factors in criminal incidents, and to construct formal theory guiding the research.

Biases of Research

More than three decades ago, William Goode (1972) claimed that the ultimate importance of force in human society had been neglected because of a "kindly bias," or "humanistic tradition," that made researchers focus on non-forceful means of social control such as values and consensus (p. 509). Physical force and force threat are, however, not only ubiquitous, but also one of the major social control mechanisms because consensus and law are rarely enough to elicit what people want to obtain from other people. While in any society groups and individuals exercise a certain degree of force, force is most evident in the commission of crime and its response. Criminals exercise force against victims to obtain what he or she wants (Gottfredson and Hirschi, 1990) and the criminal justice system exercises force such as arrest and incarceration in order to repress these illegal impositions of force (Beccaria, 1967[1764]; Gibbs, 1975). The importance of a victim's forceful response to victimization (i.e., self protection) however has largely been ignored.

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The scarcity of research on the impact of victim SP might be attributable to this "kindly bias" and the political sensitivity to policy implications (Goode, 1972; Kleck, 1988). If the impact of SP appeared to be beneficial for victims, it seems likely to encouraging private violence or vigilantism. This is hardly acceptable for American criminologists who are trained to believe that physical force, or violence, is unusual and deviant. As a result, the studies on victim self protection, and the notion of victim SP when it involves defensive gun use, have been subjected to strong suspicion and resistance from criminologists (Kleck and Gertz, 1995).

The political sensitivity of this topic may explain why the studies involving female victims have dominated the research (e.g., Ullman, 1997; Bachman et al., 1994; Bachman et al., 2002). In the female victimization study, victims were easily regarded as pure victims who deserve sympathy and can be encouraged to protect themselves. Therefore, researchers and the research funding sources have had no problem accepting the beneficial impact of SP—they were helping poor female victims.

Summary

To summarize, there are many barriers for criminologists who want to investigate the impact of victim self-protection, including limited data, methodological problems, and even philosophical and political biases. As a result, criminologists have failed to either (1) adequately test the causal impact of victim SP on criminal outcome or (2) to provide a theoretical explanation for any effects, even though the research is vital for a public who has to face criminal offenders and judge the most effective ways to reduce their risks.

The current study aims to conduct construct theory and conduct empirical research on this important topic. First, I introduce a new theory of victimization that can explain the outcomes of criminal confrontation, which replaces Cohen and Felson (1979)'s routine activity theory by integrating several insights from extant criminological theories. Unlike conventional theories of victimization, the power advantage theory is developed to explain the actual outcome of criminal incidents, rather than the risk of victimization. Second, I assess support for the power advantage theory by examining the impact of SP actions on criminal outcomes using the National Crime Victimization Survey recorded from 1992 to 2001. I also investigate additional issues including which victims employ each type of SP actions and when, and who has the

greater perceptional gap between reality and the perceived effectiveness of SP actions. The importance of the latter issue is underlined with the review of previous studies in chapter three, which reveals methodological problems. The need for theoretical development is evident, given the lack of existing criminological theory devoted to this topic, and is addressed in chapter two.

CHAPTER TWO
THEORY

What predicts the actual outcomes of criminal incidents? Why are some victims more likely than others to avoid injury and/or property loss during criminal events? None of the current theories of victimization, including routine activity theory (Cohen and Felson, 1979) and lifestyle theory (Hindelang, Gottfredson, Garofalo, 1978), answer these questions because they were developed to explain why some people are more likely to become crime victims than others, not to account for the results of victimization incidents. Clearly, the theories inadequately explain the outcomes of criminal events because there are substantial variations of actual degree of injury among those who become victims. That is, while all individuals who experience criminal attempts should be regarded as victims, only some of them experience injuries and property loss.

The extant explanations of victimization are of limited utility even to predict the risk of victimization because they are designed to explain only the personal predatory crimes and do not explain many other crimes, including white-collar crime. There is an urgent need to develop a new theory of victimization that accounts for the determinants of criminal events beyond the "risk" of "predatory crime" victimization.

This dissertation responds to the call by developing a new theory of victimization that addresses neglected but important questions, including "given that people that are victimized (i.e., a person initiates a criminal attempt against them), why do some victims suffer more than others?" "Why do some victims suffer physical injury while others do not?" "Why do some suffer property loss while other victims do not?" The new theory also expands the scope of the conventional theory of victimization by explaining white-collar crimes as well as predatory crimes.

In its essence, the power advantage theory (PAT) holds that the completion of crime requires three elements: motivated offenders, contact between offenders and victims, and power advantage of offenders over victims. Victimization is completed only when motivated offenders

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have contact to victims and possess physical or psychological power advantage over victims. An individual's socioeconomic power indirectly determines the crime completion by influencing contact as well as physical and psychological power. PAT aims to provide a new insight in explaining criminal events drawing on various theories of criminology and psychology.

The following sections review extant theories of victimization, after which a new theory of victimization, the *power advantage theory* is presented in detail. The power advantage theory is designed to guide victimization research, including the current work.

Review of Theories

Routine Activity Theory

Lawrence Cohen and Marcus Felson's routine activity theory has dominated the explanation of victimization since its inception in 1979. Unlike traditional criminology theories focusing on motivations, Cohen and Felson's theory focused on opportunity, which, they argued, is the most important risk factor of victimization. Specifically, they contended that daily routines and activities influence the probability of victimization by placing individuals at greater or lesser risk. They defined routine activities as "any recurrent and prevalent activities, which provide for basic population and individual needs," including "formalized work, as well as the provision of standard food, shelter, sexual outlet, leisure, social interaction, learning and child rearing," (Cohen and Felson, 1979: 593) and they predicted certain routine activities that increased the risk of victimization. For example, individuals who are routinely away from home at night or live in crime-ridden neighborhoods may be exposed to a higher risk of crime.

Cohen and Felson designed their theory to explain "direct-contact predatory violations," or those involving direct physical contact between at least one offender and at least one person or object which the offender attempts to take or damage (p. 589). The predatory crime occurs, or victimization is completed, when there is a "convergence" in time and place of "motivated offender," "suitable targets," and "absence of capable guardians." The absence of any one of these essential elements is sufficient to prevent the crime. Cohen and Felson particularly underlined the importance of suitable target and capable guardians because the two factors can change the rate of crime, regardless of motivated offenders, which traditional criminological theories have relied upon in predicting crime rates.

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A limitation of routine activity theory is that it explains only (1) who is more likely to become a criminal victim (specifically, who faces more criminal attempts than others) and (2) does not address the separate issue of, among those who face the criminal attempts, who is going to experience more serious victimization than others. Specifically, the theory does not deal with the issue of why some individuals suffer more injury (completion of violent crime attempt) or property loss (completion of property crime attempt) than others during the criminal confrontations. Nevertheless, the developers claimed in the original article that the theory intended to explain the successful "completion of crime" (Cohen and Felson, 1979: 589). They probably did not recognize the need to distinguish the risk of victimization from outcomes of victimization. The two should not be equated, however, because victims who share the same risk due to the same routine activities nevertheless experience very different actual victimization. For example, while many youths go to the same high school and, therefore, share the same risk of being bullied (i.e., a person initiating a bully attempt), some youths (e.g., weaker or passive ones) experience a lot more victimization than other (perhaps stronger) youths. The routine activity theory is not as successful at explaining the actual outcomes of crime as it is in explaining the differential risk of victimization.

A more serious problem of the theory lies in its concept, "capable guardian." Most researchers have operationalized the concept to measure the presence of third parties who can protect victims, yet some researchers have attempted to widen the concept to include the victim's self-protective actions (e.g., Kleck, 1988; Tewksbury and Mustaine, 2003). It is not clear, however, whether Cohen and Felson intended to do so. They implied that self-protection might be a part of guardianship by saying, "analytical distinction between target and guardian is not important in those cases where a personal target engages in self-protection" (Cohen and Felson, 1979: 590). In other words, even though capable guardianship includes self-protection, it blurs the distinction between guardianship and suitability of the target. In sum, the concept of capable guardian either excludes an important factor of capable guardianship or overlaps with the concept of suitable targets. Perhaps self-protection should be regarded as a dimension of target suitability rather than guardianship.

Likewise, "suitable target" is not a clear enough concept. In routine activity theory, suitable target refers to both lucrative and vulnerable victims (Cohen and Felson, 1979; Cohen et al., 1981). Lucrativeness and vulnerability do not necessarily refer to the same characteristic

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however; in fact, they are often opposite. Some victims might be lucrative but are almost invincible (e.g., a safe in a casino); others may not be lucrative but are vulnerable (e.g., poor old women). The theory does not specify which potential victim is a "suitable target" because the concept refers to two different aspects of victim characteristics.

More importantly, the concept of "suitable target" does not address a factor that influences—offender's capability. Crime is completed as a result of interaction between offender and victim, yet Cohen and Felson assume that the victim's capability to protect (capable guardianship and suitable target) alone dictates the fate of criminal events, and perhaps they did not even really address the outcome of criminal events. The effectiveness of capable guardianship (protection by third parties) and suitability of target (victim's own ability to protect oneself), however, varies significantly depending upon the capacity of the offender. For example, a five-year-old boy accompanied by his young mother is well protected from other children's physical attack, but probably not from a 20-year-old young man's attack. Also, a 20-year-old man walking alone on a street may be a suitable target for a 20-year-old male robber, but perhaps not be so to a 12-year-old robber, particularly when the robber is female. In fact, the recent National Incident-Based Reporting System (NIBRS) data reveal that only a small percentage (approximately 10%) of adult victims are victimized by juvenile offenders (McCurley and Snyder, 2004). Similarly, most people do not think a strong 30-year-old man is a suitable target for sexual assault, but his female boss may think so as long as she holds the power to fire and promote him. They did not make it clear that the meaning of suitableness of target and capable guardianship are necessarily subjective and relative. It is therefore necessary to establish a concept that considers both victim and offender's capability in criminal offenses, or the relative power difference between them (see Tittle, 1997).

Another limitation of routine activity theory is its narrow application. Because it was designed to explain "direct-contact predatory violations," or those involving "direct physical contact between at least one offender, and at least one person or object which offender attempts to take or damage" (Cohen and Felson, 1979: 589), it may not explain crimes not involving actual physical confrontation. As a result, the theory cannot explain a lot of crimes such as fraud, embezzlement, Internet hacking, tax evasion, and illegal pollution because they do not often entail physical contact between offenders and victims. Clearly, the narrow focus of the theory significantly reduces its utility.

Lifestyle-Exposure Theory of Victimization

Another influential victimization theory is Hindelang, Gottfredson, and Garofalo's lifestyle theory (1978), which is very similar to routine activity theory. According to the lifestyle theory, differential risk of victimization is attributable to the differential lifestyles of victims. Lifestyle is defined in this context as "routine daily activity, both vocational activities (work, school, keeping house, etc.) and leisure activities" (Hindelang, Gottfredson, and Garofalo, 1978: 241). Lifestyle is also depicted as "determining the likelihood of personal victimization through the intervening variables of association and exposure" (Garofalo, 1987: 24). Specifically, "lifestyle patterns influence the amount of exposure to places and times with varying risk of victimizations, and the prevalence of associations with others who are more or less likely to commit crime" (Garofalo, 1987: 26).

The life style patterns are, in turn, determined by individual and group adaptations to structural constraints (economic, familial, legal, and educational) and role expectation, which are predicted by demographic characteristics because demographic attributes often stand for role expectation and structural constraints, both of which restrict one's behavioral choices. Following the logic of the theory, demographic characters ultimately predicted differential risk of victimization through differential degree of exposure and association. In fact, the theory was originally developed to explain differences in the risks of violent victimizations across social groups (Meier and Miethe, 1993).

Later, Garofalo (1987) modified the lifestyle theory by adding other predictors of victimizations, including "target attractiveness" and "individual differences." These two factors also have direct effects on the risk on victimization, while they are also related to lifestyle. Target attractiveness is a concept that depends on offenders' perceptions of victims, and it involves the symbolic, as well as instrumental, worth of target. Individual differences refer to psychological and biological variables, which are not fully developed by Garofalo nor frequently used by other researchers. It is "target attractiveness" that has been used by researchers (e.g., Meier and Miethe, 1993; Menard, 2000).

Limitations of the lifestyle theory are similar to those of routine activity theory. The most serious problem of the lifestyle theory is that it does not address the issue of why some victims suffer more than others given that they all confront criminal attempts. It only explains why some individuals are more likely than others to become crime victims because of their risky

lifestyle. It is clear, however, that dangerous lifestyle and resulting criminal confrontations (initial victimization) do not equally lead to the same degree of actual victimizations. Garofalo's (1987) additional concept, "individual difference," could have addressed this deficiency of the theory because it is possible to argue that some individuals possess certain qualities that can block or cause further victimization during the criminal events. Unfortunately, he does not develop the concept enough to predict actual victimizations of unfortunate victims. Also, the narrow application of the theory reduces the utility of the theory. As Garofalo (1987: 36) himself commented, the lifestyle theory and his modified theory were meant to be applied to only "direct contact predatory violations." Therefore, a lot of crimes were not to be explained by the theory. Finally, the concept of lifestyle is too vague to directly measure and predict actual victimization risk. In fact, it is not even clear whether dangerous lifestyle may include tooth brushing (Tittle, 1998).

Piquero and Hickman's (2003) Application of Power Balance Theory

Although Piquero and Hickman (2003) theory of victimization just recently appeared, it contains an insight no prior theory ever provided, which it shares with the power advantage theory. They essentially extended Charles Tittle's control balance theory (1995, 1997) and provided a new framework for understanding differential risk of victimization. According to Tittle's control balance theory, the amount of control to which people are subject relative to the amount of control they exercise influences both the probability and type of deviant behavior. The surplus of control predisposes the individual toward autonomous forms of deviance, and the deficit of control pushes the individuals toward repressive forms of deviance. Actual deviance is a product of the control imbalance and situational factors such as motivation, constraints, and opportunity.

Based on the control balance theory, Piquero and Hickman proposed a new theory of victimization that essentially holds that those with control deficits are at greater risk of victimization because they are "generally weak" and have "a less-than-normal capacity to overcome individuals with control surpluses and as such are less likely to engage in protective behaviors" (p. 285). They are further subjected to higher risk because potential offenders look for such vulnerable and weak targets. Those with control surplus are also at greater risk of victimization than those with balance control for a quite different reason. They "indirectly place

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themselves at risk for victimization because they come to perceive that there is relatively little to restrain their actions" (p. 287) and, as a result, are more likely to become involved in conflict situations. Taken together, individuals with control imbalance are more vulnerable to victimizations as compared to individuals with control balance.

It seems that the former part of theory regarding control deficit victims is a reasonable explanation for the outcome of criminal incidents. It is reasonable to believe that individuals who are generally weak and passive are those who are more likely to experience injury and property loss during criminal incidents than other victims. It is indeed compatible with victimologists' observations on victims, such as that of von Hentig (1948) who described many victims as physically and intellectually weak. In contrast, it is hard to understand why victims with control surplus suffer more injury than others during criminal incidents given their superior control power, although they might be more likely to engage in conflict situations and, therefore, have more risk (attempts to injure them). Just as with routine activity theory, Piquero and Hickman's theory did not recognize the need to separately address the issue of, among those who face criminal confrontations, who suffers more actual victimization than others.

Relationship between the Power Advantage Theory and Other Theories

The power advantage theory (PAT) is an integration of various extant criminological theories. The following is an explanation for the elements of the theories PAT draws upon. PAT owes much to Cohen and Felson's (1979) routine activity theory in developing the basic structure, to the extent that PAT may be regarded as a significant modification of routine activity theory. For example, Cohen and Felson argued that crime occurs when there is convergence in time and space of motivated offender, suitable targets, and absence of capable guardian. The "convergence" of three elements became an independent concept of "contact" between offenders and victims in PAT. In doing so, it became clearer that the convergence is an essential condition for crime completion. The concept of "contact" is also similar to Hindelang and associates' (1978) concept of "exposure." Both concepts emphasize that the more interactions between potential offenders and victims the more criminal opportunities. The difference is that PAT contends that individuals' socioeconomic power is perhaps the strongest determinant of contact. More importantly, the theory emphasizes that exposure alone is not equated with criminal opportunity unless it involves power advantage of offenders over victims.

The central concept of PAT, "power advantage," replaces routine activity theory's "suitable target" and "absence of capable guardians." As discussed earlier, the two concepts convey the idea that crime occurs when the victim is weaker than the offender (suitable target) and when there is less possibility of third party intervention for the power difference (absence of capable guardians). The two concepts should be replaced by a concept of power advantage of offender over victim because the former refers to the power difference between offenders over victims, and the latter simply refers to the absence of third party intervention for the relative power difference. The new concept of power advantage is simpler and clearer while reflecting the fact that crime occurs as a result of relative power difference between offenders and victims.

The power advantage removes the problems involving the suitable targets and capable guardian. While suitable target embraces two different aspects of victim, capability of self-protection and lucrativeness, the latter does not seem to be an essential element of crime completion, although it can be a motive for a criminal attempt. For example, a burglar may attempt to steal a safe in a casino because it is very lucrative. Should he find out the alarm is on and the guard is coming, however, the burglar would no longer care about the value of the safe and would stop the attempt because there is imminent risk of getting caught and there are always other opportunities. Therefore, the concept of power advantage eliminates the unessential aspects of old concepts. Also, the new concept eliminates the conceptual confounding of suitable target with capable guardians when a victim attempts to protect herself.

With regard to human nature and the decision-making process, PAT adopts the tradition of classical criminology, including deterrence theory and the rational choice perspective. Assuming that "offenders seek to benefit themselves by their criminal behavior" (Cornish and Clarke, 1987: 1), it is expected benefits outweighing the expected costs that pushes offender criminals to attempt and complete a crime (Bentham, 1996[1789]; Becker, 1968).

There are many different kinds of benefits expected from criminal acts, including money, sexual gratification, psychological relief, or recognition from peers. The expected benefits from the criminal attempt can be an important motive, yet this researcher does not think those benefits dictate whether the crime is completed. A robber motivated by poverty can choose other criminal opportunities (e.g., robbing another gas station) or legitimate means (e.g., buying a lottery ticket or simply working hard).

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Given the replaceability of benefits, PAT contends that it is the cost factors of criminal events that dictate whether crime is completed. Following deterrence theory (Beccaria, 1963[1764]; Andenaes, 1974; Gibbs, 1975), PAT argues that the cost of official sanctions can be an important inhibitor that criminals take into account if they are certain, severe, and swift. Official sanctions are not the most important factors that criminals take into account, however, because the probability of official sanction is so low, particularly during the criminal events (Walker, 1988). Consequently, PAT emphasizes that the official sanction is only a part of many costs that criminals consider in their decision-making process (Tedeschi and Felson, 1994) and that the possibility of victim resistance and non-official third party intervention are more important inhibitors of criminal acts than official intervention (Kleck, 1988; Tedeschi and Felson, 1994; Wright and Decker, 1994) because unofficial sanctions are more certain, swift, and even severe than official ones. Hence, PAT holds that the power advantage of offender over victims is the most critical factors criminals take into account during criminal events.

The idea that power difference between offenders and victims affects the outcome of crime is not new. Kleck and McElrath (1991: 673) for instance contended, "power increases the likelihood that its user will get what he or she wants" during criminal incidents. Therefore, individuals often use weapons such as guns during interpersonal conflicts because weaponry are important "source of power"… that "partially determines whether …attacks are completed" (p. 670). That is, significant power difference between individuals due to the use of weapons is a determining factor of the result of criminal incidents. For example, robbers' possession of a gun makes a completion of robbery more likely because dramatic power difference due to a gun possession discourages a victim to resist. Unfortunately, Kleck and McElarth did not develop this insight into a formal theory.

In a similar vein, Charles Tittle (1997) contends that the amount of "control" to which people are subjected relative to the amount of control they exercise (or control ratio) affects both the probability and the type of deviant behavior. The surplus of control predisposes the individual toward autonomous forms of deviance, including exploitation, plunder, and decadence. The deficit of control, on the other hand, pushes the individuals toward repressive forms of deviance, including predation, defiance, or submission. In sum, "people may become motivated toward deviance when their control ratios are unbalanced …because deviant behavior …helps people escape deficits and extends surpluses of control" (p. 142).

The major difference between PAT and control balance theory is that the latter primarily aims to explain *motivation* while the former tries to explain *actual results* of criminal events. The differential focuses of two theories produce different prediction on the criminal events. For example, according to Tittle, individuals with extreme control surplus are less likely to be motivated to commit crime and are therefore less likely to commit crimes. It might be true that extreme control surplus might reduce the motivation for actual criminal behaviors, yet Tittle did not address the possibility that extreme control surplus could make the criminal attempt more successful than attempts accompanied by a small or medium control surplus, which is the major point of PAT. Tittle holds that people with control deficit are prone to crime and deviance because individuals have an autonomous instinct to restore their control balance. Yet, in crime incidents, offenders with a control deficit are less likely to complete the crime. For example, a physically weaker person is much less likely to successfully attack a stronger person. In sum, Tittle theory may be a significant contribution to explicate another important source of criminal motivations but should not be applied to the explanation of the outcome of criminal events.

Despite the emphasis on the motivational factors of deviance, Charles Tittle recognizes that actual deviance is a product of not only the control imbalance, but also situational factors such as motivation, constraints, and opportunity. Especially with regard to opportunity, he seems to recognize that contact and power advantages are vital components of crime completion, which is the essence of power advantage theory. For example, Tittle wrote that, "rape demands contact to another human…along with an inequality of physical strength, cunning, and weaponry," and "the robber must have access to another person…the would-be robber must show superior physical strength, cunning, or weaponry" (p. 169). Tittle did not conceptualize these observations in his theory, however, and as a result, the control balance theory was not applied to explaining the immediate results of criminal events, which is the goal of the power advantage theory.

The Power Advantage Theory (PAT)

After reviewing current theories of victimization, it has become evident that a new theory of victimization is required to explain actual outcome of criminal incidents. Specifically, this new theory needs to explain why some victims are more likely to avoid or suffer injury and

property loss during criminal events. PAT is designed to address the issue of actual outcomes of a given crime victimization. It should be recognized that, although the theory primarily aims to explain criminal events from the victim's perspective, it could simultaneously account for the incidents from the offender's perspective. That is, the theory can explain why some offenders are more likely to complete their criminal attempts as well as why some victims are more likely to disrupt the attempts. Therefore, PAT should not be viewed as simply a victimization theory but as a theory of criminal events.

PAT is also designed to account for a wider spectrum of crimes than most theories of crime do. It may not seem a general theory of crime because this theory cannot explain victimless crime such as drug use. The limitation originates from the perspective that most real crimes involve offenders and victims. Nonetheless, the theory is an important expansion of victimization theory because it explains not only street crimes but also white-collar crimes, particularly corporate crimes, that are almost neglected in opportunity-oriented theories (e.g., Cohen and Felson, 1979; Hindelang, Gottfredson, and Garofalo, 1978) and motivation-oriented theories (e.g., Agnew, 1992; Gottfredson and Hirschi, 1990).

Power advantage theory holds that the completion of crime requires three elements: (1) motivated offenders, (2) contact between offenders and victims, and (3) power advantage of offenders over victims. Victimization is completed only when motivated offenders have contact to victims and possess physical or psychological power advantage over victims. An individual's socioeconomic power indirectly determines the crime completion by influencing contact as well as physical and psychological power.

Contact between Offenders and Victims

A criminal event can be attempted only when there is contact between offender and victim. Cohen and Felson's term "convergence" of time and space is replaced by an independent concept of "contact" in order to emphasize that contact is a necessary condition for a criminal event. As other human interactions, it is obvious that one cannot offend a victim without obtaining contact with the victim. There are numerous examples that illustrate this principle. Policy-makers imprison millions of offenders in part because they believe that incapacitation eliminates convicts' contact with potential victims and, ultimately, victimization. Judges sometimes order offenders (e.g., stalking offenders) not to approach victims within certain

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distances because judges and victims think contact is a necessary condition for victimization. In the same vein, the police often advise females not to walk alone at night in order to reduce possible contact with potential offenders. In addition, it is known that majority of violent victims are attacked by acquaintances (McCurley and Snyder, 2004), who have more contact with victims than do strangers.

Contact includes both physical and non-physical contact. Most crime requires physical contact. A person in Florida cannot be victimized by a person in New York simply because the two do not have contact with each other. Of course, one can be victimized without direct physical contact because an offender may manipulate a third party or even an animal that have direct contact with the victim in order to attack the victim. Yet this example still illustrates that crime requires contact. It is, however, sometimes possible to commit crime with non-physical contact. For instance, computer hackers can contact and "hack" the server of a company, without physically getting into the company, by virtue of the Internet. Whether contact is physical or non-physical, it is a necessary condition for crime completion.

A victim's contact with an offender is determined by several factors. According to the traditional view (Hindelang et al., 1978; Cohen and Felson, 1979), some individuals have a certain lifestyle or routine activity that involves more exposure to potential offenders. Others, on the other hand, argue that frequently victimized individuals suffer from either low self-control (Schreck, 1999; Schreck et al., 2002) or mental defect (Silver, 2002), which, as a result, places them in dangerous situations more often than others. Although articulating sources of contact is not an essential part of PAT, it is the researcher's contention that socioeconomic conditions significantly influence the degree of potential offenders' contact with victims, which will be discussed soon.

Contact per se, however, is not a sufficient condition for crime completion but rather is only a necessary condition for a criminal attempt. Contact between a juvenile delinquent and a professional boxer is not likely lead to the boxer's serious victimization, although the former might attempt to attack the latter and even give slight injury to the latter. That is, contact does not automatically constitute a crime opportunity likely to prove successful for the offender unless another important condition is met: that offenders have a power advantage over the victims. If victims possess a power advantage over offenders, they are not likely to suffer serious victimization in a given criminal event.

Power Advantage: Physical, Psychological, and Socioeconomic power

Although rarely discussed in criminological studies, the crime completion requires the superior power of offenders over victims (Tittle[1], 1997: 169). It is possible that weaker individuals may initiate criminal attempts, which, by itself, leads to (minor) victimizations, yet it is impossible for them to complete what they intended to do (i.e., successful imposition of serious injury, scaring, humiliation, sexual gratitude, or taking property) because the stronger victim will resist and block the completion of the criminal attempt. Specifically, violent attack can only be completed when attackers have great physical power. A fraud can be completed when offenders outsmart their victims enough to hoax them. When offenders are not strong or smart enough to victimize victims, their attempts will only result in failure, leaving, at best, minor injury to the victim. Perhaps power advantage has not been often discussed in criminology because it is so obvious that no one realizes the need to do so. PAT underlines the fact that the power advantage of offenders over victims is the essential element of crime completion.

In PAT, power is defined as a set of qualities individuals possess that can be used to manipulate other individuals' behavior. Power takes three forms: physical, psychological, and socioeconomic. Individuals hold distinctive levels of the three types of powers and exercise them to manipulate other individuals' behaviors, particularly deviant behaviors. The concept of power is similar to other concepts such as "control." Charles Tittle (1997) defined control as social and nonsocial factors that limit behavioral options for other individuals. The concept of power is, however, more intuitive, particularly in the context of crime and can be more clearly divided into subcategories that are directly related to the characteristics of each crime types, i.e. physical, psychological, and socioeconomic power. In addition, my concept of power is better than the conventional concept of power, which refers to only social power (Tittle, 1997; Gibbs, 1989) because the PAT concept incorporates not only social but also nonsocial power factors.

Power is a necessarily relative concept because it is meaningful only when compared with other individuals' power (Emerson, 1966). One can be only *more* (or less) powerful than other individuals, not powerful or powerless in absolute terms. For example, the fact that an individual can lift 200 pounds is meaningless unless his strength is compared to others' physical strength. He may be powerful when compared to the average person but is powerless when

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[1] Charles Tittle however applied this idea only to direct-contact crime.

compared to a professional weight lifter. Additionally, when we say an individual is powerful, it means that she can control more individuals than others control her. The relative power affects various aspects of human activities, particularly the fate of a pathological form of crime because crime is determined by force, fraud, or stealth rather than justice and love.

With regard to criminal events, physical and psychological powers are direct determinants, and socioeconomic powers are indirect factors that influence criminal event through other factors. Figure 2.1 illustrates the causal process where each power factor influences the result of criminal events.

Physical power (or simply physical strength) is the most significant determinant of the outcome of violent crimes (Gottfredson and Hirschi, 1990: 18). It is well known that physically weak people such as small children or females are frequent target of violent crimes such as bullying, assault, and domestic violence (Brownmiller, 1975; Killias and Rabasa, 1997; McCurley and Snyder, 2004; Olweus, 1978; von Hentig, 1948; Wright et al., 1983). The obvious reason for their disproportionate victimizations is that they are physically weaker than offenders (Felson, 1996). In fact, a recent NIBRS data shows that most young males are victimized by other males while many young females are victimized by both males and females (McCurley and Snyder, 2004). From the offender's perspective, weaker offenders hardly successfully attack stronger people because they are afraid of tough retaliation from the victims (Tedeshi and Felson, 1994) or, more importantly, they cannot simply control physical power of victims. It is one of the few facts in criminology that males commit more violent crimes than females. One of the most important reasons why young males, rather than old males or young females, commit a large share of violent crime (McCurley and Synder, 2004) is that they are physically stronger than others (see Felson, 1996). It is interesting to see that the importance of physical power is being ignored by criminologists because even lay people know this principle well: numerous individuals go to gyms and martial arts school mostly to increase their physical power in order to help them avoid criminal victimization.

Physical power of individuals can be adjusted by other factors. Most obviously, other individuals, including both official and non-official, can significantly modify the power difference between potential offenders and victims (Felson, 1996). A lot of weak people can walk the streets because they believe the police or stranger companions could help them if they confronted criminals. In addition, the possession of a weapon can compensate for physical

weakness of victims and offenders (Killias and Rabasa, 1997; Kleck, 1988; Kleck and McElrath, 1991). In particular, guns can significantly enhance the physical power of its possessor (Kleck, 1988) to the extent that it can outweigh other power differences between people. Therefore, millions of people carry guns in order to protect themselves (Kleck and Gertz, 1998). In the same vein, most robbers carry a weapon (often a gun) in order to intimidate their victims and gain control over the situation (Feeney, 1986). The presence of capable guardians and possession of capable weapons are important elements that increase the physical power of individuals.

Psychological power is also a significant source of power that affects the outcomes of crimes. Psychological power refers to both (1) information and (2) courage. "Information" is a term that includes broad psychological qualities such as skills, techniques, knowledge, and experience, that may be measured by years of education, years of experience, possession of a degree of certificate, and so on. There are numerous everyday examples where information dictates the fate of crimes, particularly white-collar crimes. The old or less educated often become an easy target of fraud because they possess less experience and knowledge than shrewd white-collar criminals. From the offender's perspective, fraudulent insurance companies can illegally collect exorbitant fees or wrongfully refuse to pay reimbursements because the companies have more knowledge and experience than individual customers. The movie *Erin Brockovich* (2000) and *The Rain Maker* (1997) are classic illustrations of the fact that the difference in volume of information between large corporations and individual victims increase the likelihood that white-collar crime will be successful. Likewise, department stores often suffer from shoplifting by expert shoplifters, who have more skills than store managers have (Carroll and Weaver, 1986).

Another aspect of psychological power is "courage," which includes personal psychological qualities such as bravery or a victim's willingness to resist offenders. It is not rare that individuals who are physically weak but have strong courage can effectively protect themselves from criminal attack (i.e., psychological power compensates for the lack of physical power). For example, a mother might risk death to protect her baby and could succeed even though she is physically weaker than offenders. In practice, however, physical weakness and disadvantage of information may discourage victims from fighting back, as showed in Figure 1. When physically weak victims confront muscular criminals or armed offenders, they may lose

their willingness to resist because they think resistance might cause further injuries. When victims who have meager legal knowledge and education face fraud attempts from big corporations, they are less likely to resist because victims may not even know they are being victimized. Courage is hard to measure because it is a personality trait rarely measured in surveys, yet the very fact that a victim resists the offender can be interpreted as an indication that the victim had the courage to act in a highly stressful situation.

Socioeconomic power is the power one gains from his or her social and economic status and is an important power factor in criminal events. Social and economic power can be conceptually distinguished from one another, yet are here combined into a single concept because they reflect the same personal quality and function the same with regard to crime.

Social power refers to power gained from relations with other individuals, including family, friends, work acquaintances, religious groups, and political organizations. Social power can substantially modify physical and psychological power (French and Raven, 1959). It is not uncommon that physically weaker employees are victimized by their superiors because of the dramatic imbalance of power in hiring and promotion. Likewise, an old priest may sexually attack young churchgoers using his religious authority, as showed in the recent Catholic Church sexual abuse scandal. Most obviously, history reveals that numerous dictators and political leaders have illegally abused or killed citizens using their political power. As long as individuals live in a society, social power has more potential to be abused than physical or informational power.

Social power does not directly affect criminal events but influences them indirectly by modifying the physical and psychological power of actors involved in criminal events. For example, although a male employee possesses stronger physical power, he may be less willing to resist his female boss's attack as much as he would a stranger's because he fears being fired. In other words, the social power advantage she possesses increases her psychological power and decreases the male subordinate's courage. In the same vein, millions of citizens are victimized by small number of politicians because the latter possess higher social power than the former. Although individual citizens may possess stronger physical powers than individual politicians, people may be less willing to resist politician's attack such as excessive tax collection and torture because the former fears the force of the police or the army that are controlled by the politicians (Foucault, 1979).

Social power may also influence the risk of victimization by affecting the quality of third party intervention. For example, when the offender is a master and the victim is a slave, few would intervene in the event; i.e., the victim's low social power increases the probability of crime completion by reducing others' willingness to intervene. In addition, it has been found that when a crime victim is Black (a race with lower social power), the criminal justice system is not as enthusiastic to punish the offenders as when the victim is White (Walker et al., 2002), particularly in rape cases. The discriminatory intervention consequently increases the Black victims' probability of victimization and decreases the White victim's risk of victimization. Social power, therefore, influences one's risk of victimization not only directly by affecting offenders and victims, but also indirectly by affecting third parties, including the criminal justice system.

Few criminologists recognize money, as a source of power that influences criminal events. Critical criminologists, for example, argue that the bourgeoisie (narrowly the owners of the means of production, but more generally the wealthy) victimize the proletariat (the poor) in various ways using their financial power (Lynch and Groves, 1989; Reiman, 1998). As in the recent Enron and WorldCom scandals, it is their financial resources and informational advantages (e.g., hiring lawyers) that make crimes hard to resist or to avoid. Money also substantially increases one's physical power. The wealthy can purchase weapons, alarm system, and private security personnel such as Pinkerton to protect them and to attack the poor such as union workers. In contrast, the poor cannot afford these protections and, therefore, are exposed to a higher probability of victimization. During criminal events, particularly white-collar crime events, they are more likely to experience property loss than wealthier people because they do not have resources to supplement their information (e.g., by hiring a lawyer or an accountant).

Just as monetary power indirectly influences the risk of victimization by influencing third parties, so does social power. Since the rich make substantial use of the criminal justice system (Cole, 1970; Reiman, 1998; Walker et al., 2002), when others victimize them, they can expect more effective intervention from the police. In contrast, when the poor are victimized, it is less likely that the police will provide the same degree of protection and intervention (Anderson, 1999). In fact, individuals living in the poor community consistently complain about ineffective police protection, describing it as another form of discrimination. Therefore, calling the police is not as effective means of preventing crime completion for the poor as it is for the wealthy.

From the offender's perspective, wealthy offenders may be less likely to be afraid of official intervention and are, therefore, less deterred, especially when they commit crimes against powerless poor individuals. Moreover, since the shrewd crimes they commit are often hard to prove (Sutherland, 1940), the criminal justice system is less willing to investigate or process the case even if it is otherwise unbiased. As a result, the poor victims experience a higher risk of victimization when offenders are rich (and organized). In sharp contrast, crimes committed by poor individuals are easier to investigate and more likely to result in a convict. For one thing, the poor offenders more often commit crimes in open areas (e.g., dealing crack on streets) because they do not have access to safe private places, while wealthier offenders commit similar crimes in private places (e.g., dealing powder cocaine). In addition, poor offenders cannot so easily influence the criminal justice system, which makes their cases easier to process (Cole, 1970). To summarize, financial power decreases one's probability of victimization and increases the probability of successful crime completion by affecting a third party such as the police.

Socioeconomic power has other important effects on criminal events: it influences the probability of contact between offenders and victims and affects individuals' physical and psychological power. As discussed earlier, many factors can influence offenders' contact with victims. It can be lifestyle (Hindelang et al., 1978) or routine activity (Cohen and Felson, 1979), personality (Schreck, 1999), and even mental defect (Silver, 2002). It is probably the socioeconomic power that influences the patterns of contact more than others. There are millions of individuals, including female workers, police officers, factory workers, prostitutes, and retail attendants who knowingly have to work at dangerous places due to their low socioeconomic power, often called social and financial constraints. Additionally, many battered women cannot escape their abusive husbands in part because they do not have enough resources, such as money, a place to live, or support from their family, all of which can be interpreted as weak socioeconomic power (Anderson et al., 2003). Likewise, individuals living in a dangerous community are at higher probability of victimization because they are easily accessible to potential offenders (Menard, 2000; Miethe and Meier, 1993). In contrast, when an individual lives in a gated community due to his monetary power, many potential offenders may not even contact him, which ultimately reduces the odds of victimization. Likewise, politicians working in government offices or CEOs in big companies are hardly accessible during work hours by

street offenders. Socioeconomic power then modifies one's probability of victimization by influencing both the probability of contact with offenders and physical and psychological power.

These three power factors explain virtually all forms of crime. An individual who is stronger, smarter, holding higher authority or richer than others is less likely to be victimized and more likely to be successful in victimizing others. In sum, crime is completed when there are unbalances of physical, psychological, socioeconomic power between offenders and victims.

Does Power Advantage Motivate a Crime?

The power advantage theory does not aim to explain what motivates crimes. Nevertheless, it may be worth considering whether the power advantage per se can be a motivational factor for crime. Contrary to Tittle (1997), this researcher predicts that it does. Specifically, the greater the power differences between people, the greater the probability of crime attempt as well as of completion. Tedeschi and Felson (1994: 178) argue that, "in general, the greater the coercive power… possessed by an actor relative to another person, the more likely the actor is to engage in coercion." This is because "actors who possess superior coercive power…anticipate that they will be successful and that their costs (victim resistance or their party intervention) will be low" (p. 212; see also Williams, 1992; Emerson, 1966). It is easy to imagine that a boss with a lot of social power can and will attempt more crime (e.g., sexual harassment) against employees than a coworker does toward the employees. In the same vein, individuals who perceive themselves more (socio-economically) powerful than spouses would be prone to commit domestic violence because the perceived costs associated with such behavior are low (Williams, 1992: 621). In short, those having more power simply possess more opportunities to commit crime.

Moreover, because crime is usually lucrative, gratifying, liberating, and exciting (Gottfredson and Hirschi, 1990; Katz, 1988), the offender's knowledge that he holds excessive power can become a "seduction" to crime (Katz, 1988). This principle of power difference has been applied only in violent crime (e.g., Gelles, 1983; Tedeschi and Felson, 1994; Williams, 1992), but it can be applied to other types of crime. In fact, we have noticed throughout the history that numerous political leaders, religious leaders, and owners of giant companies have abused (and killed) numerous innocent people because they had absolute power over people and knew they could successfully complete their criminal attempt. No word better explains this

principle than Lord Acton's famous commentary, "power tends to corrupt, and absolute power corrupts absolutely" (Acton, 1967).

Motivated Offender's Decision-Making Process

As discussed earlier, PAT adopts the assumption of rational choice perspective that "offenders seek to benefit themselves by their criminal behavior and that this involves the making of decisions and of choices" (Cornish and Clarke, 1987: 1). A motivated offender considers both benefits and costs when he decides to commit crime (Bentham, 1789; Cornish and Clarke, 1986). When a potential offender thinks that benefits outweigh the costs, they will attempt criminal acts.

Cost factors often become the determining factors in a criminal event since benefits from a crime are replaceable legitimately and illegitimately. That is, a robber motivated by poverty can choose other criminal opportunities (e.g., robbing another gas station) or legitimate means (e.g., buying a lottery ticket or simply working hard). For motivated offenders, the most important costs involving crime are victim resistance and third party intervention (Beccaria, 1963[1764]; Cohen and Felson, 1979; Kleck, 1988; Tedeschi and Felson, 1994). In PAT, if a potential offender has certain power advantages over victims (little resistance from victim or third party), the cost factor becomes nil. PAT, therefore, holds that crime will be attempted when a motivated offender perceives his or her power advantage over the target victim (i.e., offender believe he can successfully hurt victims or take property from them). If not, the crime is not usually attempted and the motivated offender may seek other suitable victims (Walsh, 1986).

It is important to emphasize that PAT does not adopt the classical rational choice model. The original decision making model originated with the classical model of rational choice where the typical humans or "rational actors" are assumed to "chooses [sic] what options to pursue by assessing the probability of each possible outcomes, discerning the utility to be derived from each, and combining these two assessments" (Gilovich and Griffin, 2002). Becker's (1968) expected utility model, for example, holds that an individual will commit the crime if his or her expected utility is higher by doing so than by not doing so, calculating probability and utility. The classical rational choice model, including the expected utility model, however, has been largely abandoned because of empirical and theoretical shortcomings (Cornish and Clarke, 1986; Tversky and Kahneman, 2002).

Social psychologists, including Tversky and Kahneman, instead suggest the "heuristics and biases" program, which holds that "judgment under uncertainty often rests on a limited number of simplifying heuristics rather than extensive algorithm processing" (Gilovich and Griffin, 2002: 1). In criminal events, for example, offenders do not collect all "information relevant to risks and benefits and combine this information according to the expected utility formula" before they attempt a crime (Carroll and Weaver, 1986: 20; Walsh, 1986). Instead, they rely on several important indicators (heuristics) of victims' capacity of resistance or possibility of getting caught. As a result, the decision often results in fallacies. To summarize, because offenders are "constrained by limits of time and ability and the availability of relevant information"(Cornish and Clarke, 1986: 1), offenders commit a crime when they heuristically think that the potential benefits of crime overweigh the potential costs, including the possibility of getting caught and victim resistance.

In part, because of the defective decision making process, it is often hard to correctly calculate the power advantage before the criminal event is actually attempted. As a result, some motivated offenders will underestimate their power advantage over victims and, consequently, will not attempt the crime. Kleck (2003) argues that most individuals usually overestimate the possibility of police intervention, causing some to not commit crime. That is, the deterrence effect of the police, a third party, is essentially based on the offender's fallacious decision-making process. In a similar vein, some motivated offenders may overestimate the physical power of the victim (e.g., robbers are afraid that victims may possess guns) and, consequently, do not initiate the criminal attempt (Wright et al., 1983).

In contrast, some motivated offenders overestimate their power advantage and, as a result, attempt the crime, which is not successfully completed. In this case, (1) the targeted victim is stronger than the motivated offender initially thought or (2) there are third parties who are willing to intervene that the offenders did not expect. For instance, seemingly weak victims such as females or small children may turn out to possess guns for self-protection, which contradicts offenders' perception of a physical power advantage and prevents victimization. A weaker victim may also prevent crime from happening when he or she resists crime to the death. Unexpected intervention of a third party may also deter the completion of crime. Or an insurance company may start paying reimbursement to the legally deserving customers (victims) when

seemingly unknowledgeable victims fight back with the help of lawyers, as shown in the movie *Erin Brockovich* (1994).

In fact, many attempted crimes result in failures (Gottfredson and Hirschi, 1990; BJS, 2004). The frequency of failure is attributable, in part, to the fact that offenders' calculation of power advantage is based on limited rationality (Kahneman and Tversky, 1982). Although even the most rational criminal attempts sometimes fail because of uncontrollable risk factors (Walsh, 1986), the majority of attempts are unsuccessful due to their limited rationality. That is, offenders mostly fail because they do not collect all "information relevant to risks and benefits and combine this information according to the expected utility formula" before they go to crime (Carroll and Weaver, 1986: 20; Walsh, 1986). Instead they rely on several important indicators of victim's capacity of resistance or possibility of getting caught—a heuristic decision. Offenders may rely on the appearance of victims such as size, masculinity, age, and gender, and/or past experiences with similar victims; however, many victims will be stronger than offenders calculated: they may carry guns, practice martial arts, have great courage, or be protected by capable third party. Therefore, while heuristic decisions sometimes yield favorable outcomes, they often lead to errors in calculations of power advantage, which brings about unsuccessful criminal attempts. In contrast, highly rational criminals such as professional thieves are usually successful because they consider many, if not all, important factors before and after criminal events (Carroll and Weaver, 1986; Sutherland, 1956; Incidardi, 1975; Letkemann, 1973; Walsh, 1986).

The rational choice model may not be equally applicable to all individuals because they possess different abilities and biases in cognitive information processing (Stephan and Stephan, 1990). For example, Gottfredson and Hirschi (1990) argued that people who lack self-control are prone to criminal acts because they do not have capacity to see the long-term results of their actions. In other words, people who lack self-control are irrational because they are vulnerable to the temptation of immediate gains, and their ability to see long-term outcomes are limited. Apparently, the general theory of crime (GTC) presupposes the individual differences between people with low self-control and those with high self-control regarding their cognitive ability to calculate benefits and costs. Note, however, that even those with low self-control would commit criminal acts based on *calculation,* albeit short-term, of pleasure and pain. Therefore, the perceptual model of GTC is compatible with that of PAT. Overall, while current psychological

theories found many defects in the classical rational choice model and advocated individual differences in their cognitive capacity in interpreting criminal events, the basic rational choice model still hold valid.

Figure 3.2 summarize the temporal sequence of a crime, which depends upon the perception and the reality of power advantage of motivated offenders over victims. Offenders' correct perception of their power advantage is an important factor influencing criminal events because when an offender thinks that he or she does not have a power advantage over the victim, crime will not even begin (case 3 in Figure 3.2), and when an offender erroneously perceives he or she has a power advantage over victim, the crime will end up as an unsuccessful attempt (case 2 in Figure 3.2). Crime is completed only when an offender perceives a power advantages and he or she really possesses the power advantage (case 1 in Figure 3.2). The likelihood of criminal attempts then depends upon motivated offenders, their contact with targets, and their perception of power advantage. Actual completion of victimization attempts, however, depends on motivated offender, their contact with targets, and their perceived and real power advantages over victims.

CHAPTER THREE

REVIEW OF RESEARCH FINDIGS

In the previous chapter, I held that the relative power difference between offenders and victims is the key factor that determines the completion of a crime. One way to test the power advantage theory is to examine the effect of self-protection (SP) on the outcomes of violent crime incidents, during which SP strategies reflect victims' different levels of power, particularly physical and psychological power. The theory predicts stronger forms of self-protection would be more effective than weaker ones in avoiding crime completion. For example, victims who protect themselves with lethal weapons are more likely to avert criminal attempts than are passive victims because weapons substantially enhance individuals' physical power.

The following literature review assesses evidence that bears on the power advantage theory. This evidence is based on research that examines the effect of self-protection on outcomes in various types of violent crime, such as assaults, robberies, and sexual assaults.

This dissertation aims to examine related issues as well, including (1) who is likely to resist during criminal incidents and under what circumstances, and (2) whether criminal victims overestimate the effectiveness of SP actions. Little research has been conducted on the former issue, and no research has ever been done on the latter issue. Therefore, these issues will only be briefly discussed in this literature review where they are relevant.

Assessing the Impact of Self-Protection

In order to identify empirical studies, electronic searches were conducted using *First Search*, the *Web of Science*, and *National Criminal Justice Reference Service*, and using combinations of key words, including "self protection," "self defense," "victim resistance," and "defensive gun use." The electronic search was supplemented by reference checks of located studies. After limiting the scope to English studies and studies done after the 1970s, the final

sample consisted of 29 studies. (See Table3.4 for a list of individual studies, their major methodologies, and their results.) As discussed earlier, most studies in this area examined rape crimes with dependent variables of both rape completion and injury, while others examined robbery and assault cases, focusing on injury as the dependent variable. Given the separate focus on rape and injury, the results of research that examines the impact of SP on rape completion is first presented, followed by the evidence found in the research that assesses the effect of SP on injury in rape, assault, and robbery incidents.

Tables 3.1 and 3.2 summarize the empirical results of victim SP and outcome relationships in terms of signs and statistical significances of the studies. As Table 3.1 shows, with regard to rape completion, there has been an overwhelming support for effectiveness of victim self-protection. Regardless of SP types, victim SP almost always reduces the risk of rape completion (83.3%), and many of findings are statistically significant (50.0%). Given the findings, one may reasonably claim that victim SP is a wise strategy to reduce rape victimization.

Table 3.2 shows the empirical evidence regarding injury as the dependent variable in various crimes, including rape, robbery, and assaults. The findings are mixed and difficult to summarize because of inconsistent typologies of self-protection. Nevertheless, it is reasonable to conclude that physical SP (or forceful SP) often appears to increase the risk of injury, while verbal SP (or non-forceful SP) provides no clear patterns of effects. More important, the results disclose that the effect of SP, particularly physical SP, varies significantly depending upon how SP actions are categorized. When researchers crudely divided all SP actions into either (1) physical or (2) verbal, the former usually appeared to be associated with an increased risk of injury (68.5%). When researchers used a more detailed typology, however, the general patterns disappeared. Armed SP, including defensive gun use and defensive knife use, and non-forceful physical SP, including running away, seemed to be generally associated with a lower risk of injury, while other forceful SP, including fighting back without a weapon seemed to be associated with a higher risk of injury. A detailed discussion on the effect of typology will be provided later in this chapter.

Based on mixed findings, some criminologists have concluded that victim resistance to crime, especially forceful resistance, is useless and even dangerous because it provokes offenders to attack the victim (e.g., Griffin and Griffin, 1983; Cohen, 1984; Marchbanks, Liu and Mercy, 1990; Zoucha-Jensen and Coyne, 1993; Bachman and Carmody, 1994; Bachman, Saltzman,

Thompson, and Carmody, 2002), while others have concluded that resistance is generally beneficial (Ziegenhagen and Brosnan, 1985; Kleck, 1988; Ullman and Knight, 1992; 1993; Kleck and Delone, 1993; Southwick, 2000; Ullman, 1997; Thompson et al., 1999; Kleck and Kates, 2001).

Some of the variation in findings with regard to injury outcome may be due to differences in the types of crimes studied. For example, most studies have been confined to sexual assaults (see Ullman, 1997 for a review of 28 pre-1995 rape resistance studies), while others examined robberies (Conklin, 1972; McDonald, 1975; Hindelang, 1976; Block, 1977; Cook and Nagin, 1979; Ziegenhagen and Brosnan, 1985; Block and Skogan, 1986; Cook, 1986; King, 1987; Weiner, 1987; Kleck, 1988; Kleck and Delone, 1993; Southwick, 2000; Kleck and Kates, 2001), burglary (Cook 1991:57), or assault (Lizotte, 1986; Kleck, 1991:149; Thompson et al., 1999; Kleck and Kates, 2001; Fritzon and Ridgway, 2001; Bachman et al., 2002).   Findings across studies would differ if victim resistance had significantly different effects in different types of crimes (Bachman et al., 2002).

The opposite findings, however, may be attributable to differences in their research methods because there are as many variations in the same crime type studies as in different crime type studies. As Table 3.4. shows, the quality of research methods varies significantly from study to study and, unfortunately, most studies suffer serious methodological problems. The following presents a summary of methodological issues in the previous research regarding sample characteristics, temporal control, measurement of SP, and model specification, as well as a quantitative summary.

<u>Methodological Issues in the Prior Research</u>

Sample Characteristics

An obvious problem involving victim self protection studies is that many studies are based on small nonprobability samples of crimes, typically local convenience samples of incidents known to authorities, such as those reported to a single local law enforcement agency (Amir, 1971; Conklin, 1972; McDonald, 1975; Weiner, 1987; Prentky, Burgess and Carter, 1986; Fritzon and Ridgeway, 2001), those involving college students at a single campus (Levine-MacCombie and Koss, 1986), victims who sought help from particular rape crisis centers (Cohen,

1984; Ruback and Ivie, 1988), offenders incarcerated in a single institution or handled by a single treatment facility (Ullman and Knight, 1992; 1993), or self-selected volunteer subjects (Bart, 1981; Bart and O'Brien, 1984) .

There are biases in convenience samples of crimes that come to the attention of the authorities, biases that bear directly on the apparent effectiveness of victim defensive actions. Most critically, victims tend not to report to the police less serious crimes and those in which they suffered no injuries or property loss (U.S. Bureau of Justice Statistics, 1985). Thus, samples of crimes known to the authorities necessarily tend to disproportionately exclude cases in which victim actions were effective in preventing injury or property loss. As Hindelang and Gottfredson (1976) pointed out decades ago, at the very dawn of victim resistance research, this systematic censoring of crimes thereby yields samples of crimes that contribute to underestimating the effectiveness of self-protection. Likewise, incidents reported to victim crisis centers or treatment facilities are likely to suffer from similar censoring of crimes with better outcomes for victims, since the consequences of such crimes are likely to be less traumatic for victims, who would therefore be less in need of treatment or counseling.

Typology of SP Actions

A more serious problem in victim resistance research is the use of needlessly limited two- or three-category typologies of resistance actions. Most researchers simply divide victims into those who resisted and those who or did not, or distinguish only forceful ("physical," "direct," "combative") resistance from nonforceful resistance (e.g., Block and Skogan, 1986; Marchbank et al., 1990; Ullman, 1998; Fritzon and Ridgway, 2001; Bachman et al., 2002). The practice is partly due to data limitations. Some data sources do not provide detailed information on the types of SP victim employed during criminal events. It is, however, sometimes attributable to researchers who did not recognize the importance of separately examining effects of each SP actions. For example, although the pre-1986 NCVS distinguished eight types of SP actions, and the post-1986 NCVS provides information on 16 types, even researchers using this rich source of information have lumped different types of victim actions into a few very broad categories. Bachman and her colleagues (2002; see also Bachman and Carmody, 1994) for instance combined the 16 relatively specific protective measures provided in the NCVS data into just two categories: "physical response" and "non-physical response." The category of "physical

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response" included such diverse measures as the victim attacking the offender with a gun, threatening the offender with a knife, making unarmed attacks, physically struggling without any weapon, chasing the offender, and running away (p.143). Using this typology, they concluded that "the probability of injury was increased for women who physically resisted" offenders (p. 135).

Grouping SP into a few categories is an unfounded practice, however, and one that obscures the individual impact of each SP action. As discussed earlier, while broadly categorized SP actions produce a somewhat consistent pattern (i.e., physical SP appears to increase the risk of injury), the general tendency disappears when SP actions are divided into detailed subcategories. Kleck and Delone (1993), for example, separately assessed all eight distinct categories of self-protection that were coded in the pre-1986 NCVS, and found that some forceful responses appeared to reduce the risk of injury while others did not, and some non-forceful responses appeared to be effective while others, such as attempting to get help, seemed to increase the risk of injury. Different forms of physical resistance can even have opposite effects.

Table 3.2 illustrates the importance of categorizing SP actions. The broadly defined physical SP actions provide radically different effects when they are divided into subcategories. Although fighting back unarmed is mostly associated with increased risk (91.6%), SP with a weapon (66.6%) and non-forceful physical SP, such as running away (80.0%), are usually associated with reduced risk of injury (e.g., Ziegenhagen and Brosnan, 1985; Kleck, 1988; Kleck and Sayles, 1990; Kleck and DeLone, 1993). More particularly, all studies that separately investigated the impact of defensive gun use unanimously found that victims' gun use was associated with reduced risk of injury (Kleck and Kates, 2001; Southweak, 2000; Kleck and Delone, 1993; Kleck, 1988; Ziegenhagen and Brosnan, 1985), and one study found a statistically significant impact (Kleck and Delone, 1993). These findings should be taken as somewhat surprising to those who are skeptical about the effects of forceful SP actions. In sum, the review underscores the importance of separately examining the impact of each SP action (Kleck and Kates, 2001).

Time Sequence between SP and Outcomes

Most critically, apparent conflicts in findings of studies may be attributable to the failure of most researchers to establish the sequence of protective actions and injury. As Sarah Ullman (1998:179) noted, where one does not have information on the sequence of resistance and injury, one cannot draw conclusions about whether resistance provoked injury, since a positive association may be primarily due to crimes in which injury provoked resistance from previously nonresisting victims. That is, injury may provoke resistance, rather than the reverse.

As Table 3.3 shows, nearly all researchers who have found significant positive associations between injury and self-protection actions, and concluded that resistance provoked offenders into attacking victims, failed to establish whether self-protective (SP) actions preceded the offender's inflicting of injury (e.g., Block, 1977; Griffin and Griffin, 1981; Block and Skogan, 1986; Ruback and Ivie 1988; Marchbanks, Lui, and Mercy, 1990; Zoucha-Jensen and Coyne, 1993; Bachman and Carmody, 1994). In these studies, crimes in which a victim was injured <u>before</u> doing something to resist were effectively treated as cases in which resistance provoked injury. In contrast, the few studies that established the injury-SP sequence have generally found that all or most types of resistance either reduce the risk of subsequent injury or have no net effect one way or the other (Quinsey and Upfold, 1985; Ullman and Knight, 1992; Kleck and DeLone 1993:75-77; Thompson et al., 1999; Kleck and Kates, 2001:288-293; Bachman et al., 2002).

The failure of controlling temporal sequences was in part due to lack of information. The Pre-1992 NCVS, for example, did not provide the information. Some recent researchers however possessed information on the injury-SP sequence, but applied it in ways that biased findings against conclusions that victim actions are beneficial or neutral. The problem lay in how the researchers handled cases in which SP actions followed injury. For example, Thompson and her colleagues (1999) and Bachman and her associates (2002) both coded such cases as crimes in which the victim took no protective actions or simply as missing cases. This is inappropriate first because it is inaccurate - the victims did take protective actions. More importantly, this miscoding systematically biases findings against a conclusion that victim actions are effective because they disregarded the favorable impacts of victim resistance that followed initial injury. In these cases, offenders initially inflicted injury on non-resisting victims, who then resisted with no further injuries being inflicted after resistance. The NCVS coded these victims as employed

both pre injury SP and post injury SP and therefore one should have coded those victims' SP as effective ones-not neutral or missing. Simply dropping these cases systematically censor out those who prevent further injuries due to their SP actions. Thompson et al. and Bachman et al. therefore artificially made SP actions appear less effective than they really were.

Model Specification-Controlling Context

One final problem with research in this area is the most difficult to solve and may never be completely solvable. Victims do not select their responses to offenders randomly, so the choice of protective action may be correlated with characteristics of victims, offenders, and crime circumstances that have their own effects on crime outcomes. In fact, many researchers have pointed out that the choice of resistance strategies and injury outcome are heavily correlated with contextual variables such as type of offender attack or threat (Ullman and Knight, 1992), victim and offenders' alcohol consumption (Brecklin and Ullman, 2001), and victim-offender relationships (Atkeson et al., 1989; Levine-MacCombie and Koss, 1986; Brecklin and Ullman, 2001; Bachman et al., 2002), which are unfortunately often ignored in the studies.

Likewise, the use of some defensive actions may be more common in circumstances that are already favorable to the victim, in the sense that it was already unlikely that the victim would have been harmed, or it was fairly easy for the victim to avoid harm, even without taking the protective action. For example, victims who call the police or go to 'get help' during the incident may be able to do so precisely because they face offenders who were not trying to hurt them – it was the absence of injury or serious threat that made those actions feasible. In such cases, analysts could mistakenly attribute effectiveness to victims' actions that actually had little or no impact of their own. On the other hand, victims may be pushed to extreme defensive actions only by extreme circumstances. The more forceful victim responses may be adopted only under the most desperate circumstances, e.g. when victims were outnumbered by offenders. In these cases, defensive actions could appear less effective than they really were, because the dangerous circumstances associated with the defensive action often caused the victim to be injured.

The standard solution to this problem is to measure and statistically control for as many suspected confounders - correlates of protective actions that affect crime outcomes - as possible. But this is difficult when we know little about likely correlates or it is impossible to measure the

variables of interests because we are using secondary data such as the NCVS. In particular, victim and offenders' physical strength, victim's alcohol consumption, and offenders' intentions and strength of motivation have never been measured or controlled in any self-protection study (though Cohen [1984] did ask rape victims about their perceptions of offenders' intentions), yet these variables might well influence not only crime outcomes but also the victim's choice of defensive strategies.

Reiss and Roth (1993:266) speculated that victims who use guns are likely to have had more advance warning time to plan a response than other victims, since the ability to get to a weapon might itself be a product of greater lead time (see also Thompson et al. 1999:243). The greater time to respond might itself produce better outcomes independent of the gun use. Because no researcher has ever measured lead time, this notion remains nothing more than an unsupported speculation. On the other hand, empirical evidence indicates that victims who use guns are more likely to be outnumbered and to face offenders who themselves possessed guns (Kleck and Kates, 2001:292), consistent with the general idea that victims who face more desperate circumstances are more likely to adopt more extreme defensive measures. Regardless, defensive actions are correlated with other variables that could influence crime outcomes, so as many such potentially confounding variables as possible should be controlled.

An important task involving model specification is that of employing relevant interaction terms in the model. The probable conditional impact of SP actions has only occasionally been investigated. Bachman and her colleagues (2002; 1994) reported that when female victims resisted against intimate offenders (domestic violence), physical action significantly increased the risk of injury, and speculated that other victims' self protection and females' nonphysical self protection might significantly decrease the risk of injury. Similarly, others speculated that the impact of resistance might vary depending upon time (day or night), place (home or not home), and victims' and offenders' substance usage (Ullman, 1997; Bachman et al., 2002). It is of urgent importance, therefore, to investigate the conditional effects along with other appropriate methodologies in order to provide more precise advice to potential crime victims.

Statistical Technique

A related problem with model specification is the use of less sophisticated statistical techniques. Somewhat surprisingly, many researchers have employed such crude techniques as

analysis of variance (ANOVA) or chi-square methods applied to simple cross-tabular data (e.g., Cohen, 1984; Amick and Calhoun, 1987; Ullman et al., 1999; Ullman and Knight, 1995; Zoucha-Jensen and Coyne; Fritzon and Ridgway, 2001; Kleck and Kates, 2001; Southwick, 2000; Rand, 1995), while others used multivariate techniques such as logistic regression or probit analysis (e.g., Brecklin and Ullman, 2001; Marchbanks et al., 1990; Kleck and Sayles, 1990). Bivariate statistics do not allow researchers to control for potential confounding variables, making it harder to determine whether associations involving SP actions are due to causal effects of victim resistance or to effects of correlated but uncontrolled variables. Therefore, it is necessary to use multivariate statistical techniques.

Measurement Issues

Researchers usually measure the effectiveness of SP actions by the presence or absence of injury inflicted on the victim. Although this procedure seems valid, victims sometimes report seemingly inconsistent self-assessments of the effectiveness of their action. For example, the preliminary analysis of the NCVS reveals that some victims who reported that they suffered an injury after employing SP nevertheless indicated that they believed their SP yielded favorable effects. The gap between perceived and actual effectiveness of SP actions deserves attention from researchers, yet no empirical research has been devoted to this topic. Given the importance of the issue, this dissertation will explore the topic separately.

Another measurement issue is assessments of what constitutes serious injury. Some researchers used victims going to a hospital or staying in the hospital as an indicator of serious injury (e.g., Rand, 1995; Bachman et al., 1994; Block and Skogan, 1986). This measurement may be biased because some victims may refrain from seeking medical attention even though they were severely injured. Those who use a gun, for example, might be less likely to go to the hospital for fear of the police arresting them for unlawful gun possession. Likewise, those injured by intimates or friends might not seek medical care because doing so would result in police interrogation, and legal trouble for the offender. Additionally, because of high medical costs, poor victims are financially constrained from seeking medical treatment or staying at a hospital. Including in the equation such variables as income may only partially control these problems. Given these problems, it is better to use more objective measurements of injury seriousness, such

as the presence of "broken bones," "lost consciousness," or others (e.g., Ziegenhagen and Brosnan, 1985) as listed in the NCVS, to prevent further complexity.

Who is Likely to Resist and Under What Circumstances?

As discussed earlier, many researchers have pointed out that victims do not randomly choose SP actions, and the choices of resistance are correlated with contextual variables, such as type of offender attack or threat (Ullman and Knight, 1992; Kleck and Kates, 2001; Ziegenhagen and Brosnan, 1985), victims' and offenders' alcohol consumption (Brecklin and Ullman, 2001), victim-offender relationships (Atkeson et al., 1989; Levine-MacCombie and Koss, 1986; Brecklin and Ullman, 2001; Bachman et al., 2002), and the number of victims and offenders (Kleck and Kates, 2001). Some victims employ resistance or non-resistance "in accord with a careful calculation of probable outcome" (Ziegenhagen and Brosnan, 1985: 686). For example, victims who face more desperate or serious circumstances are more likely to adopt more extreme defensive measures. It is plausible that victims who are injured by offenders or face serious threat may be pushed to use stronger SP actions such as defensive gun use. Likewise, victim and offender demographics such sex, race, and age may be associated with types of SP actions because victims choose certain types of SP actions depending upon their physical ability to control the criminal confrontation (Ziegenhagen and Brosnan, 1985) and their subculture (Marshall and Webb, 1987). The topic of who is likely to use SP actions and under what circumstances deserves serious research in its own right and, therefore, this dissertation addresses this issue separately.

Although many researchers have investigated who carries or possesses a gun to protect himself/herself from victimization (e.g., Kleck and Gertz, 1998; Smith and Uchida, 1988; Tewksbury and Mustaine, 2003), only a handful of empirical studies have explored the correlates of victims' actual SP. For example, Ziegenhagen and Brosnan (1985) used the National Crime Panel survey collected in 1974 and found victims were less likely to resist when the robber was armed. It was Marshall and Webb, however, who conducted most of the research on this topic. Using the National Crime Panel survey, Marshall and Webb (1987; also Webb and Marshall, 1989) investigated whether black, poor, young, or male victims are more likely to physically resist offenders than other victims, based on a subculture of violence hypothesis (Wolfgang and

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Ferracuti, 1967). They found that those demographic variables were not significant predictors of victims' self-protection. It was circumstance variables such as the offender's weapon possession and the type of offense (rape, assault incidents) that were significantly associated with whether or not the victim resisted.

Marshall and Webb (1992) also tested whether predictors of certain SP actions such as defensive gun use and other weapons use might differ using National Crime Panel survey incident data collected from 1987 to 1990 (also Marshall and Webb, 1994). Some variables were associated with both defensive gun use and other weapon use. Male victims were more likely than female victims to have used a gun and other weapons, and victims were more likely to use a gun and other weapons when they confronted armed offenders. Predictors of gun and other weapons use, however, were not the same. For example, the frequency of victims' movement and the time of the incidents were associated only with non-gun weapon use. Thus, they suggested, "it is useful to separate the study of gun use from the study of other weapon use" (Marshall and Webb, 1992: 253). They also found that many variables, including race of victim, years of victim's education, gender of offenders, race of offender, number of offenders, knowing the offender, and presence of other individuals were not associated with any weapon usage.

Prior research studies, particularly those of Marshall and Webb, shed light on this rarely studied topic, yet they have substantial limitations. First, they relied on the NCS or NCP data, which do not contain critical information that may be associated with victims' self-protection. For example, the victims' injury might be highly correlated with the victims' decision to resist; specifically, once a victim is injured, he/she might become so enraged or so desperate that he/she will employ any means of self-protection. Yet, it was impossible to control for the injury inflicted *before* SP actions because the NCS did not ask whether the victim was injured before or after employing SP. Only the post-1992 NCVS asked about the temporal sequence between injury and self-protection. Likewise, these researchers relied on only three to four years of NCS data that contained small numbers of cases involving certain SP actions. For instance, there were only 86 cases involving defensive gun use in Marshall and Webb's (1992) study. As a result, it was hard to find statistically significant predictors of victims' SP actions, especially for unusual SP actions. Using larger NCVS data collected for longer periods may allow researchers to find more significant correlates of SP actions.

Summary

Assessing the effects of victim action is a way of testing the validity of the power advantage theory (PAT) because physical power is often the determining factor in the outcomes of violent crimes and because victim resistance, particularly weapon use, indicates that the victim is willing and able to resist. The overwhelming finding that victim SP virtually always reduces the risk of rape completion, often statistically significantly, supports the power advantage theory. The effects of victim action on injury, however, have not been properly investigated due to myriad serious methodological problems; therefore, it is impossible to conclude whether prior research supports the PAT. Those problems found in the research include (1) nonprobability sampling, (2) failure to establish the temporal sequence of injury and SP actions, (3) practice of grouping together many different types of SP action into crude two or three categories, (4) inadequate model specification, and (5) use of less sophisticated statistical techniques. As a result, criminologists are less prepared to provide reliable advice to millions of potential criminal victims who have to face criminal offenders.

While researchers have paid substantial attention to the effects of SP, a few studies addressed the topic of who resists and under what circumstances. Further, the research has relied on relatively small bodies of data that lacked critical information, such as whether victims injured before he/she decided to use any SP actions. Thus, it is premature to draw any meaningful conclusion on the topic. In a similar vein, no researcher has examined what explains the gap between perceived and actual effects of SP.

The following chapter presents a methodology of the present study, which overcomes the problems found in previous studies. In doing so, this dissertation serves as the first empirical test for the power advantage theory, and it examines the correlates of self-protection and the gap between perceived and actual injury as a result of self-protection.

CHAPTER FOUR
RESEARCH DESIGN

This study is an empirical test of the power advantage theory (PAT), which holds that the power advantage of offenders over victims is the decisive factor in crime completion. While many implications of the power advantages are tested, this study focuses on the impact of self-protective actions that reflect both psychological power (willingness to defend) and physical power (e.g., use of a gun or other weapon). It would be valuable to examine the impact of socioeconomic power on criminal events. Unfortunately, the National Crime Victimization Survey that this dissertation relies on does not provide enough information to test the hypothesis regarding socioeconomic power. Examining the precise impact of self-protection actions is still of value to potential victims who confront criminal offenders with their own defense strategies. Once individuals become aware of the relative effect of certain self-protective actions, they can better handle the most stressful events in their lives. For instance, the study can help victims by answering such crucial questions as "Is complete passivity more helpful to reduce injury than active self-protection?" or "Is forceful self-protection dangerous than non-forceful actions?" Thus, this study examines whether self-protective actions, as well as other types of power advantage, prevent victims' injury and property loss in criminal attempts. Rape completion will not be assessed because there is already overwhelming empirical support for the PAT hypothesis (see Ullman, 1997:192-193; Bachman et al., 2002:137-138).

Methodologically, the study tries to overcome the flaws of past victim resistance research discussed in Chapter Three. Specifically, the study aims to (a) examine a large national probability sample of crimes, (b) take account of the sequence of victim protective actions and injury in appropriate ways, (c) control for as many confounding correlates of defensive actions as possible, (d) separately assess all 16 specific victim actions coded in the post-1992 NCVS, and (e) do so separately for each type of crime in which there was personal contact between the victim and offender.

In addition, this study explores the correlates of self-protective action and answers the question of 'who is more likely to resist and under what circumstances?' Doing so is important firstly because it would reveal more precisely the effect of each known SP action. For example, should defensive gun use be employed in the most desperate situations, the effect of the SP action may be underestimated, not because it is ineffective but because the circumstances are already seriously adverse. It is also of theoretical importance as it tests the "violent subculture" hypothesis (Wolfgang and Ferracuti, 1967) and the associated "Southern violence" hypothesis (Hackney, 1969; Gastil, 1971) by examining whether certain individuals such as young, black, and males, or those who live in the South, are prone to violent forms of SP actions due to a subculture of violence.

Finally, this study examines whether there is a gap between perceived and actual effectiveness of SP actions and which SP actions involve largest discrepancies. No prior research to date has addressed the issue; yet it is an important topic as doing so would cast light on misconceptions of the effectiveness of SP actions.

Methods of Analysis for Victim Self-Protection Research

The sample used is all crime incidents reported in the National Crime Victimization Survey (NCVS) that occurred in the United States from 1992 through 2001 and that involved personal contact between victims and offenders (U.S. Dept. of Justice, 2003). Only data gathered since 1992 is to be used because this was when the NCVS began to record the sequence of victim actions and injury. The NCVS is an ongoing national household survey conducted by the U.S. Census Bureau that questions all persons 12 years old or older residing in a large national probability sample of housing units. The NCVS uses a rotating panel design in which stratified multistage samples of U.S. housing units are randomly selected, and residents of the sampled units are interviewed every six months, over a three and a half year period, about their victimization experiences during the six months preceding each interview. All respondents are identified to interviewers, i.e. the interviews are not anonymous. Most interviews are conducted by telephone but some, particularly the first interview, are conducted face-to-face. The total unweighted sample size utilized in this study was 27,595 personal contact crime incidents.

Incidents will be weighted using a modified version of the NCVS Incident Weight, which reflects the differing probabilities of selection into the sample of different cases. If used unmodified, this weight inflates the apparent sample size up to estimated population totals, fooling statistical software into believing that there were millions of crimes in the sample, and distorting significance tests such that even very weak associations appear to be highly significant. To avoid this, in each sample analyzed, the mean value of the original Incident Weight variable is computed. A new weight variable was then created that, for a given crime incident, equaled that case's Incident Weight divided by the mean of the Incident Weight in the sample being analyzed (e.g., robbery incidents). Since the average value of this new weight equals one, apparent sample sizes are exactly equal to the actual unweighted sample size, and significance tests are not distorted.

This study will analyze five types of crimes: sexual assaults, robberies, assaults (without sexual elements), personal contact larcenies (completed or attempted purse snatchings and pocket pickings), and confrontational burglaries. All but the last crime type are defined according to the NCVS Type of Crime (TOC) typology. I want to separately assess the effects of protective actions in residential burglaries in which there was some potential for direct confrontation between victim and offender, but the TOC for many of these would be some kind of robbery. Therefore I define a confrontational burglary as a crime incident in which there was (a) unlawful entry by the offender into the victim's home and (b) the victim saw the offender while the crime was going on. Crimes with these elements but also those of sexual assaults were left as sexual assaults because there were already so few cases of this crime type.

Table 4.1 lists the variables included in the analysis and their means and standard deviations. Most variables are binary, indicating the presence or absence of an attribute.

Dependent Variables

The dependent variables measure whether the victim suffered (1) any injury during the incident, regardless of when it occurred (ANYINJUR), (2) any injury after taking some self-protective action (POSTINJU), (3) a serious injury after taking self-protective actions (POMISERI), or (4) property loss (LOSTHIN). Since the dependent variables are all binary variables, I use logistic regression to estimate equations. Injury of victims is typically an intended outcome only for assault cases, and not for robberies, sexual assaults, or burglaries.

However, I estimate injury equations for the full set of all person contact crime incidents in the sample and separate injury equations for all of the aforementioned types of personal contact crime to see whether the effect of protective actions yield injury-reducing effects in those crimes as well. It is necessary first because the results are of practical importance to numerous potential victims, and because the type of crime recorded in the NCVS is not determined by offenders' actual intentions but by the results of crime. Further, the intentions of offenders may be dual in those many crimes: robbers for example may aim to hurt victims as well as to steal property. On the other hand, only robbery, burglary, and personal contact larceny were analyzed with respect to property loss.

As discussed earlier, knowing temporal sequence between SP and injury is a key element to determining whether SP causes injury or not. Protective actions taken after the victim was injured could not have affected whether the injury was inflicted. Likewise, because humans are not capable of instantaneous reaction, attacks that began simultaneously with victim actions could not have been provoked by those victim actions. In some incidents, victims described the two events as occurring at the same time. While the beginnings of these actions probably were not literally simultaneous, the victims in these incidents presumably were unable to say whether their protective actions came before or after injury. I treat these incidents as missing on the post-SP injury variables, since it is impossible to determine whether injury actually occurred slightly before or slightly after the protective actions.

The NCVS does not address the possibility of complex sequences in which multiple different types of defensive actions are taken and injury occurs after one victim action but before another type of action. Rather, all victims who were injured and used protective actions are simply coded by interviewers as to whether protective actions (in general) were taken before, during, or after the victim was injured. Victims can be coded for as many of these sequences as were appropriate, and therefore might be coded as having suffered injury before, during, and after defensive action. For purposes of coding post-protection injury, I treat victims who were injured both before and after victim actions as having suffered post-protection injury, thereby favoring the hypothesis that resistance increases the victim's risk of injury.

The types of injuries recorded in NCVS are: (1) raped, (2) attempted rape, (3) sexual assault other than rape or attempted rape, (4) knife or stab wounds, (5) gun shot, bullet wounds, (6) broken bones or teeth knocked out, (7) internal injuries, (8) knocked unconscious, (9) bruises,

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black eyes, cuts, scratches, swelling, chipped teeth, and (10) other injuries. The exact cut-off between serious and minor injury is necessarily subjective and somewhat arbitrary, but I use the fairly conventional one adopted in past research using NCVS data: the last two categories were treated as less serious injuries, the rest as more serious. This coding scheme thereby slants the distribution of injury seriousness in favor of the "serious" category, since, among specific categories of injury, only the least serious (bruises, cuts, etc.) is coded as less than serious.

Independent Variables-Physical Power Variables

Three variables are included to reflect the physical power advantages that offenders had over victims. ADVSEXOF is coded higher when one or more male offenders confronted a female victim, i.e. there was likely to be a physical power advantage to the offender because of difference in sex. ADVAGEOF is coded higher when one or more offenders were in their prime physical ages (age 15-29) and the victim(s) was not in this age range, i.e. there was likely to be a physical power advantage to the offenders because of age and generally associated physical fitness. ADVNUM equaled the number of offenders minus the number of victims, measuring the numerical advantage of offenders.

As discussed earlier, weapon possession is a significant factor that may modify the power difference. Included variables measure whether offenders possessed weapons during the incident and the type of weapon (OHADGUN, OHADKNIF, OHADSHAP). I expect offenders' gun possession would be negatively associated with injury and but be positively associated with property loss because of 'redundancy effect' of the gun possession (Kleck, 1991), i.e., the gun provide so significant power to the possessor that doing actual harm is not necessary to achieve property. The effect of gun possession is stronger than that of a knife or of a sharp object.

Independent Variables- Self-Protective Actions

I include 16 binary variables denoting whether a given type of protective action was taken by the victim (2=action was taken, 1=action was not taken). The very fact that the victim resisted may reflect his or her psychological power because it implies the willingness to defend himself and his property in a criminal challenge. Also, each SP action may reflect different degrees of physical power that a victim may possess. Defensive gun use, for example, implies that the victim has a greater power advantage because even if the victim is physical weaker than

the offender, the effect of possessing lethal weapon can outweigh the power difference due to muscular strength (Kleck, 1988). In the same vein, victims who use other weapons have stronger SP power than those resisting without any weapons, other conditions being equal.

Victims could be coded as having used as many or as few of these strategies as they reported, and those who did nothing to resist would simply be coded 1 on all 16 protection variables. Because there was no variable included in the models that explicitly denoted that victims did nothing to protect themselves, "no self-protection" is the omitted protection category, which serves as a point of comparison for all specific protective actions. Thus the coefficient of each protection variable reflects how much more or less likely a given outcome was for victims who took that action, compared to victims who did nothing to resist, other things being equal.

NCVS respondents reporting a victimization are asked: "Did you do anything with the idea of protecting YOURSELF or your PROPERTY while the incident was going on?" (U.S. Bureau of Justice Statistics 2003). It should be noted that some "self-protection" actions are only protective of property, not the victim's bodily safety. For example, it is unlikely that victims chase the offender to prevent injury to themselves. The purpose of such an action is more likely to be to recover the victim's property, inflict punishment on the offender, or hold him for the police than to protect bodily safety. Victims can also be coded as either cooperating or pretending to cooperate with the offender. Genuine cooperation might seem to be indistinguishable from nonresistance, but since cooperating and pretending to cooperate are grouped together in the NCVS, victims in this category must be coded as having taken some kind of protective action, since some of them "stalled" to protect themselves.

Another problematic category of "self-protective action" coded in the NCVS is "screamed from pain or fear" (this is the full verbatim description that appears in the NCVS interview schedule – U.S. Bureau of Justice Statistics, 2003). Responses coded as fitting this category of victim response were provided in the context of the introductory statement asking about protection, and so these behaviors are treated as self-protection in the NCVS. But they could also be viewed as virtually involuntary responses to threat or injury itself, rather than actions intended to prevent further injury or property loss. Ambiguity arises because after the initial protection question is asked, those who respond "No" are nevertheless asked the more ambiguous follow-up question, "Was there anything you did or tried to do about the incident while it was going on?" Thus, some victims who answered "No" to the first question, then

"Yes" to the second one, were not necessarily claiming that the action was taken for protective reasons. Nevertheless, since screaming from pain might well influence whether the perpetrator inflicts further injury, and screaming from fear might influence whether any injury is inflicted in the first place, I included this action in the models. Readers should, however, note that any positive associations between this victim behavior and injury may merely reflect the fact that injury often causes victims to scream from pain, and threat of an attack could make them scream from fear. Even with information on SP-injury sequence, one must still consider the possibility that victims may scream from fear just before an injury is inflicted. Such a case could appear to support the view that screaming provokes offender attack, even if it actually had no effect.

Because weapon possession, especially in public places, is often unlawful, many cases of armed resistance are probably not reported to the NCVS, since this would entail confessing to a crime. While there is no evidence bearing directly on the validity of responses to questions about defensive use of guns or gun carrying, there is considerable evidence that survey respondents often conceal gun ownership. First, surveys asking how many guns people own yield far lower estimates of the total civilian gun stock than do data on the numbers of guns manufactured, imported, and exported (Kleck 1991, pp. 19, 455-460). Second, when Illinois adults who held legally-required gun owner licenses were asked in interviews whether they owned guns, nearly a tenth claimed that neither they nor anyone in their household owned a gun or had owned one in the past five years (Bordua, Lizotte and Kleck 1979). Third, a number of researchers have noted discrepancies in married-couple households in survey responses to household gun ownership questions, indicating that wives substantially underreport their husbands' gun ownership (Buckner 1995; Kleck 1997, pp. 66-67, 100; Ludwig, Cook, and Smith 1998). Even among the presumably highly "legitimate" gun owners who registered their guns with the authorities, 12.7% denied, when interviewed, having any guns (Rafferty, Thrush, Smith, and McGee 1995). Since reporting defensive use of a gun necessarily entails acknowledging possession of one, this documented reluctance to admit gun ownership is likely to lead to an underreporting of gun use.

Further, I cannot be sure that the relatively few incidents that are reported in the NCVS are representative of all cases of armed resistance. Those defensive uses of weapons that are reported by victims are probably more "legitimate" than those not reported, but it is unclear whether they would be more effective. On the one hand, victims might be embarrassed by

actions that failed to prevent harm or made things worse, and consequently might underreported unsuccessful defensive actions. On the other hand, victims are known to be less likely to report incidents without injury or property loss, which contributes to underreporting of successful defensive actions.

It is not practical to assess the impact of combinations of specific protective measures. There are 57,527 possible combinations of 16 different measures. Even testing just one percent of these combinations would inevitably yield many misleadingly "significant" findings due to the huge number of hypothesis tests performed. Further, any subset of those combinations selected for inclusion in the models would be arbitrary, given the absence of either past research on the effects of combinations of victim actions or relevant theory that specifies which combinations would be most likely to affect, for good or ill, the outcomes of crimes. In any case, only 17.7 percent of all victims used more than one type of SP (13.3 percent used two types, 3.0 percent used three, and 1.4 percent used more than three), so there usually is no issue of the effects of combinations of SP actions.   Further, when I examine the correlations among SP actions, I found no correlations even as large as 0.2, and only three exceeding 0.1, out of 120 total bivariate correlations. Thus, there appears to be no pronounced clustering of SP actions in the minority of cases where multiple actions were taken.

Independent Variables-Characteristics of the Victims, Offenders, and Circumstances

Variables measure observable characteristics of the victims, offenders, and circumstances that might influence outcomes of the incidences. These might also be correlated with the willingness (psychological power) or ability (physical power) of victims to use each defensive action.

Twelve variables measured attributes of victims that are mostly self-explanatory. They are included because they reflect the willingness and capability of the victim to protect themselves and their property. For instance, it is easier for offenders to injure or steal property from victims older than 65 because of their physical weakness (frailties and inability) and psychological weakness (disinclination to retaliate). On the other hand, in robberies, it may be precisely because offenders anticipate little resistance from older victims that they do not feel a need to attack them at the outset of the incident.

Ten other variables measure attributes of offenders, as perceived by victims, as well as the relationship between victim and offender. Intimate offenders such as family members (OFDFAMIL) and sexual intimates (OSEXINTI) may be more inclined to inflict harm on the victim because hostility has had time to intensify in the course of extended emotional interaction. Alternatively, emotional bonds might inhibit the offender's aggression. Emotional intimacy might also influence the willingness and ability of victims to protect themselves – victims might be reluctant to direct forceful actions at intimates. Because there could be multiple offenders, with differing relationships to the victim, I simply coded whether a given relationship existed between the victim and at least one offender. Thus, it is perfectly possible for a given incident to receive the higher code on more than one relationship variable. The same procedure was followed for offender race variables.

The PAT predicts that the presence of bystanders (OTHRPRES) would reduce the risk of injury and property loss because another individual enhances the threatened victims' physical power to avert attack, however it could also provoke aggressors to inflict further injury because she/he perceived a greater need to control the victim. Likewise, the presence of family members (FAMIPRES) would reduce the risk of injury and property loss because the family member may help the victim, and the victim might try harder to defend family members by defending himself or herself. Alternatively, it could make victim more reluctant to resist in order not to provoke offenders into attacking these others.

Independent Variables--Other Circumstance Variables

Other independent variables measure the degree of safety for the victim in terms of their familiarity with the setting and the possibility of gaining assistance from others. ATHOME reflects whether the crime occurred in the victim's home, while NEARHOME reflects whether the incident occurred in the immediate area around the home, such as the yard, garage, and very close streets. SECUPUB stands for a secure public place that may have capable guardians, such as banks, other commercial places, offices, factories, or school buildings.

Other variables indicating an urban or rural setting (RURAL, URBAN) reflect population density of the setting and thus the likelihood that there would be other people around who could serve as allies to the victim, intervening or summoning police. Other variables measured whether offender(s) entered or attempted to enter the victim's home or car (ENTRYHOM and

ENTRYCAR). Note that independent variables were omitted from equations only when it was unavoidable because they were constants in the subsample being analyzed.

Methods of Analysis for Exploring the Determinant of Victim Self-Protection

The second major analysis will be based on the same data and weighting procedures. In this analysis, I examine the correlates of SP actions in all personal contact crime incidents (n=27,595), including assaults, robberies, sexual assaults, larcenies, and confrontational burglaries incidents. Larcenies are not separately analyzed because they are perceived as less serious crimes than others and involve less serious self-protective actions. Readers should note that self-protective actions reported in sexual assaults might be biased. Sexual assault victims may be less inclined to report incidents that involved no SP actions or only very mild forms of self-protective action because doing so might lead to victim blaming, or the notion that the victim was responsible for the crimes or was not really a victim (Williams, 1984). Thus, SP actions reported in sexual assault might over-represent stronger forms of actions, such as fighting back or under-represent weaker forms or non-resistance.

Table 4.2 lists the variables included in the analysis of the determinants of SP and their means and standard deviations. Most variables are binary, indicating the presence or absence of an attribute.

Dependent Variables

The dependent variables measure (1) whether the victim used any self-protective actions or not (2=action was taken, 1=action was not taken), and if so (2) whether the victim used forceful types of self-protective actions (2=forceful action was taken, 1=only non-forceful action was taken), (3) whether the victim used any weapon for self-protection (2=a weapon was used, 1=no weapon was used for self-protection), (4) whether the victim used a gun for self-protection (2=a gun was used, 1=no gun was used). As discussed before, some self-protective actions such as "cooperating, or pretending to stalled" and "screaming from pain or fear" are barely different from complete passivity, and do not really constitute "resistance." Thus, victims who used these actions were coded as those who employed no resistance. Since the dependent variables are all binary variables, I use logistic regression to estimate the equations.

As discussed earlier, the relatively few incidents that are reported in the NCVS may not represent all cases of certain SP actions, especially involving armed resistance. Those defensive uses of weapons that are reported by victims are probably more "legitimate" than those not reported, yet it is impossible to control for legitimacy because the NCVS did not ask, for example, whether the respondent owned a gun, possessed one during the crime, or had a license to carry that gun.

Independent Variables-Victim Characteristic Variables and Geographical Variables

Fifteen variables measure attributes of victims that are mostly self-explanatory. They are included because they reflect the willingness of the victim to protect themselves. For example, young people, blacks, and males, and individuals from a lower socioeconomic background may be more likely to use violent forms of SP actions because they may be more likely to adhere to a violent subculture (Wolfgang and Ferracuti, 1967). Some segments of the U.S. population may be more inclined to violently respond to criminal attacks because it is the "code of the street" necessary to live in disadvantaged neighborhoods (Anderson, 1999). To test for the subculture effect, it might be better to include variables that reflect geographical characteristics of the neighborhoods where respondents reside. However, the publicly available NCVS data upon which this study relied do not provide such information[2]. Instead, the study measures whether the victim was young (YOUG1529), black (BLACK), or male (MALE). Readers should note, however, that even though people in this groups may be more likely to violently resist, they may also be less likely to report violent SP actions to federal employees like NCVS interviewers because they do not want to reveal possibly illegal actions to the authorities. Thus, the coefficient of these demographic variables may be smaller than they should be.

Three variables measure whether incidents occurred in South (SOUTH), West (WEST), Midwest (MIDWEST), with the northeast area omitted as a reference point. Southerners may be disproportionately inclined to use violent defensive action during criminal incidents because they embrace the "subculture of violence" in the South (Gastil, 1971; Ellison, 1991; Hackney, 1969). Finally, two variables measure whether the incident occurred in city (URBAN) or rural areas (RURAL), with mid-size areas as the omitted category.

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[2] Area-Identified NCVS can be combined with other data such as U.S.Census to provide such an information but are available only under secure conditions at a limited number of physical locations (Lauritsen and Schaum, 2004)

Independent Variables-Offender Characteristics

Ten other variables measure attributes of offenders, as perceived by victims, as well as the relationship between the victim and offender. Victims may be inclined to violently resist intimate offenders such as family members (OFDFAMIL) and sexual intimates (OSEXINTI) because hostility has had time to intensify in the course of extended emotional interaction. Conversely, emotional bonds might inhibit victims' strong resistance. Because there could be multiple offenders, with differing relationships to the victim, the incident is coded as to whether a relationship existed between the victim and at least one offender. Thus, it is possible for a given incident to receive a higher code on more than one relationship variable. The same procedure is followed for offender race variables.

Independent Variables-Seriousness of Incidents

Other independent variables reflect the seriousness of incidents. They are included because victims may choose a self-protective action depending upon his or her evaluation on the seriousness of situation (Ziegenhagen and Brosnan, 1985). One variable measures whether victims suffered injury before they employed any self-protective actions (PREINJU). Once the victims experienced an injury, they would automatically recognize the severity of the situation. Then, victims might strongly resist because they become enraged or desperate to prevent further injury. Alternatively, some victims could be pushed to complete passivity because they recognized doing so might further aggravate the incident. Again, the temporal sequence between SP and injury is crucial to deciding whether injury caused SP or not. An injury inflicted after SP could not have affected whether victims decided to use SP action. As discussed earlier, in some incidents, victims described injury and SP as occurring at the same time. These incidents are treated as missing, since it is impossible to determine whether injury actually occurred slightly before or slightly after the protective actions.

Two variables were included to reflect physical power advantages that offenders had over victims. They measure whether female victims confronted male victims (ADVSEXOF) or whether the victim was outnumbered by the offenders (ADVNUM). Victims may be more likely to resort to serious SP actions in such desperate situations because they think less forceful SP action would not save them from further harm. Alternatively, victims who are in such situations may choose less forceful SP actions (e.g., cooperation) or even complete passivity because they

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become scared or think SP might provoke offender. In the same vein, victims would evaluate the seriousness of incidents depending on types of offenders' weapons and behave accordingly. Thus, I include variables that measure whether offenders possessed weapons during the incident (OHADGUN, OHADKNIF, OHADSHAP). In particular, offenders' gun possession would be strongly negatively associated with forceful self-protective actions (Marshall and Webb, 1989).

Independent Variable-Other Circumstance Variables

Other independent variables measure location and victims' familiarity with the setting. They reflect whether the incident occurred at home (ATHOME) or near home (NEARHOME). Victims would be more likely to resist at home, where they have valuable possessions and people they love. In addition, they can easily access any weapons kept in their residence. Finally, two variables measure the presence of bystanders (OTHRPRES) or family members (FAMIPRES). Victims accompanying others may be more willing to resist offenders because they expect help from others. Alternatively, they may be reluctant to resist because doing so might aggravate the situation and cause harm to others, especially family members. Note that variables were omitted from equations only when it was unavoidable because they were constants in the subsample being analyzed.

Methods Studying the Gap between Perceived and Actual Effects of SP actions

The third analysis utilizes all personal contact crime incidents that involve a single victim SP action used (n=14,593). The association between SP actions and whether victims suffered injury is the most direct measure of the effectiveness of a SP action. If an injury is inflicted after employing a SP action, for instance, it indicates that the action was at least not totally effective and possibly aggravated the situation. Alternatively, effectiveness can be measured by victims' perceptions of effectiveness. The NCVS asked respondents whether their self-protective actions "made the situation worse in any way?" Should the victim say, "yes" to the question, respondents were asked whether it "led to injury or greater injury" to respondent. The answer given describes the victim's perception of the effectiveness of the SP action. Comparing the actual injury occurrence after a SP action (POSTINJU) and the victim's perception of the

consequences of the action casts light on whether individuals overestimate or underestimate the effect of certain SP actions.

Crime victims often employ more than one type of SP actions. In order to clearly isolate the perceived gap attached to specific types of actions, I will analyze only incidents where victims reported a single SP action. This analysis then would disclose which types of SP actions involve the largest gaps between actual and perceived effectiveness. Individuals who hold strong confidence in their gun's effectiveness, for example, might over-estimate the usefulness of the weapon although the weapon is not actually helpful. Given the nature of this analysis, a crosstabulation of actual injury occurrence and victim perception of effects for each SP action will be used.

Hypotheses

The following are the key hypotheses to be tested in the current study. These hypotheses are linked to three distinctive inquiries. Hypotheses 1 to 5 concern the impact of SP actions research, while hypotheses 7 to 8 address the determinants of SP actions. Finally, hypothesis 9 concerns the research on the gap between actual and perceived effects of SP actions.

> H1. Resisting victims experience less crime completion than do non-resisting
>   victims.
>   (Psychological power hypothesis)
>
> H2a. Victims who resist with weapons experience less crime completion than victim
>   who resist without weapons and who do not resist.
>   (Physical power hypothesis/ Weapon effects hypothesis)
> H2b. Victims armed with guns are the least likely to experience crime completion.
>   (Physical power hypothesis/ Gun effects hypothesis)
>
> H3a. Offenders armed with weapons are more likely to complete criminal attempt than
>   offenders who do not possess a weapon.
>   (Weapon advantage hypothesis)
> H3b. Offenders armed with guns are the most likely to complete criminal attempt.
>   (Gun advantage hypothesis)

H4. Incidents involving female victims and male offenders are more likely to be completed than those involving female victims and female offenders, or male victims and female offenders.
(Sexual advantage hypothesis)

H5. Offenders in the prime age (15-29) are less likely to complete crime when facing victims who are out of the age range
(Age advantage hypothesis)

H6. Criminal incidents involving more offenders than victims are more likely to be completed.
(Numerical advantage hypothesis)

H7. Young, black, male victims are more likely to use forceful self-protection.
(Violent subculture hypothesis)

H8. Victims who live in the South are more likely to use forceful self-protection.
(Southern subculture of violence hypothesis)

H9. Victims' perception of the effectiveness of SP action differs from actual effectiveness.
(Perceptional gap hypothesis)

CHAPTER FIVE
FINDINGS

In this chapter, the results of three analyses are presented in the following order. The progression begins with a test of the power advantage theory, focusing on the impact of self-protective actions on the outcomes of violent criminal incidents. Injury and property loss are regressed on 16 types of self-protective actions in separate analyses of assaults, robberies, sexual assaults, confrontational burglaries, and larcenies as well as in analyses of the total sample of 27,595 incidents. Since the hypotheses of the power advantage theory are to predict the effect of the variables on the completion of the crime, I particularly pay attention to the outcomes that constitute the completion of the crime. Thus, I focus on injury outcomes in assaults and sexual assaults and on property loss in robberies, burglaries, and personal larcenies.

Following this initial model are the results of the investigation on who uses particular SP actions and under what circumstances, which in part tests violent subculture hypotheses (Gastil, 1971; Hackney, 1969; Wolfgang and Ferracuti, 1967). Four different types of SP actions, including defensive gun use, weapon use, forceful SP action, and any SP actions are separately regressed on victims' demographics and geographic regions as well as other circumstance variables. The logistic regressions are separately conducted in assaults, robberies, sexual assaults, confrontational burglaries, and in the total sample of 27,595 criminal incidents.

Finally, the dissertation presents the results of the analysis that examines whether there is a gap between perceived and actual effectiveness of SP actions on injury outcomes of criminal confrontations. Bivariate correlation analysis and crosstabular method are used for 14,593 incidents that involve a single SP action used in order to investigate the mismatch between actual and perceived effectiveness involving each SP actions.

Findings of Victim Self-Protection Research

Frequency and Injury Rates of Protective Actions

Table 5.1 shows how often NCVS crime victims reported using the various types of victim protective actions and the share of victims using each method who were injured. Readers should not interpret these figures as measures of the relative effectiveness of the various resistance tactics, since simple differences in injury rates reflect more than just differences in the effects of victim actions. Nevertheless, this table conveys simple descriptive information that is arguably more important than the results of the later complex multivariate analyses. Most importantly, these figures show that while many crime victims are injured, they are rarely injured after taking any kind of protective action and are almost never seriously injured after resisting. For all 27,595 crime incidents, less than two percent involved a victim being injured after resisting the offender, and less than one half of one percent involved a victim being seriously injured after resisting. Of all crimes involving SP actions and injury, only ten percent involved SP followed by injury. Thus, a scholar who implicitly interpreted SP-plus-injury crimes as incidents in which SP provoked offenders into injuring the victim would be wrong in at least 90 percent of the cases.

Once victims resist, the probability that they will suffer any further injury drops almost to zero, regardless of crime type or form of resistance. While most offenders in personal larcenies and burglaries probably never had any intentions of hurting their victims, and thus there were no violent intentions to thwart, post-resistance injury is also rare in sexual assaults, robberies, and assaults. This does not mean there is no risk whatsoever to victim resistance, but the chances of resistance provoking offenders to inflict injury is low by any reasonable standard (2.8 percent of crimes with SP) and the risk of serious injury is close to zero (0.7 percent). Violent crime is obviously inherently dangerous independent of victim resistance. Even among victims who did not resist in any way, about 18.5 percent were injured (the rest were merely threatened with injury). But resistance rarely adds to this "baseline" level of danger, given how infrequently any further injury is inflicted after resistance.

These conclusions can be drawn even before performing complex multivariate tests because even if one were to make the extreme assumption that all cases of post-SP injury were incidents in which resistance alone caused the offender to hurt the victim, it would still be

accurate to conclude that resistance rarely causes the victim to suffer further injury. In reality, it is highly unlikely that all crime victims who resisted and then were injured suffered those injuries because they resisted, since some offenders were surely determined to hurt their victims regardless of whether the victims resisted. Thus, the post-SP injury percentage is properly viewed as an upper limit on the share of crimes in which protective actions could have provoked offenders into attacking.

These simple injury rates, however, cannot tell us whether resistance actually reduces risk of injury – perhaps victims resist only in situations that were already relatively safe or resist only offenders who appeared unlikely to hurt them. Nor can these figures tell us which protective actions are relatively more effective, inconsequential, or counterproductive. To address these issues, analyses using multivariate controls are needed.

While this extremely low rate of post-SP injury is good news for crime victims, it creates statistical problems for assessing the relative effectiveness of different protective strategies for avoiding injury, since it means that there is very little variation on dependent variables measuring post-SP injury. It is harder to predict very rare outcomes, and estimates of the impact of a given variable will necessarily be unstable even in fairly large samples because they are based on so few cases with the outcome of interest. This problem is aggravated when analyses are confined to subsamples pertaining to specific crime types, especially the less frequent ones, and is even more severe with regard to estimating effects of the rarer SP actions. Thus, for example, despite the very large NCVS total samples, there are few robberies with post-SP injury, and also few with armed resistance. This means that estimates of the effects of armed resistance on post-SP injury in robberies will be dependent on a few cases and correspondingly unstable.

Note that I did not take the complex sampling design of the NCVS into account in estimating standard errors of coefficients in part because existing packages cannot take account of the NCVS sampling design. It is necessary to do so because the NCVS select certain geographic areas first and selects multiple respondents from each selected areas, and therefore correlations between respondents in given clusters may exist (BJS, 2003; Bachman and Carmody, 1994: 325). Thus, readers should keep in mind that actual standard errors are actually bigger than are reported here, and accordingly statistical significance of coefficients is likely to be less impressive than the significance levels shown.

Property Loss

Middle-class observers might be tempted to dismiss property loss as a minor consequence of robberies, burglaries, and larcenies, preferring instead to focus only on injury, fear, invasion of privacy, and the loss of a sense of security. This is certainly true of scholars who study victim resistance, since they rarely address the effects of resistance on property loss. In contrast, lower income persons, for whom the loss of $100 might make it impossible to buy groceries or pay the rent, might be less inclined to regard the issue as trivial. Thus, I begin by assessing the impact of victim actions on whether victims of robbery, confrontational burglary, or personal contact larceny lost any property, as opposed to merely being the victims of attempted thefts.

The findings in Table 5.2 indicate that 13 of the 16 protective actions were associated with lower rates of property loss compared to nonresistance, 11 significantly so. Based on the size of the coefficients of the corresponding variables, three of the four most effective methods for avoiding property loss in crimes in general were types of armed resistance, all of the four most effective methods in robberies were types of armed resistance, and three of the four most effective methods in confrontational burglaries were kinds of armed resistance. Note that the crime-specific findings are unstable for the rarer forms of SP, including use of a gun, because distributions are extreme on both these SP variables and the property loss dependent variable, since property loss is extremely rare among victims who used guns.

These findings regarding property loss clearly support the hypotheses of the power advantage theory (PAT). For instance, it was expected that resisting victims experience less crime completion than passive victims (psychological power hypothesis). As predicted, Table 5.2 showed that resisting victims experienced less property loss, often significantly less, than non-resisting victims. Likewise, the PAT predicts that victims who resist with weapons, especially with a gun, are the least likely to experience crime completion because weapons increase the physical power of victims. As predicted, victims who resisted with weapons were less likely to lose property than those victims who resisted without weapons (weapon effects hypothesis). Also victims armed with guns were less likely to lose property than almost any victims (gun effects hypothesis). The only SP variable that appeared to be more effective than defensive gun use was that of threatening with other weapons in confrontation burglaries.

The PAT also generated the sexual advantage hypothesis, age advantage hypothesis, and the numerical advantage hypothesis, which predicted that criminals who had such advantages

were more likely to succeed in criminal attempts. Table 5.2 showed that incidents involving such offenders are all significantly associated with higher rates of property loss. In sum, the findings regarding property loss strongly supported the PAT hypotheses with very few minor exceptions.

Injury Regardless of Injury-SP Sequence

It could be hypothesized that this greater ability of resisting victims to avoid property loss comes at the price of increased risk of injury. While some victims might succeed in retaining their property by resisting, their resistance might anger aggressors into attacking them. Table 5.3 presents findings that are comparable to those reported in most past research, in that they show the association between protective actions and injury to the victim, without respect to whether injury preceded or followed resistance. It should be stressed that the purpose of reporting the Table 5.3 estimates is to provide results comparable to those presented in most prior studies, not to report results that we regard as the most meaningful estimates of SP effects on victim injury.

The results are extremely mixed and without clear patterns. About half of the protection variable coefficients are positive and half negative, and those that are negative are as likely to pertain to forceful as nonforceful actions. Many of these findings are hard to make sense of, if one interprets the SP-injury associations as the effects of the former on the latter. For example, taken at face value, they seem to suggest that, aside from threatening the offender with a gun or calling the police, the most effective methods for avoiding injury were threatening without a weapon and "yelling or turning on the lights." While some of these apparent interpretations might be valid, the findings are ambiguous because they take no account of SP-injury sequence, so one cannot tell if positive associations reflect counterproductive effects of foolish resistance actions or previously nonresisting victims roused into action by the injuries inflicted on them.

Post-Self Protection Injury

This problem is addressed in the analyses whose findings are reported in Table 5.4. Here the dependent variable denotes whether the victim was injured <u>after</u> taking protective actions. Victims were coded 2 if they took SP actions and were injured after doing so, and were coded 1 if they took SP actions and were not injured after doing so, the latter group including those who were injured only before taking SP actions. This method of defining the dependent variable eliminates the SP-injury sequence problem since only post-SP injuries can "count against" an SP

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action. It permits comparisons of effectiveness among the 16 SP actions, but not between a given SP action and taking no SP actions at all. Cases in which victims took no SP were not included in the Table 5.4 and 5.5 analyses because the concept of post-SP injury is undefined for victims who took no SP actions. (I later report results from an alternative approach in which no-SP cases were included and arbitrarily coded as to whether there was "post-SP" injury.) Thus, unlike the preceding analyses, the Tables 5.4 and 5.5 results describe only victims who took some kind of protective action, and address the question: "Among victims who did something for protection, which actions were relatively more effective in averting subsequent injury, beyond any injury that may have already been inflicted before the victims took defensive action?"

Since nonresisting victims were excluded, we could not treat no-SP as the excluded category. While it is statistically inconsequential which protective action was treated as the excluded category, I selected "called the police" as the omitted category because it is often presented as the officially recommended course of action for crime victims, and thus can serve as a useful point of comparison. The signs and absolute sizes of coefficients in Tables 5.4 and 5.5 should therefore not be compared with those in Table 5.3, since the omitted SP category that serves as the point of reference is different. Instead, the focus should be on the relative sizes of the coefficients within each model.

The "effectiveness" of a given SP action is meaningful only in a comparative context, i.e. compared to some alternative course of action, even if the alternative is doing nothing. Thus, the signs of the coefficients for the SP variables are a somewhat arbitrary reflection of which SP category I chose to treat as the omitted category. If I had omitted the SP type that had the lowest rate of injury, the coefficients of all the included SP variables would be positive, not because all the SP actions in some absolute sense elevate the risk of injury, but rather because, by definition, they are not as effective in averting injury as the most effective method. Conversely, had I treated the SP with the highest injury risk as the omitted category, all SP coefficients would be negative, perhaps suggesting to the unwary that all SP actions "work" in avoiding injury. In my injury analyses I treat "no-SP" (Table 5.3) or "call the police" (Tables 5.4 and 5.5) as the omitted categories merely because they are well known as the no-resistance courses of action that are sometimes recommended to prospective victims by authorities such as police or victim advocates. Readers should note, however, that these options are often not feasible or safe for some victims. Conversely, when they are adopted, it is sometimes an indication that the circumstances of the

crime were already relatively safe, for reasons having nothing to do with victim actions. For example, if a victim was able to call the police during the crime incident, it suggests that circumstances were less risky to the victim. Consequently, even SP methods that are quite effective in averting offender attack may nevertheless not have significant negative coefficients because they were not capable of driving down the risk of injury even further below the already extremely low risk prevailing among those who had the luxury of calling the police while the incident was going on.

The Table 5.4 estimates are therefore most appropriately viewed with a focus on the rankings and relative sizes of the SP coefficients. Most of the SP actions appear to have effects on post-SP injury that are not significantly different from calling the police. Both of the two SP actions with the largest negative coefficients are types of armed resistance, threat with a nongun weapon and threat with a gun, though neither action's coefficient is significantly different from zero, partly due to the rarity of these actions. The only option with a significant negative coefficient was "ran away, hid." On the other hand, five types of unarmed SP action had significant positive associations, indicating they were associated with higher post-SP injury than calling the police: attacking without a weapon, struggling with the offender, stalling or pretending to cooperate, arguing/reasoning/pleading, and screaming from pain or fear.

The meaning of the last association is ambiguous, for reasons discussed earlier. Leaving this one aside, two of the significantly less effective SP actions were forceful actions and the other two were nonforceful actions. None of the four forms of armed resistance were associated with significantly higher injury risk compared to calling the police. In sum, once SP-injury sequence is taken account of, there is no evidence indicating that either forceful resistance in general or armed resistance in particular is generally counterproductive or that it is less effective in avoiding injury than nonforceful options. Thus the findings contradict scholars who concluded that nonforceful resistance was better for avoiding injury than forceful resistance (e.g. Cook, 1986:412; Zimring and Zuehl, 1986:17-19; Block and Skogan, 1986; Marchbanks et al., 1990). These earlier conclusions were probably an artifact of the failure to address SP-injury sequence, since the analysts effectively treated injury preceding SP as if it could be a consequence of SP, and this flaw makes resistance look less effective than it really is.

Attending only to the sizes of the coefficients, both of the SP methods that appeared most effective in averting injury in all types of crimes were forms of armed resistance – threat with a

gun, and threat with a nongun weapon. In robberies, all of the five most effective SP actions were types of forceful resistance, and all of the four most effective were varieties of armed resistance. Among assaults, there was no clear pattern regarding types of SP that averted injury. In confrontational burglaries, five of the six most effective SP actions were forceful actions, and all four forms of armed resistance showed more success in averting injury than calling the police, though these differences were not significant. Finally, in sexual assaults, four of the six most effective SP actions were forceful actions, though again, post-SP injury in sexual assaults is so rare that even very large coefficients are not significantly different from zero.

Because the analyses reported in Table 5.4 excluded no-SP cases, which claimed 29 percent of the total sample, the sample sizes on which these analyses are based are substantially smaller than those reported in Table 5.3. This inflates standard errors and makes it even harder to achieve statistical significance for coefficients, especially those of the rarer defensive methods, because there is so little variation on these protection variables. As Table 5.1 indicated, few victims report using weapons for self-protection. Perhaps this reflects reality but it may also reflect an understandable reluctance to admit unlawful weapons possession to federal government interviewers in the context of a nonanonymous interview.

I feel that reporting large but nonsignificant coefficients is appropriate, in the spirit of exploratory findings. Just as qualitative research, based on case studies, life histories, or informal interviewing of small nonprobability samples of informants, has yielded valuable insights, findings based on small samples of crime victims reporting less common methods of self-protection likewise merit dissemination, as long as readers understand that the estimates could be a product of chance.

Regardless, the effect of limited variation on the armed resistance variables is that standard errors of their coefficients are so large that even the largest coefficients are nonsignificant. For example, the robbery model coefficient for "attack with gun" is enormous, but is based on just six sample cases of robbery victims taking this SP action, none of whom suffered post-SP injury (Table 5.1). Thus, this coefficient was not statistically significant. Among robberies, all of the four largest negative SP coefficients were linked with armed resistance, yet none were statistically significant. That is, the injury-preventing effects of armed resistance appear to be larger than all other protective actions, yet estimates of these effects are unstable and imprecise.

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I estimated variants of the models in Table 5.4 in which a single variable measured whether victims used any of the four types of armed resistance, and was used in place of the four separate armed resistance variables. Coefficients for this variable were still nonsignificant in all models (results not shown in tables). The estimate closest to significance was in the post-SP models for robbery incidents. The coefficient for the armed resistance variable was larger negative than the coefficient for any other protective measure, and equaled –1.893, implying that victims who used weapons to resist robbery have only 15.1% of the risk of subsequent injury prevailing among victims who called the police, other things being equal. But even this coefficient was significant at only the .076 level, 1-tailed.

Several types of unarmed resistance, some forceful and some nonforceful, are associated with significantly higher post-SP injury rates than calling the police: (1) physically attacking the offender, but without a weapon, (2) physically struggling, (3) stalling or pretending to cooperate, (4) arguing/reasoning/pleading, and (5) screaming from fear or pain. Once again, there is no pattern regarding the distinction between forceful vs. nonforceful actions, but all of these actions share something in common that could provoke offender attack: they all create problems for the criminal that could be solved by attacking the victim. When dealing with victims who attack or struggle with them, offenders can stop the victims by injuring them, and could even regard their own injury-inflicting actions as "defensive." Inflicting injury on the victim could likewise be an effective method for forcing victims who had been stalling or arguing to finally begin cooperating with the offender. And inflicting injury might be perceived as a way to silence victims screaming in response to their fear or previously inflicted injuries. Alternatively, screaming may simply anger offenders or panic them into thinking that it would lead to bystanders intervening or the police being summoned.

It should, however, be stressed that these are assessments of relative injury-producing effects and that the Table 5.1 figures indicates that in absolute terms, post-SP injury is extremely rare for all SP actions. Thus, even large relative differences in injury risk generally imply only small absolute differences.

Overall, it was impossible to draw strong conclusions about the weapon effect hypothesis and gun effect hypothesis because none of the findings were significant. Attending only to the signs and sizes of coefficient, I found weak and mixed support for the hypotheses. There was support for the two physical power hypotheses in robberies, confrontational burglaries, and

sexual assaults, where defensive gun use and other weapons use yield the largest injury-reducing effects. However, in assaults the physical power hypotheses, particularly the gun effect hypothesis, were not sustained because attacking with a gun was associated with a higher risk of post-injury, compared to calling the police.

Recall that the PAT can also explain why some *offenders* are more successful than others in their criminal attempt. For instance, applying the gun effect hypothesis to offenders, it can be hypothesized that armed criminals would be more likely to complete their crime because the gun substantially augments their physical power. The results partially supported this idea because offenders' guns significantly increased the probability of victim injury in sexual assaults and robberies. Likewise, offenders' weapons appeared to increase the risk of victim injury, especially in robberies. However, it was hard to draw strong conclusions about offenders' weapon effects because most coefficients were not statistically significant and some contradicted the expectation. For instance, offenders who used guns were less likely to injure victims, albeit nonsignificantly.

The results reported in Table 5.4 generally support the sexual advantage hypothesis, age advantage hypothesis, and numerical advantages hypothesis because the post-SP injury is more likely when offenders have such advantages, especially in assaults and sexual assaults. For instance, when offenders outnumbered victims, victims were more likely to be injured in all crimes. This was statistically significant in assaults and robberies. Likewise, the offender's sexual advantage was almost significantly positively associated with higher risk of victim injury in all incidents. It was negatively associated with injury only in robberies and confrontational burglaries where the victim's injury may not be regarded as the completion of crimes. Finally, the offender's age advantage is positively associated with higher risk of victim injury in most incidents, although all effects were not statistically significant. In sexual assaults, however, the age advantage of offenders was associated with lower risk of victim injury, contradicting the age advantage hypothesis.

In sum, it is difficult to find statistically significant effects of power advantages partly because post-injuries are rare and because I eliminated incidents that did not involve any self-protective action. Yet, attending to the sign of coefficient, the results generally support the hypotheses of the power advantage theory.

Serious Post-SP Injury

As was evident in Table 5.1, less than a quarter of the injuries inflicted in crimes are more serious than bruises or cuts. Yet since serious injury is probably what people fear most from criminal victimization, focusing on injury without respect to its seriousness fails to address what people care most about. Findings pertaining to the impact of victim actions on injury in general, most of which is no more serious than bruises and cuts, might not apply to SP effects on serious injury. For example, some forceful methods might be effective in avoiding <u>more</u> serious injury, but at the expense of suffering <u>less</u> serious injuries as a by-product of the defensive actions themselves, as when a victim cuts his hand when striking the offender or blocking a blow. Therefore I also assessed the effects of resistance on more serious injury. In these analyses, victims who suffered more serious injuries after taking protective actions were coded 2, and those who suffered exclusively minor injuries or no injuries after taking protective actions were both coded 1. As in the examination of all post-SP injury, this analysis was confined to victims who had taken some kind of protective action, since the concept of post-SP injury is not applicable to those who took no SP actions. The omitted SP action category was once again "called the police."

Victim SP actions are followed by serious injury in only 0.7% of confrontational crimes (Table 5.1, 'All Offenses' column, 'Any SP' row). Because serious post-SP injury is so extremely rare, there is virtually no variation on this dependent variable to explain. Combined with the rarity of some defensive actions, especially armed resistance, estimates of those actions' impact on serious injury are highly unstable, reflected in the low ratios of coefficients over standard errors shown in Table 5.5. These estimates are therefore presented in the spirit of exploratory findings and should be read in conjunction with Table 5.1 information on the frequency of each defensive action.

Even very large coefficients for protection variables were often not significant because of the action's rarity. For example, based on their very large negative coefficients, attacking or threatening the offender with a gun appears to be almost totally effective in avoiding serious injury, but the estimates of their effects are not significant because they were based on only 45 sample cases of attacking with a gun and 202 cases of threatening with a gun, in a sample where serious injury after defensive action was almost nonexistent. Indeed, the coefficients for attacking with a gun were nonsignificant even though not a single victim taking this action was

seriously injured after doing so. Similarly, even though <u>none</u> of the 38 victims in the sample who reported threatening the offender with a gun in a confrontational burglary suffered injury of any kind after taking this action, its coefficient in the serious post-SP injury model, though huge (-18.139), was still not statistically significant. And estimating effects of victim gun use in sexual assaults was impossible because there were no sample cases of sexual assault victims attacking their offender with a gun and only one case of a victim even threatening with a gun.

With these caveats in mind, most victim actions were not significantly different in their effectiveness in averting serious injury from calling the police, or at least the NCVS does not provide a sufficient basis for reliably estimating differences in their effects. All victim actions are associated with a near-zero probability of suffering serious post-SP injury, a conclusion foreshadowed by the Table 5.1 figures indicating that only 0.7 percent of victims using self-protective actions of any kind suffered any serious injury after doing so. Only three defensive actions were associated with significantly different risks of serious injury compared to calling the police, all associated with higher risk: attacking the criminal without a weapon, physically struggling with the offender, and screaming from pain or fear. These three actions are associated with fairly large <u>relative</u> differences in the risk of serious injury; for example, victims who screamed were 4.7 times more likely to later suffer serious injury than those who called the police. But even large relative differences in risk do not imply substantial absolute differences in risks, given that the overall risk of serious post-resistance injury among the reference category victims was a fifth of one percent (Table 5.1).

Since the effects of most SP actions are not statistically different from that of calling the police, it is difficult to discuss whether the findings support the hypotheses of the power advantage theory. Ignoring statistical significance, victims who attack with a gun experience a lower risk of serious post-SP injury in assaults. This was also true for other crime types. Thus, the finding that contradicts the gun effect hypothesis disappeared when serious injury, instead of any injury, was used as the dependent variable.

Further, the findings in Table 5.5 clearly supported the sexual advantage hypothesis, age advantage hypothesis, and numerical advantage hypothesis. All power advantage variables were significantly associated with higher risk of serious injury in all incidents, assaults, and confrontational burglaries. In assaults where victims' injury meant the completion of the crime, age advantage and numerical advantage of offenders seemed to significantly increase the risk of

the victim's serious injury. Taken together, although it was difficult to draw strong conclusions from the results, due to large standard errors in the serious injury models, the findings generally supported the hypotheses of the power advantage theory, particularly sexual advantage, age hypothesis, and numerical advantage hypothesis.

Note also that Table 5.5 shows that offenders' use of weaponry, including guns, knives and sharp objects, significantly increased the risk of victims' serious injury, though it was not significantly associated with a higher risk of any post-SP injury (Table 5.4). In many criminal incidents, minor injuries such as bruises and cuts may not be the goal of offenders, but a byproduct of failed criminal attempts (e.g., victims ducked the attack and consequently get a bruise). Thus, this finding was in accordance with the PAT that predicts that weapons substantially increase the physical power of both victims and offenders, and ultimately helps the possessors complete their intentions.

Comparing the Impact of SP with No SP

An alternative way to perform the post-SP injury analyses is to include "no-SP" cases, i.e. crimes in which the victim did not take any SP actions. I estimated models in which post-SP injury was coded 2 if (a) the victim took some SP action and was injured afterwards, or (b) took no SP and was injured. This variable was coded 1 if (a) the victim took SP action and was not injured, (b) took SP action and was injured, but before SP actions, or (c) took no SP action and was not injured. Cases in which the victim reported that SP actions and injury occurred simultaneously were treated as missing, since it was impossible to establish SP-injury sequence in these incidents.

Thus, in this alternative analysis, victims who took no SP actions but were injured were treated as valid cases and were coded the same as victims who took SP actions and were subsequently injured. It is reasonable to treat these two types of situations as similar if one takes seriously the possibility that nonresistance can provoke an offender into attacking, just as victim resistance might. Passivity can send the message that the offender is free to attack or steal with little risk or difficulty. All cases were included in the alternative analyses, and 'no-SP' was treated as the excluded SP category. Thus, coefficients for SP variables can be interpreted as a comparison between each SP action and taking no SP actions.

Table 5.6 reports results of these analyses. For readers' convenience, the Model 1 column displays the Table 5.6 'All Offenses' estimates obtained when no-SP incidents were excluded from the post-SP injury analysis. Model 2 estimates were those obtained when no-SP cases were included and those involving injury were coded the same as incidents in which an SP action was followed by injury. The SP coefficients in the Model 2 column of Table 5.6 are directly comparable with those in Table 5.3 because no-SP cases were included in the samples and no-SP is the omitted category in both sets of analyses. This comparison directly establishes the effects of taking account of the sequence of injury and SP actions, since this is the only difference between the Table 5.6 Model 2 analysis and the Table 5.3 'All Types of Crime' analysis. Without exception, every SP coefficient moved in a negative direction when sequence was taken into account (Table 5.6 vs. Table 5.3). This indicates that past research that failed to address SP-injury sequence consistently understated injury-preventing effects of victim resistance, or created a misleading impression of risk-elevating effects.

When no-SP cases are included, all but one of the SP actions have negative coefficients in models of both injury and serious injury (the exception is the ambiguous "screamed from pain or fear"). Thus, virtually any form of victim resistance, forceful or nonforceful, is associated with lower rates of post-SP injury than nonresistance. In Table 5.6, the appearance of support for the view that crime victims should refrain from resisting crime has essentially disappeared.

The finding is evidently in accordance with the psychological power hypothesis, which predicts that resisting victims experience less crime completion than non-resisting victims due to the psychological power or the willingness to defend oneself in a given criminal incident. Likewise, the findings in Table 5.6 support the gun effect hypothesis and the weapon effect hypothesis, which was clearer than in Table 5.4 and Table 5.5. In fact, two of the four most effective methods for avoiding injury were types of armed resistance, threatening with a gun and threatening with other weapons. Also, attacking with weapons was among the most efficient ways to reduce the risk of injury, slightly less effective than calling the police and running away. Perhaps running away should not really be considered resistance, because the victims simply avoided the confrontation. In addition, calling the police can be employed only when the circumstances are less serious, and therefore, the victims have the luxury to do so. Thus, the pure relative effect of armed resistance might be even stronger than it is implied by results in Table 5.6.

The Model 2 coding procedure, however, biases results against the no-SP option by effectively treating all cases in which victims did not resist but were injured as incidents in which nonresistance provoked offenders to attack and injure the victim. A final alternative analysis was based on the sample with no-SP cases included, but an opposite coding scheme. In Model 3, no-SP incidents in which the victim was injured were all coded as <u>not</u> injured after SP, i.e. were effectively all treated as if nonresistance <u>never</u> provoked offenders to attack and injure the victim. Not surprisingly, this procedure has the opposite effect on estimates, making most SP methods look more likely to result in injury than nonresistance. Since the Model 2 and Model 3 analyses are both based on extreme assumptions about the effects of nonresistance on injury, I prefer the estimates reported in Table 5.4, in which no-SP cases were simply excluded.

Exclusion of Fatal Incidents

The NCVS does not include crimes in which the victim was killed. Could including such cases alter the injury findings reported here? In one sense the answer is "no," since SP effects on injury, including both fatal and nonfatal injury, would not be changed by the inclusion of so few cases. In 2001, the U.S. experienced, based on NCVS estimates, at least 5,315,500 nonfatal violent crime incidents. Based on Uniform Crime Reports data, there were 15,980 fatal violent crime incidents, i.e. murders and nonnegligent manslaughters (U.S. Bureau of Justice Statistics, 2003; U.S. Federal Bureau of Investigation, 2002:65). This implies a ratio of 0.00306 fatal crimes per nonfatal crime. Thus, if fatal crimes could have been included in our sample of 27,595 nonfatal violent crimes, about 83 cases of fatal injury would also have been included, in addition to the 6,650 nonfatal injuries found in our sample (0.00306 x 6,650 = 83). Therefore the overall injury rate in our sample could have increased, from the 24.1 percent injury rate observed in our sample (Table 5.1, All Offenses, % Injured column) to no more than 24.3 percent ((6,650+83)/(27,595+83)=.243) had fatal crimes been included. Consequently, it is highly unlikely that our estimates of SP effects on injury could have been materially affected by the inclusion of homicides.

In another sense, data on fatal incidents might lead to different results if they were separately analyzed and SP effects on fatal injury were found to be significantly different from their effects on nonfatal injury. While separate analysis of SP in homicides could be worthwhile, there is currently no empirical evidence that victim SP actions increase the chances of the victim

being murdered, nor do I know of any sound theoretical reason why any SP actions would increase the risk of fatal injury but not the risk of nonfatal injury.

Are Effects of Protective Actions Contingent on Other Conditions?

It has been suggested that the effectiveness of different defensive actions may depend on a variety of conditions under which they are used. Researchers have explored whether effectiveness depends on the victim's sex, whether the offender is an intimate of the victim (Ruback and Ivie, 1988; Bachman et al., 2002), offense location (home/nonhome, indoor/outdoor), offender intoxication, and offender weapon possession (Ullman and Knight, 1993; Bachman and Carmody, 1994), with highly inconsistent results (Bachman et al., 2002: 140). Although there was no strong a priori rationale for testing any one interaction, we tested each of these possibilities by forming multiplicative interaction terms between each of the sixteen protection variables and each of the aforementioned variables on which protective effects supposedly depend, and including each set of 16 multiplicative terms (involving a single conditioning variable) in the property loss, post-SP injury and serious post-SP injury models. Thus, for example, when I tested whether SP actions interact with whether the crime occurred in the victim's home (ATHOME), the model included ATHOME x GUNATACK, ATHOME x GUNTHREAT, and so on, in addition to the rest of the variables shown in Tables 5.2-5.5. Or, when I tested for whether SP actions interact with whether the offender was armed (OFDWEAPON), the model included OFDWEAPON x GUNATACK, OFDWEAPON x GUNTHREAT, and so on, in addition to the rest of the variables shown in Tables 5.2-5.5.

In the post-SP injury models, the coefficients of these interaction terms were rarely significantly different from zero. No more than one out 16 interaction variables had a significant coefficient in any one model, and one would expect one coefficient to be "significant" at the .05 level solely as a result of chance, due to the large number of hypothesis tests. Further, the signs of the coefficients were as likely to be contrary to theoretical expectations as consistent with them. In particular, I found no support for the notion that forceful resistance increased injury risks for women when they faced adversaries who were intimates, as Bachman and her colleagues asserted (2002). On the whole, the effects of victim actions on injury do not appear to significantly vary depending on victim or offender sex, victim-offender relationship, crime location, victim's age, offender intoxication, number of offenders, or offender weapons.[3]

The only mildly distinct indications of meaningful interactions all pertained to property loss. Defensive actions appeared to be <u>more</u> effective in preventing property loss when the crime occurred in the victim's home or indoors, and <u>less</u> effective when the offender was armed, under the influence of alcohol or other drugs, or was an intimate of the victim. I could, of course, have dredged the data for evidence of 3-way and even 4-way interactions (e.g., SP action by victim-offender relationship by sex by crime type) as well, but there is no strong theoretical rationale for examining any particular higher order interactions. And examining tens of thousands of possible interactions could serve no useful purpose since large numbers of seemingly "significant" associations would inevitably be generated by chance, due to the enormous number of hypothesis tests (see Selvin and Stuart, 1966 for a classic critique of data dredging and ex post facto hypothesis testing).

Summary

This analysis aims to reveal the effect of victim self-protection on the outcomes of criminal confrontations. In doing so, it also serves as an empirical test of six hypotheses of the power advantage theory including: (1) psychological power hypothesis, (2) weapon effect hypothesis, (3) gun effects hypothesis, (4) sexual advantage hypothesis, (5) age advantage hypothesis, and (6) numerical hypothesis. The analysis showed that victim self-protections were generally associated with lower risk of injury and property loss in most crimes and therefore supported the hypotheses of the PAT. For instance, victim resistance reduced the probability of the crime completion both in property crimes and violent crimes compared to nonresistance; defensive gun use and other weapon use were generally the most effective methods; offenders' sexual advantage, age advantage, and numerical advantages increased the risk of property loss and injury. Support for the hypotheses of the PAT was especially apparent in property crimes with property loss as dependent variables and in violent crimes with serious injury as dependent variables.

Although I controlled for many circumstance variables, it was impossible to isolate the net effect of each SP actions because the NCVS does not provide all circumstantial information. Yet, it is probable that victims who took some courses of action may have been able to do so only because they face more favorable circumstance, while others may have taken certain actions only because they were compelled to do so by very desperate circumstances. Thus, in order to

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reveal the precise effect of each SP action, it is necessary to find out the correlates of the actions. The following section addresses the issue.

Findings of Analysis for the Determinants of Victim Self-Protection

The Circumstances in Which Different SP Actions Were Taken

Table 5.7 presents descriptive information about the crimes in which various types of protective action were taken. The results indicate that, contrary to the speculations of Reiss and Roth (1993), victims who used weapons, especially those who used guns, faced much more adverse circumstances than other victims. Although weapon users were more likely to be on home territory, they were also more likely to be outnumbered by the offenders, to face offenders in age groups that are generally more physically vigorous than the age group to which the victim belonged, to confront offenders with knives, and to face criminals who themselves possessed guns. And perhaps most important of all, victims who used weapons to attack their adversaries were more likely to have already suffered an injury before resisting: 13.3 percent of victims who attacked with a gun and 19.1 percent of those who attacked with some other weapon were already injured before doing so, compared to 7.9 percent of victims using all SP methods combined. Thus, victims who used armed resistance experienced lower risks of property loss or serious injury despite facing circumstances that were otherwise more disadvantageous. If there are still other such adverse circumstances that are not measured in the NCVS and that we therefore could not control, this suggests that our analyses may understate the injury-reducing effects of armed resistance.

On the other hand, victims also often resorted to the least forceful protective measures when circumstances were very adverse. Victims were more likely to cooperate or run when they faced offenders with guns. One interpretation that ties both patterns together is that victims in the most adverse situations may be forced to choose either extremely forceful responses or submission to offenders because they believe that less forceful actions would be inadequate.

These simple crosstabulations, however, cannot tell us whether victims really choose depending upon the seriousness of the circumstances. To address these issues, analyses using multivariate controls are needed. Yet, there is also a problem in the multivariate analysis that may not be solvable in the current study. As discussed earlier, certain SP actions are rarely

reported even in the large survey data such as NCVS in part because victims are less willing to reveal certain SP actions that may be illegal. The underreporting of the SP actions creates statistical problems, since it means that there is very little variation on dependent variables measuring those SP actions. It is harder to predict very rare outcomes, and estimates of the impact of a given variable will necessarily be unstable even in fairly large samples because they are based on so few cases with the outcome of interest. With these caveats in mind, the following presents the results of multivariate analysis.

Any Self-Protection vs. No Self-Protection

The findings in Table 5.8 indicate that victims were more likely to take SP actions to a criminal attempt when they experienced injury, when the incident occurred near home, when others were present, when offenders possessed a knife or sharp object, and when offenders seemed to be under the influence of alcohol or drugs. This shows that victims were more likely to take action when the situation was more serious and adverse. On the other hand, victims were more likely to be passive if they were old, faced offenders with a gun, or the offenders were their sexual intimates. It seemed that they chose not to resist when the situations was extremely hard to handle.

Table 5.8 also denotes that young people and males were more likely to use any types of self-protective actions in a given criminal attempt. On the other hand, blacks were more likely than whites to do so only in assaults and sexual assaults and were less likely, albeit not significantly, to respond in robberies and confrontational burglaries. When it comes to geographic effect, incidents which occurred in the South were not associated with higher rates of self-protection.

Forceful Self-Protection vs. Non-Forceful Self-Protection

The sixteen types of self-protective actions included in the NCVS are extremely diverse. For instance, some actions are violent actions while others are very passive. Consequently we would not expect all of them to reflect the same characteristics of individuals or circumstances of crimes. Thus, it is useful to examine subtypes of SP. Table 5.9 answers the question, "among those who decide to use some type of self-protection, who employs violent or forceful self-protective actions and under what conditions?" The findings of the table show that victims were

more likely to employ forceful SP actions when the situation was serious. For instance, they used such actions when they experienced injury, when the offender had a knife, and when the offender seemed to be under influence of controlled substances. On the other hand, victims were less likely to use forceful SP actions when the situations were very adverse. They were reluctant to use such actions when they were females, and when offenders had a gun and were males. Victims also refrained from using violent actions when they owned a house, were married, had a higher level of education and when offenders were acquaintances at work. These patterns may indicate that people who have something to lose are less likely to respond aggressively to criminal attempts.

Perhaps the most important finding of the analysis has to do with whether certain individuals are prone to violent self-protective actions. The findings of Table 5.9 indicate young people and males were significantly more likely to use forceful SP actions in most criminal incidents. Blacks, however, were more likely that whites to use forceful SP actions only in assaults. Attending only to the sign of coefficients, they were actually less likely to use forceful actions. Thus, my predictions derived from violent subculture theory (Wolfgang and Ferracuti, 1967) were only partially supported.

Again, incidents that occurred in the South were not associated with the use of violent SP actions. It was rather the West incidents that were associated with a higher use of forceful SP actions, especially in robberies. Thus, the Southern violent subculture hypothesis (Gastil, 1971; Hackney, 1969) did not seem sustained as regards forceful actions by crime victims.

Weapon Use

While forceful self-protective actions include both attacking with weapons and without weapons, the two methods may be qualitatively different. Armed resistance can be far more consequential than unarmed resistance, given that even physically weak people can inflict serious injury or even death if using a weapon. Consequently, I investigated whether correlates of weapon use might differ from other SP actions. Note that weapon use in sexual assaults was so rare that I could not even estimate a logistic model, even with a decade's worth of NCVS data.

As expected, the findings shown in Table 5.10 indicate that victims used weapons when the circumstances were very serious, more serious than in the model of forceful SP. Victims were more likely to resort to weapons when offenders had a gun or a knife, or when the offender

was under the influence of a controlled substance. They were also more likely to do so when the offender was black, or when the incidents occurred at home or near the person's home. Recall that victims were <u>less</u> likely to use forceful SP actions when offenders had possession of a gun. These circumstances probably reflect the worse-scenario; the kind of scenario that people really want to avoid during criminal incidents. The findings shown on Table 5.10 indicated that in such cases, people might be forced to use weapons for self-protection regardless of whether they embrace a violent subculture or not.

Table 5.10 reveals that victim were not more likely to use weapons when they experienced injury, but injured victims were significantly more inclined to take SP actions of some kind and more likely to take forceful SP actions (Table 5.8 and Table 5.9). The difference is perhaps attributable to the fact that injuries have both a "motivating effect" and a "disabling effect." That is, while injury generally motivates victims to resist criminal attacks, it simultaneously reduces the victim's ability to react in certain ways. Thus, injury may not increase armed resistance because it makes it difficult or impossible the victim to get to a weapon and deploy it effectively.

Table 5.10 also shows that predictors of weapons SP actions differed from those of forceful SP actions. While males were more likely than females to use weapons for self-protection, young people and blacks did not show such a tendency. In fact, they were often less likely to use weapons, although not significantly so. Hence, the violent subculture hypothesis did not seem supported, especially when violent actions were defined to refer only to weapon use. On the other hand, the coefficient of South variable changed the sign, indicating that criminal incidents occurred in the South were now positively associated with weapon use. Although regional effects were not significant in most crimes, it almost reached statistical significance in confrontational burglaries (t=1.95). Thus, there was a weak support for the Southern violent hypothesis when violence was defined to include only weapon use, compared to when it include any forceful actions.

Defensive Gun Use

Defensive gun use is unique in that it requires possessing a specific object-a firearm. Guns cost a substantial amount of money to purchase, a license to carry on in public, and effective use may require at least some basic training, in contrast to the use of other types of

weapons. Thus, it can be hypothesized that defensive gun use and other weapon use might be associated with different variables.

The findings of Table 5.11 showed, however, that correlates of the use of defensive guns and the use of other weapons were mostly similar. While males were more likely than females to use a gun for self-protection, young people and blacks were not more likely to do so than older people or whites. In fact, blacks were less likely to employ defensive gun use, contradicting the predictions of the violent subculture hypothesis. Also, the Southern violent subculture hypothesis was not supported in terms of gun use in criminal incidents. Although Southerners are more likely to resist with a gun, none of the association were significant. The findings pertaining to the subculture of violence perspective suggest it is applicable only to aggressive violence, and that defensive violence is genuinely different from aggressive violence.

Table 5.11 also indicates that victims employed a gun when the circumstance was very serious. For instance, they were more likely to use a gun when offenders had a gun or a knife, when offenders were under influence of a controlled substance. Victim gun use was also more common when offenders were black, and when the incident occurred at home or near the home. That is, the correlates of weapon use and gun use were almost identical.

Note that the patterns of defensive gun uses mirrored the availability of guns. Gary Kleck (1991: 70-71) has noted that "males are far more likely to personally own a gun than females," "gun ownership is higher among middle-aged people than in other age groups," "whites are much more likely to own guns or handguns than blacks," in part because most black households are located in the city, and gun are more common in rural areas. Also, he pointed out that "gun ownership is highest in the South." (Kleck, 1991: 71). In accordance with the ownership patterns, defensive gun use was more likely among white males, and more likely in the South-- although not significantly--, while it was less likely among young people and urban people. In the same vein, defensive gun use was significantly more likely to be used by people in the armed forces or who work as police officers, who have easier access to guns. In sum, victims use guns for self-protection when the circumstances of the incidents are very adverse and when a gun is available.

Summary

This analysis explored the correlates of self-protective actions and answers the question

'who is likely to resist and under what circumstances?' It was found that victims used forceful self-protection, especially weapon use and defensive gun use, in the most adverse circumstances such as when they faced armed offenders. The findings implied that actual effects of weapon use and gun use may be stronger than they appeared to be in the previous section, and therefore indirectly support the weapon effect hypothesis and gun effects hypothesis.

Theoretically, the findings revealed that a violent subculture hypothesis (Wolfgang and Ferracuti, 1967) and the associated "Southern violence" hypothesis (Hackney, 1969; Gastil, 1971) were not supported. While males were more likely to use all types of forceful SP actions, blacks and young were often less likely to use guns and other weapons. Likewise, incidents which occurred in the South were not positively associated with forceful SP actions, except for weapon uses in burglaries. Again, these findings suggest that violent subculture hypotheses may be applicable only to aggressive violence, and not to defensive violence, and that defensive violence is qualitatively different from aggressive violence.

Studying the Gap between Perceived and Actual Effects of SP actions

Table 5.12 shows how often NCVS crime victims reported using the various types of self-protective actions and the share of victims using each method who were injured. The purpose of the table is to reveal the possible inconsistencies between victims' perception of the effectiveness of their SP actions and the actual outcomes of the crimes. The actual outcome of crimes was measured by whether injury was inflicted after victim used an SP action, as described earlier (Ch.4). Only 2.8 percent of the incidents involved a victims being injured after resisting the offender. The NCVS also measures the victims' own evaluations of the effect of SP actions on the injury outcomes. The respondents who answered "yes" to the question "Did any of your actions make the situation worse in any way?" were also asked whether their SP actions "led to injury or greater injury." Respondents said "yes" only in 1.4 percent of incidents (BJS, 2003: 7). On the other hand, victims who answered "yes" to the question, "Did your actions help you avoid injury, protect your property, escape from the offender?" were also asked whether their actions "helped avoid injury or greater injury to respondent," "scared or chased offender off," or "helped you (respondent) get away from offender," actions that can be considered as having an injury-reducing effect. Among respondents who thought their actions were helpful, 60.2 percent

thought their actions had one of these injury-reducing effects. Thus, victims' subjective judgments were more favorable than actual rates of post-SP injury might suggest because the perceived post-SP injury rate (1.4 %) was only half of the actual post-SP injury rate (2.8%).

Further, I performed a Pearson correlation test to investigate a bivariate correlation between actual post-SP injury and perceived harmfulness of SP actions, across types of SP actions, using the values listed on the second and third columns. The association was strongly positive (r=.658) and statistically significant at 0.01 level. In addition, I examined whether the rank order of these measures were correlated, utilizing Spearman's rho test. The test revealed that they were even more strongly positively associated (rho=.843) and that the coefficient was statistically significant at 0.01 level. Thus, although victims' own evaluations of the injury-preventing effects of SP actions were substantially more favorable than actual results measured by post injury, the methods were nevertheless closely related in the aggregate. That is, the SP methods perceived by victims as the most beneficial or least harmful were also generally the ones least likely to actually be followed by injury to the victim.

In order to find out which SP action involves the most significant gap between victims' own evaluations and actual outcomes, I computed, for each SP action, the percent of post injured victims who did not think SP actions led to injury or greater injury. I called this "positive mismatch" and its frequency is shown in the fifth column. No specific pattern of mismatch was found. For instance, forceful SP actions did not involve more mismatch than nonforceful actions. The most highly overrated SP actions include attacking and threatening with non-gun weapons, chasing offenders, calling the police, and screaming because the positive mismatch rate involving these actions were 100 percent. That is, for such incidents, victims perceived none of post-SP injuries actions that they suffered were caused by SP actions. One should be careful in interpreting this finding because these incidents involving this extremely high positive mismatch rate were based on no more than six post-SP injury cases. Other SP actions involving larger number of post-injury incidents were less overestimated. The degree of overrating was lower for threatening without weapons (50.0%), attacking without weapons (75.8%), threatening with a gun (75.0%), and arguing/reasoning/pleading (77.8%).

The sixth column of Table 5.12 showed the percent of victims who did not experience post injury but nevertheless reported SP actions led to injury or greater injury, or percent of negative mismatch. The negative mismatch rate was rare with an average of 0.3 percent. This not

very surprising finding means that implied that victims almost never report that their SP actions led to injury when they did not actually experienced injury after using SP. Since these values were all so small, it is meaningless to discuss which SP actions involve more negative mismatch.

Why did victims overestimate the value of SP actions? It might reflect the nature of some human beings who do not want to admit their own limitations. It is well known that politicians and bureaucrats tend to exaggerate the accomplishment of their acts and underestimate or even hide their mistakes. Likewise, individuals might be prone to overrate the success of their own behaviors, including self-protective actions, perhaps because they do not like to admit their failure to others.

Alternatively, the supposed "overestimation" might reflect actual effectiveness of SP actions. Consider that even if SP actions preceded an injury (Post Injury), it does not necessary mean that SP action <u>caused</u> the injury. Offenders may inflict harm regardless of the victims' resistance. For instance, it is plausible that domestic violence offenders are so determined to hurt victims that they proceed to hit them even after the victims fought back. Moreover, even SP actions followed by injury may have actually reduced injury, in the sense that offenders did less serious harm to the victim than otherwise would have inflicted. Thus, using the post-SP injury as an indication of the ineffectiveness of SP actions might lead to underestimating the real effectiveness of the actions. The post-SP injury percentage is properly regarded as an upper on the share of crimes in which protective actions could have provoked offenders into attacking. After all, victims who experienced the crime may know the full circumstances of an incident better than researchers who must rely on limited NCVS data.

There are reasons to believe that victims' own evaluations are generally accurate in terms of judging the effect of SP actions. The sixth column of Table 5.12 showed that victims very rarely (1 in 333) erroneously reported that SP actions led to injury when they did not actually experience post injury. Unlike positive mismatch, this negative mismatch would clearly imply that victims were illogical because at one point they did not reported injury occurred after using SP actions (no post-SP injury) but later they perceived that SP led to injury or greater injury. The extremely low rate of this mistake implies that victims were fairly consistent sources of information. Further, the high level of positive mismatch rates where victims were actually injured after SP but did not think SP led to injury or greater injury does not necessarily indicate that victims made a logical mistake, as discussed above. But to the extent that victims do

misperceive SP effectiveness, it is almost always in the direction of overestimating it. Moreover, the bivariate correlation tests confirmed that actual effects of SP measured by post injury and perceived effects of SP were significantly positively correlated across SP actions, implying that the victims' judgments the aggregate are in accordance with reality.

Taken together, there were several reasons to believe that victims' evaluation of SP actions on injury might be more accurate than the measure of whether SP preceded injury. However, it is premature to conclude that victims' judgment is the best measure of the effect of SP on injury because as seen in the sixth column they did occasionally make logically contradictory reports. More importantly, it is impossible to confidently assess the degree to which victims' evaluation of their own SP actions reflect the tendency of human beings who view their actions in a favorable light.

Summary

The purpose of this analysis was to reveal whether there is a gap between actual effectiveness and perceived effectiveness of SP actions and which SP actions involve the largest gap. It was found that victims' perceptions of the efficacy of SP were much more favorable than implied by rates of actual post-SP injury. However, bivariate tests revealed that the two measures were highly significantly correlated, implying that victims' perception did not include random miscalculations. Further, the gap was not particularly strong in certain SP actions. It was speculated that the seemingly overestimation of SP effect might in fact reflect the reality of SP actions rather than being a perceptual mistake. The fact that SP preceded injury does not necessarily mean that SP caused injury. Until other information such as offenders' intentions become available, it will be impossible to reveal how much of the gap was attributable to victims' misconception and to actual reality. Yet, given the results and logical reasoning, it is plausible that the actual effectiveness of SP actions on injury outcomes is stronger than what was shown on Tables 5.1 to 5.5.

CHAPTER SIX
CONCLUSIONS AND DISCUSSION

Before presenting the interpretations and implications of the current study, a brief summary and background of the study will be offered. The dissertation was written with a concern for potential crime victims and it aims to answer what *victims* want to know the most, "What should we do to reduce injury and property loss during criminal incidents?" or "Are some types of self-protective actions more effective than others?"

Upon reviewing prior research, I found that past research has consistently supported the view that a wide variety of defensive actions reduce the risk of: (1) a rape attempt being completed (Ullman, 1997), (2) a robbery attempt being completed --that is, the robber escaping with the victim's property (Kleck and Delone, 1993), or (3) a burglary attempt being completed (Cook, 1986).

Yet, there has been skeptics who have argued that the avoidance of crime completion might come "at the price of great injury for the victim," since victim resistance would incite offenders into inflicting harm (Bachman et al., 2002: 138). Supporters of the "escalation hypothesis" are particularly concerned that physical or forceful SP would increase the risk, while non-forceful might reduce the risk (Skogan and Block, 1983; Bachman and Carmody, 1994).

On the other hand, supporters of the "protection hypothesis" argued that any type of victim resistance might decrease injury because it could physically block or psychologically deter offenders from crimes (e.g., Brownmiller, 1975; Kleck and Sayles, 1990; Kleck and Delone, 1993; Ullman, 1997). They found that both physical and non-physical SP reduce injuries (Kleck and Delone, 1993, Kleck, 1988; Ziegenhagen and Brosnan, 1985).

Such confusion was attributable to two major factors: questionable research methods and lack of theoretical guidance. With a few exceptions most prior research suffers serious methodological problems, which includes: (1) nonprobability sampling, (2) failure to establish the temporal sequence of injury and SP actions, (3) the practice of grouping together many

different types of SP action into just two or three very heterogeneous categories, (4) inadequate model specification, and (5) the use of less sophisticated statistical techniques. A careful review revealed that a few studies that controlled for temporal sequence and that used detailed typologies of SP actions were more likely to find that SP actions, both forceful and nonforceful, were associated with lower risk of injuries and crime completions.

More fundamentally, none of the current theories of victimization, including routine activity theory (Cohen and Felson, 1979) and lifestyle theory (Hindelang, Gottfredson, Garofalo, 1978) could guide the victim resistance research because they were developed to explain why some people are more likely to become crime victims than others, not to account for the results of victimization incidents. It was also established that the theories were of limited value because they only explained "predatory crime".

It was in this light that I introduced a new theory, the *power advantage theory*, designed to explain the outcomes of criminal confrontation, using the insights of various previous theories. In essence, the power advantage theory holds that the completion of a criminal attempt requires three elements: (1) motivated offenders, (2) contact between offenders and victims, and (3) power advantage of offenders over victims. Victimization is completed only when motivated offenders have contact with victims <u>and</u> possess physical or psychological power advantage over the victims. Thus, the theory is well-suited to explain the effects of self-protection on the outcomes of violent crime incidents, during which SP strategies reflect the victims' different levels of power, mainly physical and psychological power. For instance, the theory predicts that stronger forms of self-protection would be more effective than weaker ones in avoiding crime completion, which contradicts the escalation hypothesis.

Six hypotheses were derived from the power advantage theory. They were then tested using methods that reduced the aforementioned flaws of victim resistance research. The results of the hypothesis tests are summarized here:

1. The psychological power hypothesis is unambiguously supported in all crimes. Resisting victims experience less crime completion than non-resisting victims.
2. The weapon effects hypothesis is partially supported. Victim weapon use is the most effective method to prevent property loss. Yet, its effect on injury and serious injury was not significantly different from that of calling the police in part because injury

and serious injury following weapon use were so rare. When compared to nonresistance, however, weapon use was one of the most effective tactics for preventing injury. Moreover, circumstances of weapon use were more adverse than that of other SP actions, including calling the police. This suggests that the net effect of victim weapon use is probably better than it looks.

3. The gun effects hypothesis is partially supported. Gun use was one of the most effective methods for preventing property loss. Yet, the effect of defensive gun use on injury and serious injury was not significantly different from that of calling the police. However, when compared to nonresistance, defensive gun use, especially threat with a gun, was one of the most effective tactics for preventing injury. Moreover, the circumstances of defensive gun use were much more adverse than the circumstances of other SP actions including calling the police. This suggests that the net effect of gun use on injury may be stronger than any other tactics.

4. The sexual advantage hypothesis is unambiguously supported. Criminal incidents involving female victims and male offenders are significantly more likely to result in victim's property loss and serious injury than those involving female victims and female offenders, or male victims and female offenders.

5. The age advantage hypothesis is unambiguously supported. Criminal incidents involving offenders in the prime age range (15-29) and victims who are out of the age range are significantly more likely to result in property loss or serious injury to the victim.

6. The numerical advantage hypothesis is unambiguously supported. Criminal incidents involving more offenders than victims are significantly more likely to result in property loss or injury to the victim.

What Should Criminologists Suggest to Crime Victims?

All evidence is flawed, and there will always be more evidence developed by later research. Thus one can always cite these facts to justify refraining from drawing any firm conclusions from research, and issue the standard call for more research. While more research is always good, from the standpoint of those who need information to make real-world choices in

the near term, this is not a helpful position for scholars to adopt. I believe that as long as some sound research has been conducted, scholars should draw conclusions, accompanied by appropriate caveats about the limits of the data, based on the best evidence available at the time. This seems reasonable if for no other reason than that this is the only course scholars will ever be able to follow, regardless of how much more research is done or how high its quality. Evidence will never be either perfect or complete, so conclusions based on imperfect and incomplete information are the only kinds of conclusions that can ever be drawn.

One might take the position that offering advice to prospective victims is risky, since the advice might prove ill-founded, and that refraining from offering advice is therefore the more prudent course of action. Refraining from offering advice, however, can also have consequences. Failing to provide advice that, if followed, would have helped save a life can cost a life. Likewise, failing to offer advice that would have blocked a rape, prevented crippling injury, or otherwise averted harm can passively contribute to those harms coming to pass. Declining to make recommendations may seem like a course that entails less responsibility, but this impression is illusory, since choosing to not act can have consequences as serious as choosing to act. A wealth of evidence indicates that nonresistance is not always the safest course of action for crime victims, implying that some prospective victims who continue believing that nonresistance is the safest course will be hurt because no one did anything to correct their misapprehensions.

It is in this light that I offer tentative advice to prospective victims. While there are exceptional situations, victim resistance is usually either successful or inconsequential, and on the rare occasions that it is harmful, it is rarely seriously harmful. Therefore, unless there are circumstances that clearly indicate resistance will lead to significant harm, the evidence reported in this dissertation indicates that some form of resistance should be the path generally taken. This does not mean resistance always works, or that it can, by itself, can make victims completely safe, since violent crime is dangerous for reasons having nothing to do with victim actions. Rather, it means that, on net, resistance will generally either make things better for the victim (e.g., less chance of rape completion or property loss) than they would have been without resistance, or do no harm.

Which particular victim actions produce the best results will depend on the resources and options available to the victim. Many victim actions are impossible in a given crime incident,

which undoubtedly explains why some kinds of victims do not take certain actions in some crime circumstances. Given the generally positive or neutral effects of most real-world acts of resistance, despite the dangers that some forms of resistance hypothetically might have in some situations, victims evidently rarely choose counterproductive courses of action. The actions that they in fact do choose are rarely harmful and almost never seriously harmful.

Nearly all forms of resistance help avert property loss, and past research indicates most forms of resistance also help rape victims avoid rape completion. Regarding impact on injury, some past research appeared to indicate a pattern whereby nonforceful resistance was more effective than forceful resistance, and the latter was even counterproductive, elevating risk of injury. Once one takes account of the sequence of injury and SP, however, no such pattern is evident. Various kinds of forceful victim protective behavior, such as threatening the offender with a gun or other weapon, show the strongest negative coefficients, though none of these are significant. Also, resistance with a gun appears to be more effective in preventing serious injury than any other victim actions, though this finding is not statistically significant due to the small number of reported gun uses. On the other hand, the most of the SP tactics that appear to have higher risks than calling the police are nonforceful tactics: stalling, arguing, and screaming from pain or fear (though the later finding may reflect an effect of injury rather than a cause). A conservative interpretation would be that armed and other forceful resistance does not appear to increase the victim's risk of injury over that prevailing among nonresisting victims. Yet, considering that guns tend to be used in the most adverse circumstances, and that they were significantly more effective when compared to nonresistance, a less conservative interpretation would be that armed resistance generally does not increase the risks that were already dangerous, but that it probably substantially reduced the risk.

For crime victims, it is also very important to note that while some forms of resistance, mostly nonforceful, appear to increase the risk of injury, the injuries that result are almost always no more serious than bruises and cuts. And still other victim actions have no significant effect on injury. These relative differences in impact, however, are less importance than the more general fact that serious injury almost never follows resistance, of any kind, in any type of crime. That is, resistance per se appears to be effective in averting further significant harm, or at worst benign in its effects, arguably making the question of which particular varieties of resistance have relatively stronger benefits a rather secondary issue.

For some, "almost never" is not a good enough assurance that serious harm will not befall a resisting victim. The NCVS cannot detect incidents in which victim actions lead to their death. It could be argued that if resistance leads to death in even a few crimes, then resistance is tragically foolish behavior even if it often prevents rape completion, nonfatal injury or property loss. This argument, however, is strictly conjectural - there is no sound empirical evidence that resistance does in fact provoke fatal attacks, and the evidence presented here indicates that resistance almost never provokes attacks resulting in serious, though nonfatal, injury. The argument is also unrealistically one-sided, since it ignores the possibility that resistance can save lives. Invoking the value of human lives does not necessarily favor those who counsel nonresistance or who decline to offer advice, any more than it favors those who counsel resistance.

It also seems unlikely that a given form of victim resistance, such as resistance with a gun, would have no impact on <u>serious</u> injury (as was found in the present research) yet increase the risk of <u>fatal</u> injury. One might nevertheless speculate that offenders confronted with gun-wielding victims might believe that nothing short of killing the victim would insure their own safety, resulting in killings of armed victims but few nonfatal injuries. Even so, there should be at least a few offenders in this situation who would be satisfied with inflicting incapacitating yet nonfatal injury, in which case I should have found an effect of victim gun use on serious nonfatal injury. I did not. In any case, I know of no empirical evidence that any significant number of victims have been killed after using weapons in self-defense.

I can only know what has happened in past instances of victim resistance. I cannot know for certain the consequences of future victims behaving in ways that are very different from the ways victims have acted in the past. It is possible that a given form of victim resistance is already being used by crime victims in all the circumstances in which it is effective and safe to do so, and that extending SP actions to different sets of circumstances would result in harmful outcomes more often than have occurred in the past. My tests of interactions suggest that various modes of resistance do not vary significantly in their effectiveness across crime circumstances, insofar as I am able to measure circumstances using NCVS data. While this tends to undercut the hypothesis that SP actions would be less effective were they adopted in circumstances different from those prevailing in the past, such evidence cannot definitively rule out any hypothesis concerning SP actions taken under conditions substantially different from

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those of the past.

Future research might bring better evidence that contradicts these conclusions, but at present the best available evidence, derived from the largest, most representative sample of crime incidents in existence, indicates that victim resistance to crimes is generally a wise course of action.

Human Society and the Order of Force

Why are criminologists so skeptical about the effect of victim resistance? Perhaps, it is because most criminologists have a "kind bias" or "humanistic tradition" in favor of non-forceful means of social control such as values and consensus (Goode, 1972: 509). A benign view of human society is that it is ruled by consensus and by law. Certainly, the perspective of criminologists in this respect is no exception. Only a few criminologists have viewed victim self-protection as a form of social control that helps victims control potential offenders (Black, 1980; Kleck, 1988; McDowall and Loftin, 1983; Smith and Uchida, 1988; Tewksbury and Mustaine, 2003).

In contrast, most criminals and victims know from their experiences that human society is not so rosy. Rather, they know that society is "in many settings, to some degree, nearly everywhere" controlled by private use of physical force because other forms of social control are not always adequate to elicit what individuals want from other individuals (Black, 1980: 194). In fact, the NCVS data showed that each year millions of forceful criminal activities are exercised by individuals, followed by millions of violent responses to control such criminal attempts, not to mention numerous forceful actions employed by companies and the State (Reiman, 1997).

More important, victim resistance is rarely acknowledged as a major mechanism of social control because doing so results in politically unacceptable policy implications that some believe could promote physical violence. For instance, while researchers have showed that Americans use guns more than two million times a year to defend themselves (Kleck and Gertz, 1998), critics of defensive gun use have argued that gun use does not decrease crime, but that it rather promotes vigilantism (McDowall and Loftin, 1983). In contrast, routine activity theory (Cohen and Felson, 1979) and lifestyle theory (Hindelang, Gottfredson, Garofalo, 1978) have been

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popular with criminologists and law enforcement in part because they imply politically attractive policy. It rarely offends authority to argue that prevention of crime requires an increase in the capacity of "guardians" including police officers or to recommend placing limits in the convergences of victims and offenders by advising victims not to walk alone at night.

Theories have implications and consequences, and popular theories substantially affect the lives of individuals (Lilly, Cullen and Ball, 1999). Close examination of the routine activity theory reveals that it discourages the mobility and independence of victims for the sake of protecting them. In fact, the theory basically repeats the argument of conventional authority- that women should limit their mobility, depend upon men, or cooperate with the offender in order to prevent victimization. Surely feminist scholars do not agree with this limiting point of view, nor do I.

Some versions of routine activity theory seem to implicitly assume that victims are weak and helpless, such as women facing male offenders. Thus, when there is a convergence of offenders and victims, crime would probably be completed unless there is a capable other. This is an excessively pessimistic point of view. Many individuals have no choice but to work at night, live in crime-ridden neighborhoods, go to dangerous schools, or rely on public transportation. The theory suggests that unless there is a guardian, such individuals should limit the scope of their lives and their independence. The current study, however, clearly shows that many victims can and do effectively protect themselves during criminal incidents. In fact, feminists have long argued that women should fight back or actively resist offenders rather than depend on others because doing so not only prevents victimization but also promotes mobility and women's independence (Brownmiller, 1975; Bart and O'Brien, 1985; Searles and Berger, 1987).

In this light, the power advantage theory is better than conventional victimology theories. It explains how the fate of criminal events varies significantly depending upon the relative power of individuals. Furthermore, it leads to more realistic and desirable implications. Since the theory suggests that the victims' own willingness to resist and physical power are the keys to preventing crime completion in criminal incidents, e*mpowering victims* is recommended rather than having them rely on capable guardians and limited autonomy. This argument is not a new idea at all. Numerous feminists have maintained that the best tactic of crime prevention is self-defense (Bart and O'Brien, 1985; Searles and Berger, 1987). This is not to say that all

individuals should defend themselves using forceful means. Obviously, some of us do not possess the physical and psychological power that matches our offenders' power. Thus, the PAT makes it clear that requesting help from others is a form of self-protection which often results in favorable consequences. However, it should be emphasized that even asking for help requires an individual's own decision to ask for help. Thus, the empowerment of victims is still an important condition for crime prevention.

Individuals live with other individuals. They depend on one another, help one another, and unfortunately fight one another. It would be good to have an impartial arbitrator for every dispute. Yet, individuals sometimes must rely on themselves because help is not always provided by or received from others. Moreover, relying on capable guardians can be a very dangerous thing. The ubiquitous presence of capable others could imply that individuals would always be under the constant surveillance of others. It is perhaps not a entirely coincidence that people have became increasingly surveilled by omnipresent cameras in shopping malls, schools, and even on the street since the emergence of routine activity theory.

Table 3.1. Estimate Results for the Victim Self-Protection and Rape Completion

Type of Self Protection*	N	Sign and Statistical Significance of Findings			
		Significant Positive (%)	Non sig. Positive (%)	Non sig. Negative (%)	Significant Negative (%)
Physical or Forceful	9	11.1	22.2	33.3	33.3
Weapon SP (e.g., defensive gun use)	2	-	-	-	100.0
Forceful and Physical (e.g., fight back)	7	-	14.3	28.6	57.1
Non-forceful Physical (e.g., run away)	6	-	-	50.0	50.0
Verbal (or non forceful)	7	-	14.3	28.6	57.1
Forceful Verbal (e.g., threaten, warn)	4	-	-	50.0	50.0
Non Forceful Verbal (e.g., plead, scream)	7	14.3	14.3	28.6	42.9
Total	42	4.8	11.9	33.3	50.0

    * Some researchers used physical SP vs. verbal SP typologies, while others used more detailed typologies.

Table 3.2. Estimate Results for the Victim Self-Protection and Injury

Type of Self Protection	N	Sign and Statistical Significance of Findings			
		Significant Positive (%)	Non sig. Positive (%)	Non sig. Negative (%)	Significant Negative (%)
Physical or Forceful	11	45.5	18.2	36.4	-
Weapon SP (e.g., defensive gun use)	12	-	33.3	58.3	8.3
Forceful and Physical (e.g., fight back)	12	33.3	58.3	-	8.3
Non-forceful Physical (e.g., run away)	5	-	20.0	80.0	-
Verbal (or non forceful)	11	45.5	9.1	36.4	9.1
Forceful Verbal (e.g., threaten, warn)	6	16.7	50.0	16.7	16.7
Non Forceful Verbal (e.g., plead, scream, get help)	11	18.2	63.6	18.2	-
Total	68	25.0	36.8	32.4	5.9

* Some researchers used physical SP vs. verbal SP typologies, while others used more detailed typologies.

Table 3.3. The Effects of Temporal Control on the Victim Self-Protection Coefficients

Type of Self Protection		N	Sign and Statistical Significance of Findings			
			Significant Positive (%)	Non sig. Positive (%)	Non sig. Negative (%)	Significant Negative (%)
Control for Sequence	Physical or Forceful	2	-	-	100.0	-
	Weapon SP	1	-	100.0	-	-
	Forceful and Physical	3	33.3	33.3	-	33.3
	Non-forceful Physical	2	-	-	50.0	50.0
	Verbal (or non forceful)	3	-	-	66.6	33.3
	Forceful Verbal	1	100.0	-	-	-
	Non-forceful Verbal	3	-	100.0	-	-
	Total	15	3.3	33.3	40.0	13.3
Not Control for Sequence	Physical or Forceful	9	55.6	22.2	22.2	-
	Weapon SP	11	-	27.3	63.6	9.1
	Forceful and Physical	9	33.3	66.7	-	-
	Non-forceful Physical	3	-	33.3	66.7	-
	Verbal (or non forceful)	8	62.5	12.5	25.0	-
	Forceful Verbal	5	-	60.0	20.0	20.0
	Non Forceful Verbal	8	25.0	50.0	25.0	-
	Total	53	28.3	37.7	30.2	3.8

Table 3.4. Prior research on Rape Avoidance and Injury

Study	Sample Source	N	Sample Type[b]	Statistical Methods	Control for SP-Injury Sequence	V/O relationship *SP Interaction	Typology for SP actions	Findings[a] Rape Completion	Injury	Serious Injury[c]
Brecklin and Ullman (2001)	NCVS 1992-96	362	P[d]	Logistic	No	Stranger or not	Forceful Physical SP Non forceful Physical SP Forceful Verbal SP Non forceful Verbal SP	- - (sig) - +	+ + (sig) + + (sig)	+ (sig) + (sig) + +
Ullman et al. (1999)	College Students Self-Report 1984-85	3,187	NP	Hierarchical Regression	No	No	Victim Resistance Scale	+ (sig)		
Ullman (1998)	Police Report 1979, 1981	2,201	NP	Chi-Square	Yes	Stranger or not	Forceful physical SP Fleeing Forceful verbal resistance	- (sig) - (sig) - (sig)	- (sig) - - (sig)	
Ullman and Knight (1995)	Police and court Reports 1959-89	147	NP	ANOVA	No	No	Forceful fight Flee or push O away Scream or yell Plead, beg, attempt to reason	±[e] ± ± ±	± ± ± ±	
Zoucha-Jensen and Coyne (1993)	Police Records 1988-89	150	NP	Chi-Square	No	No	Physical SP Foreceful Verbal SP Nonforceful Verbal SP Running/Fleeing	- (sig) - (sig) + (sig) - (sig)	No significant effects[f]	

a. Sign of association between SP action and outcome.

b. P denotes probability sample; NP denotes non-probability sample.

c. Studies examined whether Victim received medical treatments.

d. Not weighted.

e. Mixed findings.

f. Authors did not report coefficients and sign.

Table 3.4. (Continued).

Study	Sample Source	N	Sample Type	Statistical Methods	Control for SP-Injury Sequence	V/O relationship *SP Interaction	Typology for SP actions	Findings Rape Comple-tion	Injury	Serious Injury
Ullman and Siegel (1993)	ECA Survey	240	P	ANOVA	No	Intimate Acquaints Stranger	Physical SP Verbal SP	- (sig) - (sig)		
Ullman and Knight (1992)	Police and Court Records 1959-89	274	NP	ANOVA	Yes	No	Forceful fight Flee or push away Scream or yell Plead, beg, attempt to reason	- (sig) - - (sig) -	+ - + +	
Marchbanks et al. (1990)	NCS 1973-82	851	NP	Logistic	No	No	Forceful SP Non-Forceful SP	- (sig) - (sig)	+ (sig) + (sig)	+ +
Kleck and Sayles (1990)	NCS 1979-85	242	P	Probit	Yes	No (Stranger Only)	Weapon SP Physical SP Threat SP Get Help No Forceful SP Other SP	- (sig) - - - (sig) - (sig) -	+ + (sig) + (sig) + - +	
Atkeson et al. (1989)	Rape Crisis Center Interview	116	NP	Discriminant Function Analysis	No	No	Physical SP Verbal SP	- +	+ +	
Siegel et al. (1989)	ECA Survey	3,132	P	Logistic	No	No	Physical SP Verbal SP	+ -	± ±	
Ruback and Ivie (1988)	Rape Crisis Cent. Record 1982-84	2,526	NP	OLS	No	Stranger Or not.	Physical SP Verbal SP	-	+ (sig)	

Table 3.4. (Continued).

Study	Sample Source	N	Sample Type	Statistical Methods	Control for SP-Injury Sequence	V/O relationship *SP Interaction	Typology for SP actions	Findings		
								Rape Comple-tion	Injury	Serious Injury
Block and Skogan (1986)	NCS 1973-79	347	P[a]	Logistic	No	No (Stranger Only)	Forceful Physical SP Non-forceful SP	+ - (sig)	+ (sig) -	
Levine-MacCombie and Koss (1986)	College Survey	231	NP	Discriminant Function Analysis	No	No	Active SP (running away, scream)	-		
Lizotte (1986)	NCS 1972-75	970	P	Logistic	No	No	Forceful SP Weapon SP	- (sig) - (sig)		
Quinsey and Upfold (1985)	Police Report	136	NP	Chi-Square Regression	Yes	Yes	Physical SP Verbal SP	- (sig) - (sig)	- -	
Cohen (1984)	Interview	127	NP	Chi-Square	No	No	Physical SP Verbal SP Other SP	- -	+ (sig) + (sig)	
Griffin and Griffin (1981)	NCS 1973-74	242	P	Chi-Square Regression	No	No	Physical Attack SP Evasive SP	+ -	+ -	

a. Not weighted

Table 3.5. Prior Research in Assaults and Robberies

Study	Sample Source	N	Sample Type	Stat. Methods	Control for Sequence	V/O relationship *SP Interaction	Typology for SP actions	Findings Injury	Findings Serious Injury
Bachman et al., 2002	NCVS 1992-94	2,199 Assault	P	Logistic	Yes-fail	Intimate, Acquaint, Family, Stranger	Physical Nonphysical	+ (sig) intimate/- - (sig))	
Fritzon and Ridgway, 2001	Police record 1986-95	93 Attempted Homicide	NP	Chi-square	No	Acquaint vs. Stranger	Victim SP	+- (assault)	
Kleck and Kates, 2001	NCVS 1992-98	Robbery/ Assaults	P	% of Injury comparison	Yes	No	All 16 SP (Robbery. Assault)	-	
Southweak, 2000	NCVS 1979-87, 1991	2244 Robbery/ (Sex)Assault	P	% of Injury comparison	No	No	Gun SP Other SP	- +	
Rand, 1995	NCVS 1987-92	Robbery 5,548,500	P	% of Injury comparison	No	No	Attack, threat/ Resist /Reason/Run Warn / Others	+ -	+ ?
Bachman et al., 1994	NCS 1987-90	904 Assault	P	Logistic	Yes- fail	Intimate vs. Stranger	Physical SP Passive/Verbal SP	+ (sig)intimate/ - + (sig),/ -	+ +
Kleck and Delone, 1993	NCS 1979-85	4500 Robbery	P	Logistic	No	No	Gun SP /Threat/OtherSP Other weapon/No force SP/ Knife SP PhysicalSP/GetHelp	- (sig) - + +(sig)	
Kleck, 1988	NCS 1979-85	No # Robbery/ Assaults	P	% of injury comparison	No	No	\<Robbery\> Gun SP/Other Weapon/ Knife/Physical/Get Help /Threat/No force SP/Others \<Assault\> Gun SP/Other Weapon/Threat/ No force SP/Others/ Knife /Physical/Get Help	- + + - - +	
Block and Skogan, 1986	NCS 1973-79	3,061	P[a]	Logistic	No	No (Stranger Only)	Forceful Physical SP Non-forceful SP	+ (sig) - (sig)	+ - (hospitalized)

Table 3.5. (Continued).

Study	Sample Source	N	Sample Type	Stat. Methods	Control for Sequence	V/O relationship *SP Interaction	Typology for SP actions	Findings	
								Injury	Serious Injury
Ziegenhagen and Brosnan, 1985	National Crime Panal data 1974	3,679 Robbery	NP	% of injury comparison	No	No	Weapon SP Physical SP (hit, kick) Reason Scream Leave Held onto Property Other	- + + - - - -	
Skogan and Block, 1983	NCS 1973-79	7,331 Assault	P	Correlation (Gamma)	No	No	Physical SP Non physical SP	+ -	

Table 4.1. Variables in the Analyses of Injury and Property Loss*

Variable	Description	Proportion	Range
Dependent Variables			
LOSTHING	Property was taken without permission	0.092	1-2
ANYINJUR	V was injured	0.240	1-2
POSTINJU	V was injured after responding to offender.	0.035	1-2
POSEINJU	V was seriously injured after responding to offender	0.008	1-2
ANYINJU2	V was injured excluding (attempted) rape	0.228	1-2
POSTINJ2	V was injured after responding to O excluding (attempted) rape	0.032	1-2
POSEINJ2	V was seriously injured after responding to O excluding (attempted) rape	0.000	1-2
Independent Variables			
Victim's Self Protection			
USED PHYSICAL FORCE TOWARD OFFENDER			
GUNATACK	V attacked O with gun; fired gun	0.002	1-2
GUNTHRET	V threatened O with gun	0.007	1-2
NOGUNATK	V attacked O with other weapons (knife, etc.)	0.008	1-2
NOGUNTHR	V threatened O with other weapon (knife, etc.)	0.008	1-2
NOWEPATK	V attacked O without weapon (hit, kicked, etc.)	0.096	1-2
NOWEPTHR	V threatened without weapon	0.020	1-2
RESISTED OR CAPTURED OFFENDER			
STRUGGLE	V struggled, ducked, blocked blows, held onto property	0.181	1-2
CHASHELD	V chased, tried to catch or hold O	0.019	1-2
SCARED OR WARNED OFF OFFENDER			
SCAREOFF	V yelled at O, turned on lights, threatened to call police	0.090	1-2
PERSUADED OR APPEASED OFFENDER			
COPRSTAL	V cooperated, or pretended to (stalled, did what they asked)	0.019	1-2
ARGUE	V argued, reasoned, pleaded, bargained, etc.	0.098	1-2
ESCAPED OR GOT AWAY			
RANHIDE	V ran or drove away, or tried; hid, locked door	0.138	1-2
GOT HELP OR GAVE ALARM			
CALLPOL	V called police or guard	0.072	1-2
GETHELP	V tried to attract attention or help, warn others (cried out for help, called children inside)	0.020	1-2
REACTED TO PAIN OR EMOTION			
SCREAM	V screamed from pain or fear	0.021	1-2
OTHER			
OTHERS	V did other response	0.150	1-2
Power Difference between V and O			
ADVSEXOF	Male O and female V	0.326	1-2
ADVAGEOF	O age 15-29 and V either under 15 or 30 or older	0.210	1-2
ADVNUM	Number of O – number of V	-0.128	-9 - 94
Offender Weapons and Attack			
OHADGUN	O had gun	0.082	1-2
OHADKNIF	O had knife	0.057	1-2
OHADSHAP	O had sharp object	0.010	1-2
GOTINHOM	O (attempted to) entered house/apartment	0.015	1-2
GOTINCAR	O (attempted to) entered car	0.000	1-2

* For binary variables, 1= Attribute is not present, 2=Attribute is present

Table 4.1. (Continued)

Variable	Description	Proportion	Range
Victim Characteristics			
HADCHILD	Child in the victim's household	0.394	1-2
HOUSOWN	V owned the house	0.507	1-2
EMPLOYED	V was employed	0.644	1-2
OLD65	V was 65 or older	0.021	1-2
MARRIED	V was married	0.254	1-2
EDUCATIN	V education	15.159	0-26
ARMFORCE	V was Armed force	0.006	1-2
BLACK	V was black	0.146	1-2
ASIAN	V was Asian	0.018	1-2
HISPANIC	V was Hispanic origin	0.099	1-2
NUMVICEX	Number of victimization in last six months	2.640	1-2
NUMHOUSE	Number of housing units in structure	0.353	1-2
Offender Characteristics			
OFDGANG	1+ O* was gang member	0.074	1-2
OFDSUBST	1+ O was on substance (alcohol or drugs)	0.299	1-2
OFDFAMIL	1+ O was V' family member	0.048	1-2
OSEXINTI	1+ O was V's sexual intimate	0.116	1-2
OSUPERIOR	1+ O was V's parents or supervisor	0.008	1-2
OFDACQNT	1+ O was V's acquaintance (no family, work acquaint.)	0.206	1-2
OWORKACQ	1+ O was V's work acquaintance	0.052	1-2
OFDBLACK	1+ O was Black	0.282	1-2
OFDWHITE	1+ O was White	0.611	1-2
	* One or more offenders		
Incident Circumstances			
RURAL	Incident occurred in rural	0.159	1-2
URBAN	Incident occurred in urban	0.374	1-2
ATHOME	Incident occurred at home	0.176	1-2
NEARHOME	Incident occurred near home	0.202	1-2
SECUPUB	Incident occurred in public place which may have security	0.269	1-2
FAMIPRES	Incident occurred with family member present	0.202	1-2
OTHRPRES	Incident occurred with others present (no family)	0.482	1-2
Other Variables eliminated in Logistic Analysis			
ANYSD16	V respond responded in any of 16 type of action	0.707	1-2
TOTALSD	Total number of victim response	0.950	1-2
OFDWEPON	O had weapon	0.234	1-2
OFDATCK	O attacked V	0.541	1-2
OFDTHRET	O threatened V	0.487	1-2
OFDGUNAT	O attacked with gun	0.007	1-2
OFDKIFAT	O attacked with knife	0.023	1-2
HOMINCOM	Income of the household	8.406	1-14
YOUG1529	V was 15 to 29 yr old	0.461	1-2
MALE	V was male	0.554	1-2
NUMOFD	Number of O	0.531	1-2
MALEOFDC	O was male	0.839	1-2
YONGOFDC	O was 15 to 29 yr old	0.549	1-2
NIGHT	Incident occurred at night	0.451	1-2
AFTERNON	Incident occurred in the afternoon	0.200	1-2
SOUTH	Incident occurred in SOUTH	0.244	1-2
WEST	Incident occurred in WEST	0.190	1-2

Table 4.2. Variables in the Analysis of the Determinants of Self-Protective Actions*

Variable	Description	Proportion	Range
Dependent Variables			
ANYSP14	V used any of SP actions, except for cooperation or screaming.	0.694	1-2
ALLFORCE	V used physical force toward offender, including gun use, other weapon use, and physical attack.	0.172	1-2
ALLSPWW	V used weapons for self-protection	0.036	1-2
SPWG	V used a gun for self-protection	0.009	1-2
Independent Variables			
Victim Characteristics			
YOUG1529	V was 15 to 29 yr old	0.461	1-2
BLACK	V was black	0.146	1-2
ASIAN	V was Asian	0.018	1-2
HISPANIC	V was Hispanic origin	0.099	1-2
MALE	V was male	0.554	1-2
HOUSOWN	V owned the house	0.507	1-2
EMPLOYED	V was employed	0.644	1-2
OLD65	V was 65 or older	0.021	1-2
MARRIED	V was married	0.254	1-2
EDUCATIN	V education	15.159	1-26
ARMFORCE	V was Armed force	0.006	1-2
NUMVICEX	Number of victimization in last six months	2.640	1-2
NUMHOUSE	Number of housing units in structure	0.353	1-2
HADCHILD	Child in the victim's household	0.394	1-2
Geographic of Incidents			
SOUTH	Incident occurred in SOUTH	0.244	1-2
WEST	Incident occurred in WEST	0.190	1-2
MIDWEST	Incident occurred in MIDWEST	0.183	1-2
RURAL	Incident occurred in rural	0.159	1-2
URBAN	Incident occurred in urban	0.374	1-2
Offender Characteristics			
OSEXINTI	1+ O was V's sexual intimate	0.116	1-2
OFDFAMIL	1+ O was V' family member	0.048	1-2
OFDACQNT	1+ O was V's acquaintance (no family, work acquaint.)	0.206	1-2
OWORKACQ	1+ O was V's work acquaintance	0.052	1-2
OFDBLACK	1+ O was Black	0.282	1-2
OFDWHITE	1+ O was White	0.611	1-2
OFDGANG	1+ O was gang member	0.074	1-2
OFDSUBST	1+ O was on substance (alcohol or drugs)	0.299	1-2

* One or more offenders

* For binary variables, 1= Attribute is not present, 2=Attribute is present

Table 4.2. (Continued)

Variable	Description	Proportion	Range
Serious of Incidents			
PREINJU	V was injured before he/she employed SP	0.051	1-2
ADVSEXOF	Female V and Male O	0.326	1-2
ADVNUM	Number of O – number of V	-0.128	-9 - 94
OHADGUN	O had gun	0.082	1-2
OHADKNIF	O had knife	0.057	1-2
OHADSHAP	O had sharp object	0.010	1-2
Other Incident Circumstances			
ATHOME	Incident occurred at home	0.176	1-2
NEARHOME	Incident occurred near home	0.202	1-2
FAMIPRES	Incident occurred with family member present	0.202	1-2
OTHRPRES	Incident occurred with others present (no family)	0.482	1-2
Other Variables eliminated in Logistic Analysis			
HOMINCOM	Income of the household	8.406	1-14
NIGHT	Incident occurred at night	0.451	1-2
AFTERNON	Incident occurred in the afternoon	0.200	1-2

Table 5.1. Frequency and Injury Rates of Self-Protection (SP) Strategies

SP Strategy	All Offenses				Robberies			
	Frequency	% Injured	% Injured After SP	% Seriously Injured After SP	Frequency	% Injured	% Injured After SP	% Seriously Injured After SP
Attacked with gun	45	33.3	2.2	0.0	6	33.3	0.0	0.0
Threatened with gun	202	13.9	2.5	1.5	26	11.5	7.7	7.7
Attacked w. nongun weapon	230	40.6	2.6	0.9	35	45.7	2.9	2.9
Threatened w. nongun weapon	232	18.5	0.9	0.4	14	15.4	0.0	0.0
Attacked without weapon	2,661	47.4	3.8	1.2	279	51.6	7.2	4.3
Threatened without weapon	540	20.6	2.6	0.4	35	22.9	2.9	0.0
Struggled	4,984	49.8	4.1	1.0	542	50.9	6.3	1.3
Chased, held offender	517	24.6	2.3	0.4	76	32.5	6.6	2.6
Yelled, turned on lights	2,492	27.4	2.7	0.7	228	38.6	5.7	1.8
Stalled, pretended to cooperate	535	21.5	4.5	1.5	147	11.6	4.1	1.4
Argued, reasoned, pleaded	2,700	23.3	3.4	0.9	160	26.9	6.9	2.5
Ran away, hid	3,807	20.5	1.8	0.4	335	31.4	3.6	0.6
Called police or guard	1,990	17.8	0.9	0.2	100	27.0	1.0	0.0
Tried to attract attention	567	38.7	1.9	0.4	83	42.2	4.8	0.0
Screamed from pain or fear	569	77	3.5	1.6	68	70.6	5.9	4.4
Other SP strategies	4,149	15.9	2.4	0.5	273	28.2	8.1	4.0
Any SP	19,519	26.4	2.8	0.7	1,697	33.8	5.4	1.6
No SP	8,077	18.5	n/a	n/a	943	23.1	n/a	n/a
Total Incidents*	27,595	24.1	2.0	0.5	2,640	30.0	3.5	1.1

* Total Incidents are smaller than the sum of SP actions because victims often employed multiple actions.

Table 5.1. (continued).

SP Strategy	Assaults				Confrontational Burglaries			
	Frequency	% Injured	% Injured After SP	% Seriously Injured After SP	Frequency	% Injured	% Injured After SP	% Seriously Injured After SP
Attacked with gun	28	39.3	7.1	0.0	12	25	0.0	0.0
Threatened with gun	138	15.8	2.9	0.7	38	10.5	0.0	0.0
Attacked w. nongun weapon	161	41.9	2.5	0.6	27	25.9	3.7	0.0
Threatened w. nongun Weapon	176	18.2	1.1	0.6	34	17.6	0.0	0.0
Attacked without weapon	2,146	46.2	3.4	0.6	106	57.5	1.9	0.0
Threatened without weapon	474	19.2	2.5	0.4	22	22.7	0.0	0.0
Struggled	3,842	48.8	3.6	0.7	198	60.3	6.6	1.5
Chased, held offender	324	28.7	2.5	0.0	77	10.4	0.0	0.0
Yelled, turned on lights	1,642	25.4	2.4	0.4	372	16.9	1.6	0.0
Stalled, pretended to Cooperate	299	15.4	4.3	0.7	29	17.2	6.9	0.0
Argued, reasoned, pleaded	2,146	18.0	2.9	0.2	174	30.5	2.3	0.0
Ran away, hid	3,179	18.0	1.6	0.3	114	36.8	3.5	0.9
Called police or guard	1,492	17.5	0.8	0.1	366	14.2	1.1	0.0
Tried to attract attention	388	35.4	0.5	0.0	41	31.7	4.9	0.0
Screamed from pain or fear	353	78.8	2.5	0.0	54	68.5	1.9	0.0
Other SP strategies	3,441	14.5	2.0	0.2	241	7.9	2.5	0.0
Any SP	15,503	24.9	2.5	0.4	1,293	20.1	2.7	0.3
No SP	6,068	17.1	n/a	n/a	528	12.5	n/a	n/a
Total Incidents*	21,570	22.7	1.8	0.3	1,821	17.9	1.9	0.2

* Total Incidents are smaller than the sum of SP actions because victims often employed multiple actions.

Table 5.1. (continued).

| SP Strategy | Sex Assaults | | | | Personal Larcenies** |
	Frequency	% Injured	% Injured After SP	% Seriously Injured After SP	Frequency
Attacked with gun	0	-	-	-	0
Threatened with gun	1	0	0.0	0.0	0
Attacked w. nongun weapon	5	60.0	0.0	0.0	2
Threatened w. nongun weapon	10	10.0	0.0	0.0	0
Attacked without weapon	120	35.8	5.0	0.0	6
Threatened without weapon	11	33.3	0.0	0.0	0
Struggled	343	36.2	2.9	0.0	37
Chased, held offender	4	0	0.0	0.0	37
Yelled, turned on lights	219	32.0	3.2	0.0	27
Stalled, pretended to cooperate	49	40.8	4.1	0.0	4
Argued, reasoned, pleaded	213	34.9	3.8	0.0	2
Ran away, hid	161	20.5	0.6	0.0	15
Called police or guard	38	42.1	5.3	0.0	12
Tried to attract attention	41	51.2	4.9	0.0	11
Screamed from pain or fear	83	61.4	6.0	0.0	4
Other SP strategies	171	12.9	0.0	0.0	28
Any SP	886	25.2	2.5	0.0	139
No SP	233	19.0	n/a	n/a	306
Total Incidents*	1,119	23.9	2.0	0.0	445

* Total Incidents are smaller than the sum of SP actions because victims often employed multiple actions.

** Since there are no injured V in personal larceny incidents, injury percentages are not shown.

Table 5.2. Property Loss

	Logit Coefficient (ratio, coef./SE)			
	All Types of Crime	Robbery	Confrontational Burglary	Personal Larceny
Victim's Self Protection				
Attack with Gun	-1.367 (-1.94)	*-1.793* (-1.97)	-2.556 (-1.60)	-
Threat with Gun	**-1.682** (-4.35)	-21.795 (-0.00)	-0.265 (-0.57)	-
Attack with nongun weapon	**-0.884** (-2.96)	**-1.765** (-4.33)	*-1.451* (-2.06)	-24.004 (-0.00)
Threat with nongun weapon	**-2.227** (-4.27)	*-1.562* (-2.28)	-20.453 (-0.00)	13.436 (0.00)
Attack without weapon	**-0.549** (-5.80)	**-0.727** (-4.84)	*-0.671* (-2.12)	**-5.331** (-3.30)
Threat without weapon	**-1.124** (-3.97)	**-1.523** (-3.42)	0.670 (1.15)	-
Struggled	**-0.461** (-6.71)	**-0.665** (-5.80)	**-1.053** (-4.16)	**-4.902** (-6.27)
Chased, held offender	**1.056** (8.35)	0.060 (0.22)	**0.802** (2.76)	0.679 (0.55)
Yelled, turned on lights	**-0.319** (-3.54)	**-0.449** (-2.69)	**-0.629** (-3.33)	*-2.071* (-2.16)
Stalled, pretended to cooperate	**0.930** (7.58)	**0.732** (2.96)	*1.087* (2.40)	17.532 (0.00)
Argued, reasoned, pleaded	**-1.016** (-9.18)	**-0.716** (-3.62)	*-0.568* (-2.08)	-1.848 (-0.96)
Ran away, hid	**-1.285** (-14.34)	**-1.332** (-9.79)	-0.522 (-1.71)	**-3.752** (-3.04)
Called police or guard	**-0.482** (-4.60)	*-0.479* (-1.99)	-0.219 (-1.24)	1.485 (0.58)
Tried to attract attention	-0.037 (-0.22)	**-0.794** (-3.01)	0.110 (0.23)	-0.539 (-0.25)
Screamed from pain or fear	*0.371* (2.34)	*0.779* (2.48)	0.632 (1.52)	20.801 (0.00)
Other SP strategies	**-0.767** (-9.53)	**-0.509** (-3.34)	**-0.807** (-3.60)	**-3.393** (-3.90)
PowerDifference				
ADVSEXOF	**0.160** (2.90)	0.168 (1.43)	*-0.341* (-2.27)	**-2.104** (-2.73)
ADVAGEOF	**0.373** (6.90)	*-0.260* (-2.50)	**0.415** (2.65)	-0.115 (-0.20)
ADVNUM	**0.043** (4.68)	**0.086** (3.05)	0.081 (1.68)	-0.376 (-1.75)
Offender weapons and attack				
OHADGUN	**0.953** (14.36)	**0.668** (5.05)	*0.581* (2.23)	-
OHADKNIF	**0.441** (4.97)	-0.088 (-0.62)	0.312 (1.04)	-
OHADSHAP	0.123 (0.55)	-0.027 (-0.08)	0.750 (0.85)	-
GOTINHOM	**-1.057** (-5.42)	**-**	**-1.514** (-7.46)	-
GOTINCAR	0.778 (0.81)	-	0.398 (0.44)	-

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.2. (Continued)

	All Type of Crime	Robbery	Confrontational Burglary	Personal Larceny
Victim Characteristics				
HADCHILD	**-0.153**	-0.016	-0.153	0.502
	(-2.84)	(-0.14)	(-0.96)	(0.72)
HOUSOWN	-0.037	-0.101	*0.438*	-1.176
	(-0.59)	(-0.81)	(2.50)	(-1.49)
EMPLOYED	*-0.143*	-0.120	0.103	-0.956
	(-2.55)	(-1.10)	(0.66)	(-1.55)
OLD65	**0.876**	-0.004	**0.862**	-0.488
	(7.38)	(-0.01)	(3.38)	(-0.60)
MARRIED	*-0.129*	0.182	0.109	-0.742
	(-2.06)	(1.42)	(0.66)	(-1.26)
EDUCATIN	**-0.017**	-0.015	0.003	-0.055
	(-4.12)	(-1.75)	(0.30)	(-1.34)
ARMFORCE	*-0.834*	0.657	0.133	17.871
	(-2.00)	(0.65)	(0.09)	(0.00)
BLACK	0.133	*0.321*	-0.124	0.433
	(1.94)	(2.39)	(-0.54)	(0.46)
ASIAN	**0.538**	0.240	-0.202	-1.686
	(3.75)	(0.93)	(-0.44)	(-1.64)
HISPANIC	**0.510**	0.134	-0.158	-0.415
	(6.93)	(0.95)	(-0.62)	(-0.55)
NUMVICEX	**-0.056**	-0.011	-0.049	1.044
	(-4.52)	(-0.92)	(-0.98)	(0.74)
NUMHOUSE	*0.164*	0.076	0.196	-0.366
	(2.59)	(0.60)	(1.10)	(-0.47)
Offender Characteristics				
OFDGANG	**-0.240**	-0.263	0.014	-1.313
	(-2.66)	(-1.66)	(0.04)	(-0.89)
OFDSUBST	-0.057	*0.234*	-0.087	0.652
	(-1.01)	(2.05)	(-0.58)	(0.41)
OFDFAMIL	**-0.453**	*0.698*	-0.637	15.344
	(-3.31)	(2.11)	(-1.93)	(0.00)
OSEXINTI	**-0.780**	*0.489*	-0.405	17.959
	(-7.61)	(2.00)	(-1.93)	(0.00)
OSUPERIOR	-0.101	1.716	*1.660*	-
	(-0.33)	(1.59)	(1.97)	
OFDACQNT	**-0.715**	0.156	0.009	19.751
	(-9.13)	(0.92)	(0.05)	(0.00)
OWORKACQ	**-1.617**	*1.503*	-0.481	-
	(-6.73)	(2.45)	(-0.55)	
OFDBLACK	**0.543**	0.234	-0.182	0.179
	(7.61)	(1.83)	(-0.82)	(0.27)
OFDWHITE	**-0.420**	0.110	**-0.528**	0.251
	(-5.95)	(0.81)	(-2.64)	(0.34)
Incident Circumstances				
RURAL	*-0.166*	0.060	-0.322	-1.710
	(-2.01)	(0.34)	(-1.60)	(-1.78)
URBAN	**0.150**	0.051	-0.018	0.219
	(2.82)	(0.48)	(-0.12)	(0.38)
ATHOME	**0.613**	0.335	-	14.935
	(7.50)	(1.41)		(0.00)
NEARHOME	**-0.410**	*0.302*	-	0.351
	(-5.71)	(2.18)		(0.34)
SECUPUB	**-0.463**	-0.146	-	0.809
	(-6.71)	(-1.06)		(1.31)
FAMIPRES	**-0.369**	-0.095	-0.105	0.191
	(-5.26)	(-0.57)	(-0.68)	(0.24)
OTHRPRES	-0.568	**-0.286**	*-0.510*	0.913
	(-10.14)	(-2.67)	(-2.25)	(1.31)
Sample size	25,858	2,473	1,671	410
-2 Log-likelihood	12,679	2,752	1,457	124

Table 5.3. Injury (Regardless of Sequence)

	Logit Coefficient (ratio, coef./SE)				
	All Types of Crime	Robbery	Assault	Confrontational Burglary	SexAssault
Victim's Self Protection					
Attack with Gun	**1.068**	-0.227	**1.408**	1.761	
	(2.96)	(-0.24)	(3.14)	(1.92)	-
Threat with Gun	**-0.726**	*-2.118*	-0.347	-0.967	-20.032
	(-2.94)	(-2.16)	(-1.24)	(-1.26)	(-0.00)
Attack with nongun weapon	**0.672**	0.499	**0.826**	0.711	1.463
	(4.30)	(1.32)	(4.40)	(1.33)	(1.32)
Threat with nongun weapon	*-0.492*	-0.547	***-0.578***	0.344	-1.931
	(-2.47)	(-0.73)	(-2.40)	(0.59)	(-1.34)
Attack without weapon	**1.068**	**0.913**	**1.072**	**1.682**	0.458
	(22.05)	(6.13)	(19.60)	(6.32)	(1.81)
Threat without weapon	**-0.381**	-0.745	**-0.382**	-0.756	-1.242
	(-3.01)	(-1.63)	(-2.77)	(-0.95)	(-1.38)
Struggled	**1.316**	**1.011**	**1.357**	**2.069**	**0.871**
	(34.81)	(8.87)	(31.10)	(9.90)	(4.81)
Chased, held offender	0.049	-0.103	**0.394**	-0.809	-19.320
	(0.41)	(-0.37)	(2.72)	(-1.58)	(-0.00)
Yelled, turned on lights	**-0.236**	0.101	**-0.245**	-0.281	-0.046
	(-3.91)	(0.58)	(-3.26)	(-1.20)	(-0.21)
Stalled, pretended to cooperate	0.128	**-0.763**	-0.130	-0.524	0.041
	(1.04)	(-2.64)	(-0.70)	(-0.82)	(0.11)
Argued, reasoned, pleaded	**-0.162**	-0.380	**-0.335**	*0.563*	0.358
	(-2.79)	(-1.66)	(-4.76)	(2.19)	(1.73)
Ran away, hid	*-0.125*	0.154	***-0.126***	**0.819**	*-0.197*
	(-2.48)	(1.08)	(-2.15)	(2.99)	(-0.76)
Called police or guard	**-0.552**	-0.463	**-0.442**	*-0.447*	0.668
	(-7.58)	(-1.72)	(-5.21)	(-2.08)	(1.49)
Tried to attract attention	**0.431**	0.183	**0.501**	-0.016	0.372
	(3.99)	(0.68)	(3.80)	(-0.03)	(0.89)
Screamed from pain or fear	**2.017**	**1.482**	**2.151**	**2.168**	**1.460**
	(16.89)	(4.71)	(14.18)	(4.56)	(4.69)
Other SP strategies	**-0.155**	0.167	**-0.169**	*-0.727*	-0.521
	(-3.02)	(1.04)	(-2.86)	(-2.38)	(-1.78)
PowerDifference					
ADVSEXOF	**0.149**	0.011	0.076	-0.023	0.062
	(3.74)	(0.09)	(1.54)	(-0.12)	(0.18)
ADVAGEOF	0.049	0.079	0.045	0.117	0.246
	(1.15)	(0.73)	(0.88)	(0.54)	(0.88)
ADVNUM	**0.030**	**0.110**	*0.019*	0.016	-0.188
	(3.99)	(4.52)	(2.35)	(0.28)	(-1.33)
Offender weapons and attack					
OHADGUN	**-0.521**	**-0.867**	**-0.718**	0.089	*0.912*
	(-7.33)	(-5.98)	(-7.40)	(0.30)	(2.27)
OHADKNIF	*-0.152*	*-0.311*	**-0.273**	0.044	*0.826*
	(-2.19)	(-2.01)	(-3.17)	(0.13)	(2.05)
OHADSHAP	**0.371**	0.186	*0.340*	1.537	1.781
	(2.56)	(0.53)	(2.04)	(1.75)	(1.34)
GOTINHOM	-19.974	-	-	-19.196	**-**
	(-0.01)			(-0.01)	
GOTINCAR	-19.306	-	-	-18.167	-
	(-0.00)			(-0.00)	

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.3. (Continued)

	All Types of Crime	Robbery	Assault	Confrontatio nal Burglary	SexAssault
Victim Characteristics					
HADCHILD	-0.056	-0.065	-0.072	-0.135	0.281
	(-1.56)	(-0.58)	(-1.76)	(-0.70)	(1.51)
HOUSOWN	**-0.128**	-0.124	*-0.122*	-0.105	**-0.592**
	(-3.06)	(-0.96)	(-2.54)	(-0.50)	(-2.60)
EMPLOYED	**-0.261**	-0.060	**-0.236**	**-0.605**	0.197
	(-6.67)	(-0.54)	(-5.10)	(-3.39)	(0.99)
OLD65	*-0.313*	0.214	0.011	*-0.823*	**2.203**
	(-2.36)	(0.68)	(0.06)	(-1.97)	(2.73)
MARRIED	**-0.220**	-0.070	**-0.232**	-0.112	-0.056
	(-4.86)	(-0.52)	(-4.43)	(-0.49)	(-0.20)
EDUCATIN	**-0.024**	-0.015	**-0.030**	-0.004	0.000
	(-7.73)	(-1.67)	(-8.32)	(-0.24)	(-0.02)
ARMFORCE	*-0.570*	-19.807	*-0.545*	-18.386	-20.094
	(-2.35)	(-0.00)	(-2.13)	(-0.00)	(-0.00)
BLACK	-0.042	-0.040	-0.043	-0.094	-0.416
	(-0.76)	(-0.29)	(-0.63)	(-0.31)	(-1.24)
ASIAN	0.104	0.209	-0.072	0.815	-0.662
	(0.83)	(0.78)	(-0.44)	(1.48)	(-0.95)
HISPANIC	-0.023	-0.233	0.027	0.113	-0.372
	(-0.41)	(-1.58)	(0.41)	(0.39)	(-1.12)
NUMVICEX	**-0.010**	-0.001	**-0.011**	0.007	0.016
	(-3.77)	(-0.08)	(-3.74)	(0.24)	(1.09)
NUMHOUSE	0.037	-0.086	0.049	0.058	-0.047
	(0.84)	(-0.67)	(0.95)	(0.28)	(-0.21)
Offender Characteristics					
OFDGANG	0.119	0.275	0.017	0.553	*0.984*
	(1.92)	(1.72)	(0.24)	(1.55)	(2.47)
OFDSUBST	**0.367**	**0.439**	**0.311**	**0.681**	**0.592**
	(10.28)	(3.88)	(7.46)	(4.11)	(3.38)
OFDFAMIL	*0.191*	-0.061	0.183	**1.160**	-19.803
	(2.26)	(-0.19)	(1.87)	(3.62)	(-0.00)
OSEXINTI	**0.951**	**0.692**	**1.014**	**1.108**	*0.491*
	(15.87)	(2.92)	(13.73)	(4.93)	(2.04)
OSUPERIOR	**0.550**	1.307	0.358	0.082	20.752
	(3.18)	(1.89)	(1.83)	(0.09)	(0.00)
OFDACQNT	**0.126**	0.179	0.085	0.149	0.089
	(2.82)	(1.04)	(1.68)	(0.63)	(0.40)
OWORKACQ	-0.055	-0.658	-0.089	-0.102	0.208
	(-0.61)	(-0.97)	(-0.91)	(-0.09)	(0.54)
OFDBLACK	0.047	0.030	0.013	0.282	0.136
	(0.84)	(0.23)	(0.19)	(0.84)	(0.39)
OFDWHITE	*-0.103*	0.030	*-0.134*	-0.045	-0.157
	(-2.04)	(0.22)	(-2.29)	(-0.15)	(-0.57)
Incident Circumstances					
RURAL	0.047	-0.350	0.080	0.087	0.080
	(0.99)	(-1.89)	(1.51)	(0.37)	(0.34)
URBAN	0.013	0.189	-0.011	0.108	-0.083
	(0.33)	(1.72)	(-0.25)	(0.58)	(-0.42)
ATHOME	**0.406**	0.090	**0.515**	-	0.113
	(6.94)	(0.39)	(6.68)		(0.45)
NEARHOME	0.055	-0.002	*0.010*	-	0.099
	(1.15)	(-0.02)	(0.18)		(0.40)
SECUPUB	**-0.176**	**-0.453**	*-0.103*	-	-0.670
	(-3.87)	(-2.93)	(-2.05)		(-1.78)
FAMIPRES	*-0.100*	-0.309	**0.160**	-0.291	-0.306
	(-2.03)	(-1.77)	(2.70)	(-1.52)	(-1.14)
OTHRPRES	0.009	-0.052	**0.214**	-0.044	-0.470
	(0.22)	(-0.47)	(4.36)	(-0.18)	(-1.74)
Sample size	25,858	2,473	20,259	1,671	1,045
-2 Log-likelihood	23,839	2,607	18,087	1,026	922

Table 5.4. Injury After SP Action

	Logit Coefficient (ratio, coef./SE)				
	All Types of Crime	Robbery	Assault	Confrontational Burglary	SexAssault
Victim's Self Protection					
Attack with Gun	0.471	-18.550	1.248	-16.682	-
	(0.55)	(-0.00)	(1.42)	(-0.00)	
Threat with Gun	-0.517	-18.061	0.132	-16.959	-14.562
	(-0.85)	(-0.00)	(0.21)	(-0.00)	(-0.00)
Attack with nongun weapon	0.049	-1.213	0.221	-0.147	-10.502
	(0.12)	(-0.88)	(0.44)	(-0.11)	(-0.00)
Threat with nongun weapon	-0.993	-17.771	-0.766	-17.418	-16.871
	(-1.51)	(-0.00)	(-1.15)	(-0.00)	(-0.00)
Attack without weapon	**0.597**	*0.766*	**0.464**	0.001	**3.055**
	(4.63)	(2.37)	(2.98)	(0.00)	(2.86)
Threat without weapon	-0.060	-1.050	0.051	-17.017	-14.704
	(-0.21)	(-0.97)	(0.17)	(-0.09)	(-0.00)
Struggled	**0.881**	**0.918**	**0.784**	**1.861**	1.583
	(8.20)	(3.27)	(5.88)	(3.62)	(1.86)
Chased, held Offender	-0.126	0.174	0.014	-17.450	-16.257
	(-0.41)	(0.32)	(0.04)	(-0.10)	(-0.00)
Yelled, turned on lights	0.026	0.458	0.072	-0.730	-0.508
	(0.18)	(1.25)	(0.39)	(-1.12)	(-0.58)
Stalled, pretended to cooperate	**0.678**	-0.702	**0.931**	-0.128	-4.323
	(2.89)	(-1.34)	(3.01)	(-0.08)	(-0.41)
Argued, reasoned, pleaded	**0.365**	0.306	0.263	0.451	1.274
	(2.72)	(0.77)	(1.58)	(0.66)	(1.20)
Ran away, hid	**-0.424**	-0.231	-0.323	0.210	-1.530
	(-2.83)	(-0.64)	(-1.80)	(0.30)	(-1.01)
Tried to attract attention	-0.267	0.154	*-1.507*	**1.830**	2.927
	(-0.82)	(0.27)	(-2.03)	(1.98)	(1.77)
Screamed from pain or fear	**0.925**	0.645	0.700	-18.283	2.103
	(3.42)	(0.94)	(1.83)	(-0.00)	(1.57)
Other SP strategies	0.140	**0.824**	0.037	0.163	-20.499
	(1.03)	(2.55)	(0.22)	(0.26)	(-0.01)
PowerDifference					
ADVSEXOF	0.204	-0.360	0.145	-0.190	16.286
	(1.83)	(-1.15)	(1.01)	(-0.35)	(0.00)
ADVAGEOF	0.116	0.269	0.004	0.608	-0.681
	(0.97)	(1.03)	(0.03)	(1.03)	(-0.65)
ADVNUM	**0.051**	*0.095*	**0.045**	0.102	0.249
	(3.46)	(2.25)	(2.69)	(1.01)	(0.34)
Offender weapons and attack					
OHADGUN	0.241	*0.680*	-0.111	-0.594	**6.100**
	(1.44)	(2.08)	(-0.47)	(-0.58)	(2.87)
OHADKNIF	0.116	0.005	0.125	-0.085	-28.671
	(0.66)	(0.01)	(0.59)	(-0.09)	(-0.00)
OHADSHAP	0.598	*1.332*	0.386	-16.776	-20.090
	(1.82)	(2.31)	(0.89)	(-0.00)	(-0.00)
GOTINHOM	-17.975	-	-	-17.078	-
	(-0.01)			(-0.01)	
GOTINCAR	-17.547	-	-	-15.495	-
	(-0.00)			(-0.00)	

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.4. (Continued)

	All Types of Crime	Robbery	Assault	Confrontatio nal Burglary	SexAssault
Victim Characteristics					
HADCHILD	*-0.215*	-0.502	*0.305*	-0.128	*1.614*
	(-2.10)	(-1.81)	(-2.50)	(-0.25)	(1.98)
HOUSOWN	0.020	-0.162	0.085	0.152	-1.502
	(0.16)	(-0.49)	(0.59)	(0.27)	(-1.52)
EMPLOYED	**-0.291**	-0.269	*-0.280*	-0.680	-0.298
	(-2.66)	(-0.96)	(-2.10)	(-1.35)	(-0.30)
OLD65	-1.001	-1.163	-17.415	0.378	-14.230
	(-1.72)	(-0.94)	(-0.00)	(0.40)	(-0.00)
MARRIED	-0.154	0.486	-0.270	-0.003	0.242
	(-1.19)	(1.57)	(-1.66)	(0.00)	(0.22)
EDUCATIN	*-0.021*	0.006	**-0.041**	0.050	0.086
	(-2.45)	(0.30)	(-3.72)	(1.24)	(1.09)
ARMFORCE	-17.479	-18.252	-17.327	-15.533	-15.848
	(-0.00)	(-0.00)	(-0.00)	(-0.00)	(-0.00)
BLACK	-0.097	0.205	0.002	-0.880	*-4.755*
	(-0.64)	(0.63)	(0.01)	(-0.91)	(-2.47)
ASIAN	-0.020	0.889	-0.916	-17.176	-17..289
	(-0.06)	(1.78)	(-1.29)	(-0.00)	(-0.00)
HISPANIC	0.032	-0.239	0.080	-0.115	-0.649
	(0.21)	(-0.59)	(0.44)	(-0.16)	(-0.46)
NUMVICEX	*-0.056*	-0.082	*-0.048*	-0.002	-0.633
	(-2.54)	(-0.81)	(-2.12)	(-0.02)	(-0.97)
NUMHOUSE	0.173	0.130	0.187	0.352	-1.434
	(1.39)	(0.40)	(1.24)	(0.62)	(-1.36)
Offender Characteristics					
OFDGANG	0.286	0.156	0.228	**2.049**	1.619
	(1.84)	(0.38)	(1.20)	(2.84)	(0.97)
OFDSUBST	**0.379**	0.385	**0.411**	0.857	0.895
	(3.83)	(1.41)	(3.42)	(1.85)	(1.13)
OFDFAMIL	-0.252	-1.640	-0.056	-0.531	-16.219
	(-0.96)	(-1.57)	(-0.19)	(-0.43)	(-0.00)
OSEXINTI	**0.404**	0.712	**0.646**	0.702	-2.538
	(2.34)	(1.23)	(2.94)	(1.18)	(-1.40)
OSUPERIOR	**1.211**	2.401	0.561	2.529	23.204
	(3.07)	(1.58)	(1.14)	(1.29)	(0.00)
OFDACQNT	0.127	0.010	0.153	-0.040	-0.113
	(1.01)	(0.02)	(1.04)	(-0.07)	(-0.10)
OWORKACQ	*-0.724*	-18.547	-0.691	-16.403	1.170
	(-2.03)	(-0.00)	(-1.64)	(-0.00)	(0.94)
OFDBLACK	0.244	0.253	0.094	1.188	2.420
	(1.58)	(0.76)	(0.49)	(1.17)	(1.76)
OFDWHITE	-0.123	-0.181	-0.142	1.334	-0.719
	(-0.86)	(-0.49)	(-0.83)	(1.30)	(-0.70)
Incident Circumstances					
RURAL	-0.079	-0.137	0.055	-1.062	-2.038
	(-0.54)	(-0.29)	(0.32)	(-1.45)	(-1.60)
URBAN	0.172	-0.352	**0.365**	-0.224	-0.918
	(1.65)	(-1.36)	(2.86)	(-0.48)	(-1.04)
ATHOME	*0.328*	0.750	0.286	-	0.047
	(2.01)	(1.33)	(1.29)		(0.04)
NEARHOME	-0.083	-0.023	-0.155	-	-0.295
	(-0.60)	(-0.06)	(-0.95)		(-0.33)
SECUPUB	-0.116	0.398	-0.093	-	-2.783
	(-0.87)	(1.17)	(-0.61)		(-1.82)
FAMIPRES	**0.340**	0.078	**0.808**	0.022	0.347
	(2.49)	(0.19)	(4.53)	(0.04)	(0.26)
OTHRPRES	0.176	-0.026	**0.536**	0.097	1.450
	(1.47)	(-0.10)	(3.29)	(0.14)	(1.06)
Sample size	15,233	1,251	12,329	1,041	477
-2 Log-likelihood	4,104	560	2,908	188	83

Table 5.5. Serious Injury After SP Action

	Logit Coefficient (ratio, coef./SE)			
	All Types of Crime	Robbery	Assault	Confrontational Burglary
Victim's Self Protection				
Attack with Gun	-16.543	-15.912	-16.069	-9.716
	(-0.00)	(-0.00)	(-0.00)	(0.00)
Threat with Gun	-0.454	-15..226	0.580	-18.139
	(-0.41)	(-0.00)	(0.52)	(0.00)
Attack with nongun weapon	0.018	-1.373	0.176	-106.511
	(0.02)	(-0.53)	(0.16)	(-0.02)
Threat with nongun weapon	0.025	-14.595	0.351	-29.267
	(0.03)	(-0.00)	(0.38)	(0.00)
Attack without weapon	**1.168**	**3.836**	0.691	-60.528
	(5.00)	(4.76)	(1.90)	(-0.02)
Threat without weapon	-0.440	-17.795	-0.131	-61.822
	(-0.65)	(-0.00)	(-0.16)	(-0.01)
Struggled	**1.029**	*1.560*	**1.001**	43.032
	(4.99)	(2.26)	(3.14)	(0.02)
Chased, held offender	-0.677	0.651	-15.680	-72.550
	(-0.87)	(0.60)	(-0.01)	(-0.02)
Yelled, turned on lights	-0.110	0.082	0.085	-21.407
	(-0.38)	(0.08)	(0.18)	(-0.01)
Stalled, pretended to cooperate	*0.883*	0.751	0.802	-58.006
	(2.13)	(0.73)	(1.00)	(-0.01)
Argued, reasoned, pleaded	0.474	0.817	-0.557	-32.790
	(1.85)	(0.87)	(-1.06)	(-0.01)
Ran away, hid	-0.561	-1.044	0.021	0.657
	(-1.82)	(-0.86)	(0.05)	(0.00)
Tried to attract attention	-1.335	-19.940	-15.907	18.300
	(-1.54)	(-0.26)	(-0.01)	(0.00)
Screamed from pain or fear	**1.444**	**3.946**	-0.277	31.363
	(3.52)	(3.43)	(-0.18)	(0.01)
Other SP strategies	0.101	**2.351**	-0.380	-54.514
	(0.36)	(3.24)	(-0.82)	(-0.01)
PowerDifference				
ADVSEXOF	**0.787**	-0.455	0.017	14.560
	(3.74)	(-0.58)	(0.05)	(0.01)
ADVAGEOF	*0.528*	0.093	**0.848**	32.883
	(2.42)	(0.14)	(2.78)	(0.02)
ADVNUM	*0.064*	0.038	*0.071*	1.362
	(2.57)	(0.42)	(2.48)	(0.01)
Offender Weapons and Attack				
OHADGUN	**0.897**	**2.130**	0.491	-150.691
	(3.26)	(2.91)	(1.09)	(-0.02)
OHADKNIF	*0.634*	1.081	0.744	44.741
	(2.16)	(1.37)	(1.83)	(0.02)
OHADSHAP	**1.489**	**3.469**	1.218	41.528
	(3.40)	(3.18)	(1.70)	(0.00)
GOTINHOM	-16.530	-	-	-21.001
	(-0.01)			(-0.01)
GOTINCAR	-16.022	-	-	0.209
	(-0.00)			(0.00)

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.5. (Continued)

	All Types of Crime	Robbery	Assault	Confrontational Burglary
Victim Characteristics				
HADCHILD	0.133	-1.297	-0.174	-12.233
	(0.65)	(-1.90)	(-0.59)	(0.00)
HOUSOWN	-0.427	-1.635	-0.237	4.107
	(-1.79)	(-1.92)	(-0.72)	(0.00)
EMPLOYED	-0.094	0.677	-0.603	35.804
	(-0.43)	(0.98)	(-1.90)	(0.02)
OLD65	-0.931	-15.244	-15.507	27.137
	(-0.78)	(-0.00)	(-0.00)	(0.02)
MARRIED	-0.371	0.015	-0.151	-13.433
	(-1.42)	(0.02)	(-0.41)	(-0.01)
EDUCATIN	0.016	-0.010	-0.003	-1.069
	(0.93)	(-0.19)	(-0.10)	(-0.01)
ARMFORCE	-15.891	-15.968	-15.232	29.608
	(-0.00)	(-0.00)	(-0.00)	(0.00)
BLACK	0.262	**2.387**	-0.179	6.520
	(0.94)	(3.28)	(-0.40)	(0.00)
ASIAN	-1.013	-15.319	-15.464	24.688
	(-0.89)	(-0.00)	(-0.01)	(0.00)
HISPANIC	**0.752**	0.545	**1.160**	-16.435
	(2.88)	(0.58)	(3.37)	(-0.01)
NUMVICEX	*-0.207*	0.054	*-0.522*	-7.050
	(-1.98)	(0.98)	(-2.04)	(0.00)
NUMHOUSE	-0.056	-0.572	-0.133	-25.946
	(-0.24)	(-0.85)	(-0.38)	(-0.02)
Offender Characteristics				
OFDGANG	0.009	0.380	0.068	32.478
	(0.03)	(0.41)	(0.16)	(0.02)
OFDSUBST	0.262	0.396	0.455	-16.105
	(1.32)	(0.65)	(1.57)	(-0.01)
OFDFAMIL	0.115	-1.490	1.114	15.726
	(0.26)	(-0.78)	(2.03)	(0.00)
OSEXINTI	-0.421	-0.193	1.257	-11.353
	(-1.15)	(-0.15)	(2.40)	(0.00)
OSUPERIOR	1.077	-16.101	-0.632	-33.955
	(1.62)	(-0.00)	(-0.39)	(0.00)
OFDACQNT	0.145	0.387	0.111	3.316
	(0.56)	(0.47)	(0.30)	(0.00)
OWORKACQ	0.310	-15.693	1.094	2.288
	(0.61)	(-0.00)	(1.85)	(0.00)
OFDBLACK	0.331	-0.547	0.570	82.758
	(1.08)	(-0.72)	(1.33)	(0.04)
OFDWHITE	-0.174	-0.803	-0.112	58.376
	(-0.60)	(-0.80)	(-0.28)	(0.03)
Incident Circumstances				
RURAL	0.000	-0.709	0.276	-27.641
	(0.00)	(-0.51)	(0.69)	(-0.01)
URBAN	-0.046	-0.762	0.231	-31.547
	(-0.22)	(-1.26)	(0.73)	(-0.03)
ATHOME	*0.675*	2.035	-0.005	-
	(2.12)	(1.67)	(-0.01)	
NEARHOME	0.463	-0.247	0.457	-
	(1.76)	(-0.29)	(1.20)	
SECUPUB	-0.013	0.322	0.209	-
	(-0.04)	(0.37)	(0.53)	
FAMIPRES	-0.002	0.928	*0.987*	36.479
	(-0.01)	(0.96)	(2.10)	(0.02)
OTHRPRES	-0.087	0.506	0.821	-13.490
	(-0.38)	(0.73)	(1.90)	(0.00)
Sample size	15,233	1,251	12,329	1,041
-2 Log-likelihood	1,239	138	625	0

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Table 5.6. Effect of Including no-SP Cases

	Logit Coefficient (ratio, coef./SE)		
	Injury After SP Action		
	Model 1*	Model 2**	Model 3***
	No-SP Cases Out	No SP Cases In	No-SP Cases In
	Those who did no SP were coded as missing	Those who did no SP and were injured were coded as injured after SP Action.	Those who did no SP and were injured were coded as not injured after SP action
Attack with Gun	0.471 (0.55)	-1.051 (-1.23)	0.594 (0.69)
Threat with Gun	-0.517 (-0.85)	**-2.055** (-3.43)	-0.055 (-0.10)
Attack with nongun weapon	0.049 (0.12)	**-1.570** (-3.72)	0.296 (0.84)
Threat with nongun weapon	-0.993 (-1.51)	**-2.687** (-4.11)	*-1.722* (-2.56)
Attack without weapon	**0.597** (4.63)	**-1.024** (-9.31)	**0.869** (8.41)
Threat without weapon	-0.060 (-0.21)	**-1.173** (-4.26)	0.430 (1.93)
Struggled	**0.881** (8.20)	**-0.746** (-8.98)	**1.126** (13.43)
Chased, held Offender	-0.126 (-0.41)	**-1.223** (-4.17)	0.273 (1.10)
Yelled, turned on lights	0.026 (0.18)	**-1.196** (-8.95)	**0.444** (3.95)
Stalled, pretended to cooperate	**0.678** (2.89)	**-0.696** (-3.14)	**1.309** (7.31)
Argued, reasoned, pleaded	**0.365** (2.72)	**-1.176** (-9.83)	**0.906** (8.97)
Ran away, hid	**-0.424** (-2.83)	**-2.102** (-16.03)	0.239 (2.13)
Tried to attract attention	-0.267 (-0.82)	**-1.072** (-3.41)	0.208 (1.05)
Screamed from pain or fear	**0.925** (3.42)	**0.670** (2.47)	**0.892** (5.73)
Other SP strategies	0.140 (1.03)	**-1.713** (-15.47)	**0.628** (5.57)
Call the Police	n/a	**-2.692** (-10.77)	**-0.697** (-3.84)
N	15,233	22,566	25,528

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

* In Model 1, omitted (reference) category is "called the police.
** In Model 2, omitted (reference) category is "no-SP."
*** In Model 3, omitted (reference) category is "no-SP."

Table 5.7. Circumstances of Confrontation by Type of Self Protection employed.

	Frequency	% Offender had age advantage	% Offender had sexual advantage	% Offender had numerical advantage	% Offender had Gun	% Offender had Knife	% Male Victim	% Victim Injured before SP	% Victim was at Home	% Victim was at public place*	% Victim used single SP	% Victim used multiple SP
Attacked with gun	45	31.8	20.0	28.9	28.9	20.0	80.0	13.3	29.5	35.6	62.2	37.8
Threatened with gun	202	36.1	25.2	24.1	21.3	17.3	71.8	5.0	25.2	42.1	63.9	36.1
Attacked w. nongun weapon	230	23.5	26.2	13.5	6.5	17.0	63.5	19.1	23.9	43.7	55.7	44.3
Threatened w. nongun weapon	232	20.2	31.0	12.1	5.2	15.9	61.6	4.7	27.5	47.0	57.8	42.2
Attacked without weapon	2,661	15.4	22.9	11.4	3.3	7.9	63.5	16.0	16.3	57.3	62.3	37.7
Threatened without weapon	540	20.2	15.9	11.1	4.1	7.4	70.9	6.1	15.0	51.3	42.4	57.6
Struggled	4,984	17.5	30.9	12.7	3.8	6.1	57.5	11.6	20.7	51.0	55.2	44.8
Chased, held offender	517	27.1	19.1	12.2	7.0	6.8	73.7	10.8	21.5	52.4	43.8	56.2
Yelled, turned on lights	2,492	21.1	52.8	13.6	4.2	5.2	36.3	8.0	29.8	39.4	38.3	61.7
Stalled, pretended to cooperate	535	20.7	33.6	21.8	29.2	8.8	61.7	6.5	18.1	58.5	52.9	47.1
Argued, reasoned, pleaded	2,700	16.8	37.7	7.4	7.2	5.0	50.3	6.0	23.9	45.7	51.0	49.0
Ran away, hid	3,807	20.3	39.7	20.2	13.1	6.7	49.8	9.2	13.5	56.2	66.5	33.5
Called police or guard	1,990	23.4	50.9	11.1	8.0	5.3	37.6	9.5	37.5	30.2	46.3	53.7
Tried to attract attention	567	18.3	53.9	16.9	7.2	6.5	31.7	11.8	18.2	54.3	23.6	76.4
Screamed from pain or fear	569	15.8	75.6	11.2	6.5	7.6	13.3	19.9	45.2	30.4	15.1	84.9
Other SP strategies	4,149	24.5	30.5	11.8	6.1	5.6	57.1	5.1	14.4	55.0	73.9	26.1
Victim used Weapons at Public Place	301	27.3	14.3	23.9	12.0	19.0	82.3	6.7	0	100	65.9	34.1
Victim used Single SP	14,636	21.0	30.5	13.3	7.1	6.0	57.7	6.7	15.8	54.5	100	0
Victim used Multiple SP	4,882	19.4	41.8	13.6	7.2	6.8	47.3	11.7	25.6	45.1	0	100
Victim used Any SP	19,519	20.6	33.3	13.4	7.1	6.2	55.1	7.9	18.3	52.1	75.0	25.0
Victim used No SP	8,077	21.8	30.7	13.9	10.8	4.5	56.1	-	15.8	57.1	0.0	0.0
Total Incidents	27,595	21.0	32.5	13.5	8.2	5.7	55.4	5.6	17.6	53.6	53.0	17.7

* "Near victims own home" or "at, in, or near a friend's/relative's/neighbor's home" was not included.

Table 5.8. Any Self-Protective Action

	Logit Coefficient (ratio, coef./SE)									
	All Types of Crime		Robbery		Assault		Sexual Assault		Confrontational Burglaries	
Victim Characteristics										
YOUG1529	**0.128**	(3.30)	*0.276*	(2.01)	*0.096*	(2.18)	0.018	(0.07)	0.253	(1.53)
BLACK	0.079	(1.25)	-0.268	(-1.44)	**0.227**	(2.96)	*1.035*	(1.98)	-0.313	(-1.23)
ASIAN	-0.216	(-1.59)	-0.496	(-1.33)	-0.245	(-1.52)	1.013	(0.79)	0.127	(0.22)
HISPANIC	-0.054	(-0.82)	**-0.632**	(-3.23)	0.135	(1.72)	0.538	(1.18)	-0.230	(-0.84)
MALE	*0.114*	(1.97)	0.009	(0.03)	*0.126*	(2.04)	-1.117	(-0.80)	0.046	(0.18)
HOUSOWN	0.016	(0.33)	0.094	(0.55)	0.025	(0.48)	-0.089	(-0.27)	-0.044	(-0.24)
EMPLOYED	**0.120**	(2.63)	0.085	(0.56)	*0.115*	(2.18)	**0.798**	(2.57)	-0.067	(-0.39)
OLD65	**-0.568**	(-4.64)	*-1.094*	(-2.55)	**-0.517**	(-3.19)	0.205	(0.12)	-0.371	(-1.28)
MARRIED	**0.156**	(3.28)	0.135	(0.75)	**0.175**	(3.24)	-0.041	(-0.10)	0.120	(0.68)
EDUCATIN	**0.012**	(3.67)	*0.025*	(2.10)	**0.012**	(3.11)	-0.030	(-1.22)	0.001	(0.11)
MILITPOL	0.031	(0.13)	20.689	(0.00)	-0.165	(-0.66)	20.630	(0.00)	20.271	(0.00)
NUMVICEX	0.003	(1.66)	-0.002	(-0.12)	0.003	(1.67)	-0.029	(-1.52)	-0.005	(-0.40)
NUMHOUSE	-0.011	(-0.21)	0.119	(0.67)	0.018	(0.31)	0.026	(0.07)	-0.108	(-0.56)
HADCHILD	*0.084*	(2.10)	0.062	(0.42)	0.061	(1.37)	-0.443	(-1.55)	0.267	(1.56)
Offender Characteristics										
OSEXINTI	**-0.402**	(-5.43)	0.570	(1.53)	**-0.452**	(-5.02)	*-0.926*	(-2.55)	-0.223	(-1.07)
OFDFAMIL	-0.091	(-0.99)	0.704	(1.74)	-0.194	(-1.81)	1.069	(1.86)	0.191	(0.53)
OFDACQNT	0.032	(0.63)	0.401	(1.72)	-0.037	(-0.67)	0.177	(0.53)	-0.188	(-0.93)
OWORKACQ	0.006	(0.07)	-0.271	(-0.42)	-0.101	(-1.22)	0.578	(0.95)	0.299	(0.42)
OFDBLACK	-0.100	(-1.63)	*-0.406*	(-2.24)	-0.022	(-0.30)	0.286	(0.58)	0.258	(1.05)
OFDWHITE	0.030	(0.55)	*-0.414*	(-2.18)	0.042	(0.67)	**1.181**	(3.11)	0.236	(1.11)
OFDGANG	0.068	(0.94)	*-0.554*	(-2.28)	0.109	(1.33)	0.845	(1.30)	-0.101	(-0.24)
OFDSUBST	**0.319**	(7.44)	0.080	(0.50)	**0.334**	(6.88)	-0.063	(-0.24)	0.232	(1.44)
Location of Incidents										
SOUTH	-0.070	(-1.45)	-0.146	(-0.85)	-0.069	(-1.27)	*-0.732*	(-2.20)	-0.113	(-0.61)
WEST	**-0.139**	(-2.66)	-0.332	(-1.82)	**-0.159**	(-2.71)	0.280	(0.71)	0.077	(0.37)
MIDWEST	*-0.113*	(-2.16)	-0.350	(-1.76)	-0.093	(-1.59)	-0.041	(-0.11)	-0.098	(-0.45)
RURAL	-0.067	(-1.31)	-0.440	(-1.95)	-0.059	(-1.04)	-0.255	(-0.76)	-0.250	(-1.30)
URBAN	0.007	(0.15)	-0.226	(-1.53)	0.056	(1.07)	-0.471	(-1.44)	0.192	(1.06)
Incident Characteristics										
PREINJU	**5.127**	(8.26)	**3.376**	(4.25)	**6.033**	(5.62)	21.541	(0.00)	20.388	(0.00)
ADVSEXOF	0.121	(1.91)	-0.224	(-0.68)	0.115	(1.62)	-0.332	(-0.25)	-0.099	(-0.41)
ADVNUM	0.011	(1.11)	-0.028	(-0.87)	0.017	(1.46)	-0.256	(-1.67)	-0.009	(-0.15)
OHADGUN	**-0.364**	(-5.65)	**-1.267**	(-7.57)	0.061	(0.75)	**-2.597**	(-3.51)	*-0.717*	(-2.28)
OHADKNIF	**0.350**	(4.11)	0.062	(0.30)	**0.453**	(4.40)	**-2.647**	(-2.67)	0.145	(0.41)
OHADSHAP	**0.742**	(3.28)	*1.730*	(2.14)	*0.596*	(2.47)	-2.090	(0.00)	0.074	(0.06)
Other Incident Circumstances										
ATHOME	0.124	(1.93)	-0.613	(-1.93)	0.016	(0.17)	**-1.346**	(-3.62)	-	-
NEARHOME	**0.134**	(2.70)	0.221	(1.20)	0.083	(1.52)	**-0.936**	(-2.77)	-	-
FAMIPRES	**0.189**	(3.38)	**0.590**	(2.65)	*0.167*	(2.53)	0.447	(1.18)	-0.037	(-0.22)
OTHRPRES	**0.137**	(3.12)	**0.430**	(2.98)	0.056	(1.10)	-0.137	(-0.41)	0.262	(1.04)
Constant	**-5.956**	(-6.99)	-21.491	(0.00)	**-6.981**	(-5.57)	-34.83	(0.00)	-39.918	(0.00)
Sample Size	14,728		1,264		11,805		447		977	
-2 Log-likelihood	17,788		1,450		14,032		428		1,167	

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.9. Forceful Resistance

	Logit Coefficient (ratio, coef./SE)									
	All Types of Crime		Robbery		Assault		Sexual Assault		Confrontational Burglaries	
Victim Characteristics										
YOUG1529	**0.231** (3.67)		0.233	(1.06)	**0.273**	(3.85)	0.011	(0.03)	0.123	(0.45)
BLACK	0.089 (0.87)		-0.580	(-1.73)	*0.252*	(2.20)	0.974	(1.12)	-0.628	(-1.29)
ASIAN	-0.071 (-0.29)		-0.108	(-0.19)	-0.122	(-0.41)	2.213	(1.41)	-0.111	(-0.10)
HISPANIC	-0.069 (-0.66)		-0.087	(-0.27)	-0.092	(-0.77)	-1.686	(-1.91)	0.168	(0.37)
MALE	**0.479** (4.91)		**1.694**	(2.65)	**0.426**	(4.15)	16.761	(0.00)	**1.468**	(2.91)
HOUSOWN	**-0.261** (-3.52)		*-0.586*	(-2.14)	**-0.239**	(-2.88)	0.222	(0.44)	0.132	(0.43)
EMPLOYED	0.049 (0.65)		0.294	(1.15)	0.064	(0.75)	0.370	(0.60)	-0.009	(-0.03)
OLD65	0.211 (0.80)		0.584	(0.77)	-0.599	(-1.29)	-17.23	(0.00)	*0.986*	(1.99)
MARRIED	**-0.352** (-4.18)		-0.075	(-0.26)	**-0.292**	(-3.07)	-0.596	(-0.76)	*-0.686*	(-2.02)
EDUCATIN	**-0.029** (-5.16)		-0.003	(-0.16)	**-0.039**	(-5.99)	-0.080	(-1.87)	0.007	(0.32)
MILITPOL	-0.122 (-0.31)		1.482	(1.30)	-0.269	(-0.62)	-19.74	(0.00)	-18.219	(0.00)
NUMVICEX	-0.001 (-0.48)		0.001	(0.02)	-0.001	(-0.25)	0.020	(0.67)	-0.011	(-0.14)
NUMHOUSE	-0.081 (-0.98)		-0.412	(-1.45)	-0.034	(-0.37)	0.200	(0.34)	0.256	(0.77)
HADCHILD	*0.159* (2.44)		0.226	(0.95)	*0.148*	(2.04)	-0.160	(-0.34)	0.234	(0.80)
Offender Characteristics										
OSEXINTI	-0.047 (-0.35)		0.672	(1.25)	-0.026	(-0.16)	**1.988**	(2.92)	-0.482	(-1.20)
OFDFAMIL	0.134 (0.89)		*1.573*	(2.28)	0.231	(1.32)	0.819	(0.86)	-0.721	(-1.12)
OFDACQNT	**0.237** (3.09)		0.424	(1.20)	**0.249**	(2.93)	-0.110	(-0.20)	0.068	(0.20)
OWORKACQ	**-0.670** (-3.79)		-20.052	(0.00)	**-0.714**	(-3.65)	0.947	(1.46)	-20.747	(0.00)
OFDBLACK	-0.038 (-0.38)		0.243	(0.84)	-0.133	(-1.14)	0.617	(0.55)	0.726	(1.70)
OFDWHITE	*-0.185* (-2.05)		-0.196	(-0.65)	-0.183	(-1.80)	0.878	(0.93)	0.208	(0.54)
OFDGANG	-0.216 (-1.84)		0.140	(0.37)	-0.179	(-1.39)	-18.40	(0.00)	-0.729	(-1.00)
OFDSUBST	**0.308** (4.72)		0.010	(0.04)	**0.330**	(4.49)	0.764	(1.68)	**0.877**	(3.22)
Location of Incidents										
SOUTH	-0.060 (-0.77)		-0.436	(-1.47)	-0.032	(-0.37)	-0.953	(-1.41)	0.499	(1.57)
WEST	0.087 (1.04)		*0.590*	(2.13)	0.025	(0.26)	0.366	(0.69)	0.229	(0.64)
MIDWEST	*-0.221* (-2.49)		0.525	(1.63)	*-0.212*	(-2.16)	-0.369	(-0.55)	-0.779	(-1.73)
RURAL	0.080 (0.97)		0.307	(0.92)	0.045	(0.49)	*1.392*	(2.53)	-0.049	(-0.15)
URBAN	0.036 (0.49)		-0.283	(-1.14)	*0.166*	(2.00)	0.545	(0.95)	-1.046	(-3.07)
Incident Characteristics										
PREINJU	**0.977** (11.18)		0.445	(1.40)	**1.033**	(10.77)	0.654	(0.65)	*1.053*	(2.29)
ADVSEXOF	*-0.279* (-2.44)		0.882	(1.30)	**-0.415**	(-3.20)	18.071	(0.00)	0.101	(0.20)
ADVNUM	-0.026 (-1.50)		-0.029	(-0.50)	-0.020	(-1.05)	*-0.858*	(-2.26)	-0.120	(-1.07)
OHADGUN	**-0.342** (-2.72)		-0.459	(-1.31)	**-0.372**	(-2.59)	-19.82	(0.00)	-0.210	(-0.36)
OHADKNIF	**0.563** (5.43)		**0.775**	(2.87)	**0.385**	(3.12)	-19.62	(0.00)	**1.494**	(3.28)
OHADSHAP	0.093 (0.37)		0.969	(1.61)	-0.234	(-0.76)	20.912	(0.00)	-0.190	(-0.14)
Other Incident Circumstances										
ATHOME	-0.024 (-0.22)		*-1.642*	(-2.50)	0.059	(0.38)	-2.397	(-2.87)	-	-
NEARHOME	-0.102 (-1.29)		-0.306	(-1.03)	-0.092	(-1.05)	-0.129	(-0.25)	-	-
FAMIPRES	0.008 (0.09)		-0.835	(-1.94)	*0.250*	(2.24)	-0.805	(-0.93)	-0.272	(-0.90)
OTHRPRES	*0.163* (2.17)		-0.078	(-0.34)	**0.390**	(4.36)	**-1.939**	(-2.82)	-0.534	(-1.34)
Constant	*-2.403* (-2.55)		11.329	(0.00)	-1.844	(-1.63)	15.279	(0.00)	33.729	(0.00)
Sample Size	9,728		702		7,985		309		667	
-2 Log likelihood	7,677		623		6,147		195		457	

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.10. Weapon SP Action

	Logit Coefficient (ratio, coef./SE)						
	All Types of Crime		Robbery		Assault		Confrontational Burglaries
Victim Characteristics							
YOUG1529	-0.068 (-0.56)		0.177 (0.43)		-0.147 (-1.02)		0.618 (1.83)
BLACK	-0.304 (-1.59)		-0.760 (-1.10)		-0.157 (-0.71)		-0.867 (-1.52)
ASIAN	*1.667* (-1.96)		-18.000 (0.00)		-1.227 (-1.43)		-18.234 (0.00)
HISPANIC	-0.015 (-0.08)		-0.494 (-0.79)		0.046 (0.20)		-0.558 (-0.82)
MALE	**1.028** (3.82)		2.554 (1.10)		**0.954** (3.19)		**1.828** (2.62)
HOUSOWN	-0.205 (-1.48)		0.883 (1.67)		*0.392* (-2.42)		-0.003 (-0.01)
EMPLOYED	0.166 (1.15)		0.635 (1.32)		0.186 (1.04)		-0.192 (-0.51)
OLD65	*0.685 (1.96)*		-18.516 (0.00)		-0.565 (-0.69)		**1.563** (2.82)
MARRIED	-0.066 (-0.46)		-0.563 (-1.04)		0.096 (0.57)		-0.510 (-1.29)
EDUCATIN	-0.008 (-0.83)		0.019 (0.55)		-0.012 (-0.94)		-0.004 (-0.13)
ARMFORCE	0.862 (1.84)		*3.029* (2.07)		0.827 (1.51)		-18.380 (0.00)
NUMVICEX	0.002 (0.61)		0.029 (0.92)		0.001 (0.41)		0.020 (0.21)
NUMHOUSE	*-0.383* (-2.43)		0.534 (0.95)		*-0.475* (-2.53)		-0.048 (-0.12)
HADCHILD	0.023 (0.18)		0.491 (1.04)		-0.024 (-0.16)		0.048 (0.13)
Offender Characteristics							
OSEXINTI	-0.422 (-1.80)		0.630 (0.72)		0.238 (0.79)		-0.935 (-1.67)
OFDFAMIL	*-0.587* (-2.08)		1.691 (1.38)		0.149 (0.44)		-0.978 (-1.15)
OFDACQNT	**-0.550** (-3.17)		-2.247 (-1.47)		-0.390 (-1.91)		-0.397 (-0.93)
OWORKACQ	*-0.881* (-2.37)		-19.270 (0.00)		-0.755 (-1.90)		-20.651 (0.00)
OFDBLACK	**0.556** (3.08)		1.052 (1.78)		*0.460* (2.13)		*1.226* (2.28)
OFDWHITE	-0.235 (-1.36)		0.436 (0.74)		-0.295 (-1.44)		0.258 (0.52)
OFDGANG	-0.058 (-0.28)		1.133 (1.72)		0.014 (0.06)		-1.120 (-0.95)
OFDSUBST	**0.495** (4.22)		-0.233 (-0.52)		**0.511** (3.68)		**0.900** (2.57)
Location of Incidents							
SOUTH	0.166 (1.17)		-0.301 (-0.59)		0.096 (0.56)		0.744 (1.95)
WEST	0.165 (1.01)		0.229 (0.43)		0.197 (1.02)		-0.068 (-0.14)
MIDWEST	-0.192 (-1.07)		0.562 (0.96)		-0.233 (-1.10)		-0.484 (-0.90)
RURAL	-0.145 (-0.92)		0.639 (1.21)		-0.237 (-1.21)		-0.251 (-0.61)
URBAN	**-0.410** (-2.78)		-0.516 (-1.04)		-0.223 (-1.29)		*-1.093* (-2.55)
Incident Characteristics							
PREINJU	0.236 (1.22)		-1.528 (-1.53)		0.334 (1.52)		0.566 (0.93)
ADVSEXOF	0.484 (1.69)		2.691 (1.14)		0.390 (1.18)		0.553 (0.81)
ADVNUM	0.022 (0.94)		0.018 (0.21)		0.037 (1.66)		-0.324 (-1.48)
OHADGUN	**0.701** (4.24)		0.006 (0.01)		**0.910** (4.96)		-0.154 (-0.21)
OHADKNIF	**1.383** (9.40)		**1.726** (4.02)		**1.278** (7.02)		**2.136** (4.11)
OHADSHAP	0.434 (1.12)		-16.979 (0.00)		0.766 (1.93)		-20.350 (0.00)
Other Incident Circumstances							
ATHOME	**0.935** (5.22)		-3.098 (-1.59)		0.057 (0.18)		- -
NEARHOME	*0.312* (2.06)		0.219 (0.41)		0.190 (1.11)		- -
FAMIPRES	0.106 (0.65)		-0.609 (-0.82)		0.370 (1.78)		-0.398 (-1.01)
OTHRPRES	-0.100 (-0.72)		-0.054 (-0.13)		0.156 (0.91)		**-1.847** (-2.79)
Constant	**-6.626** (-3.57)		56.132 (0.00)		-7.301 (0.18)		73.396 (0.00)
Sample Size	9,728		702		7,985		667
-2 Log-likelihood	2,740		229		2,015		320

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed)

Table 5.11. Resistance with a Gun

	All Types of Crime		Robbery		Assault		Confrontational Burglaries	
Logit Coefficient (ratio, coef./SE)								
Victim Characteristics								
YOUG1529	-0.391	(-1.91)	0.063	(0.05)	**-0.683**	(-2.71)	0.945	(1.89)
BLACK	**-0.962**	(-2.71)	-16.263	(-0.01)	-0.722	(-1.85)	-1.706	(-1.31)
ASIAN	-1.706	(-1.31)	-13.414	(0.00)	-1.032	(-0.78)	-17.308	(0.00)
HISPANIC	*-1.174*	(-2.26)	-17.458	(-0.01)	-0.800	(-1.45)	-17.780	(0.00)
MALE	**2.055**	(2.76)	14.745	(0.00)	*1.691*	(2.25)	18.339	(0.00)
HOUSOWN	-0.248	(-1.10)	0.227	(0.14)	-0.454	(-1.68)	-0.134	(-0.23)
EMPLOYED	0.176	(0.72)	18.127	(0.01)	0.312	(0.98)	-0.984	(-1.62)
OLD65	0.729	(1.49)	-16.409	(0.00)	0.327	(0.39)	0.426	(0.53)
MARRIED	-0.147	(-0.66)	-0.231	(-0.20)	0.084	(0.31)	-1.223	(-1.94)
EDUCATIN	0.023	(1.42)	0.100	(0.91)	0.000	(-0.01)	*0.089*	(2.18)
ARMFORCE	**1.589**	(2.95)	*5.497*	(2.32)	**1.676**	(2.63)	-17.925	(0.00)
NUMVICEX	0.003	(0.74)	0.018	(0.30)	0.003	(0.80)	0.154	(1.40)
NUMHOUSE	-0.400	(-1.54)	0.311	(0.20)	-0.249	(-0.81)	-0.691	(-1.00)
HADCHILD	-0.351	(-1.62)	-2.399	(-1.32)	-0.346	(-1.38)	-0.653	(-1.12)
Offender Characteristics								
OSEXINTI	*-0.850*	(-2.04)	-13.601	(0.00)	0.510	(1.03)	**-3.581**	(-2.56)
OFDFAMIL	-0.618	(-1.34)	2.902	(0.00)	0.725	(1.42)	-19.191	(0.00)
OFDACQNT	-0.455	(-1.59)	-14.474	(-0.01)	-0.143	(-0.41)	-1.261	(-1.83)
OWORKACQ	-0.453	(-0.87)	-14.785	(0.00)	-0.427	(-0.72)	-18.851	(0.00)
OFDBLACK	*0.629*	(2.18)	*4.281*	(2.26)	0.570	(1.60)	0.527	(0.71)
OFDWHITE	-0.257	(-0.93)	2.996	(1.69)	-0.347	(-1.00)	0.283	(0.42)
OFDGANG	0.045	(0.14)	-13.702	(0.00)	0.307	(0.90)	0.133	(0.10)
OFDSUBST	*0.385*	(2.02)	-3.085	(-1.80)	0.370	(1.61)	**1.573**	(2.85)
Location of Incidents								
SOUTH	0.188	(0.85)	0.612	(0.58)	0.073	(0.27)	0.210	(0.38)
WEST	-0.060	(-0.22)	1.605	(0.90)	-0.186	(-0.54)	-0.609	(-0.82)
MIDWEST	-0.479	(-1.52)	-16.384	(-0.01)	-0.552	(-1.49)	-0.979	(-1.12)
RURAL	-0.051	(-0.21)	2.177	(1.61)	-0.149	(-0.48)	0.096	(0.15)
URBAN	*-0.648*	(-2.47)	-3.900	(-1.55)	-0.318	(-1.04)	-1.019	(-1.46)
Incident Characteristics								
PREINJU	0.124	(0.36)	-16.332	(-0.01)	0.240	(0.60)	1.758	(1.80)
ADVSEXOF	1.422	(1.87)	14.735	(0.00)	0.911	(1.15)	17.426	(0.00)
ADVNUM	0.040	(1.37)	0.100	(0.33)	*0.056*	(2.03)	-0.311	(-0.91)
OHADGUN	**1.414**	(6.27)	1.875	(1.28)	**1.734**	(6.92)	-2.360	(-1.25)
OHADKNIF	**1.444**	(6.19)	**4.128**	(2.77)	**1.296**	(4.28)	1.112	(1.40)
OHADSHAP	0.625	(1.07)	-11.294	(0.00)	0.986	(1.63)	-17.428	(0.00)
Other Incident Circumstances								
ATHOME	**1.339**	(4.92)	-8.055	(0.00)	-0.079	(-0.15)	-	-
NEARHOME	*0.573*	(2.35)	-0.175	(-0.07)	0.399	(1.46)	-	-
FAMIPRES	0.008	(0.03)	-14.871	(-0.01)	0.008	(0.02)	-0.462	(-0.78)
OTHRPRES	-0.367	(-1.67)	1.648	(1.29)	-0.267	(-1.02)	*-2.467*	(-2.22)
Constant	**-9.444**	(-2.75)	77.092	(0.00)	**-11.21**	(-2.97)	62.560	(0.00)
Sample Size	9,728		702		7,985		667	
-2 Log-likelihood	1,179		44		834		157	

Bold p<0.01 (two-tailed) *Italic* 0.01<P<0.05 (two tailed

**Table 5.12. Actual and Perceived Injury Causing Effects of SP actions**

	Frequency of SP Action (Single SP only)	Actual Effect % of Victims Injured After SP	Perceived Effect of SP % Victims thought SP led to injury or greater injury	Perceived Effect of SP % Victims thought SP helped them avoid injury, scared offender off, or helped them escape	% Positive Mismatch[a]	% Negative Mismatch[b]	% Victim Who Had a Positive Mismatch Among All Victims	% Victim Who Had a Negative Mismatch Among All Victims
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Attacked with gun	28	0.0	0.0	63.5	-	-	-	-
Threatened with gun	129	2.6	1.4	83.5	75.0	0.0	2.0	0.0
Attacked w. nongun weapon	128	2.8	0.8	72.5	100.0	0.9	2.8	0.8
Threatened w. nongun weapon	134	1.0	0.0	74.3	100.0	0.0	1.0	0.0
Attacked without weapon	1,652	3.8	2.6	59.3	75.8	0.9	2.9	0.6
Threatened without weapon	229	0.9	0.6	64.5	50.0	0.0	0.3	0.0
Struggled	2,744	4.4	3.1	59.4	88.4	0.9	3.9	0.5
Chased, held offender	226	2.2	0.8	43.2	100.0	0.5	2.2	0.4
Yelled, turned on lights	951	2.2	0.8	60.4	90.5	0.2	2.0	0.2
Stalled, pretended to cooperate	282	5.0	1.1	71.6	85.7	0.0	4.3	0.0
Argued, reasoned, pleaded	1,372	4.0	1.1	47.3	77.8	0.0	3.1	0.0
Ran away, hid	2,523	1.7	0.6	79.3	85.7	0.2	1.4	0.2
Called police or guard	919	0.6	0.0	57.6	100.0	0.0	0.6	0.0
Tried to attract attention	133	0.6	0.8	54.3	100.0	0.9	0.6	0.8
Screamed from pain or fear	86	4.4	0.8	42.2	100.0	0.0	4.4	0.0
Other SP strategies	3,057	2.2	0.8	50.6	85.3	0.1	1.9	0.1
Total	14,593	2.8	1.4	60.2	84.4	0.3	2.4	0.3

a. Percentage of victims who did NOT think SP led to injury or greater injury out of victims who used SP and were injured after SP.

b. Percentage of victims who thought SP led to injury or greater injury out of victims who used SP and were NOT injured after SP.

Victim's Socioeconomic Power

Figure 1.
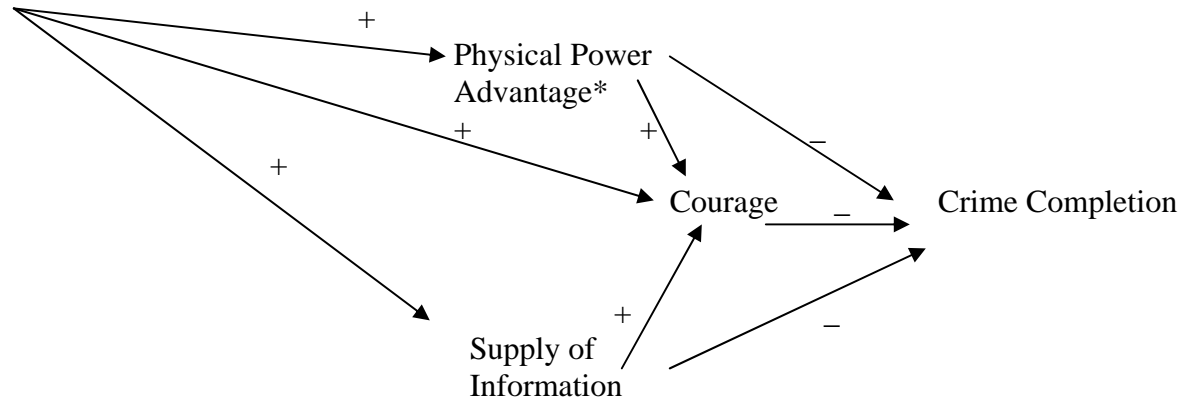
* Victim's physical power advantage over offender.

Figure 2.1. Causal Model of Crime Outcomes

Expectation of Power Advantage   **Criminal Attempt**   **Crime Completion**

Offender expected PA over Victim ————————➤ Crime Attempted

                                            IF O has actual PA ————————————➤ Crime Completion   (case 1)

                                            IF O does not actual have PA ————————➤ Crime Not Completed (case 2)

Offender did NOT expect ————————➤ Crime Not Attempted   (case 3)
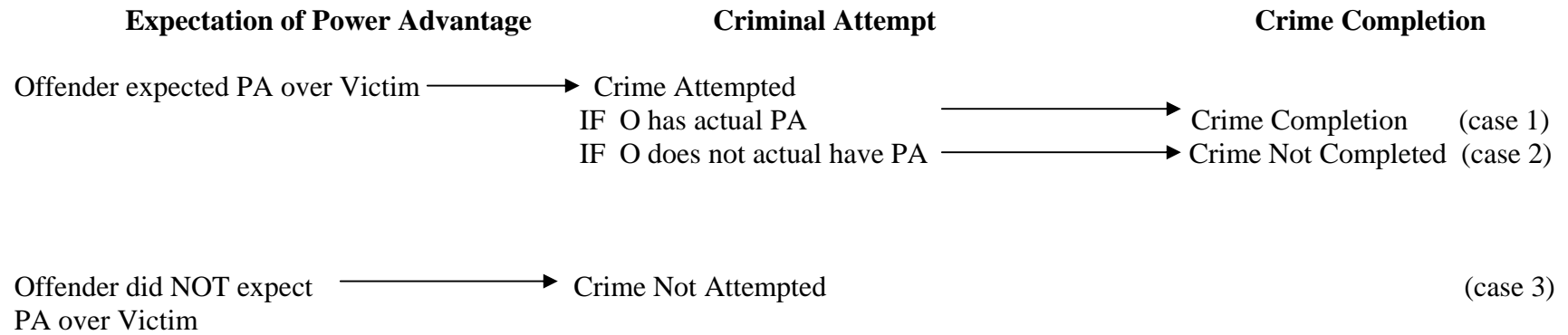PA over Victim

Figure 2.2. The Sequence of Crime Events Depending on the Offenders' Perception and Reality of Power Advantage
              over Victims

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While a doctoral student at Florida State, Jongyeon Tark worked for numerous research projects mostly with Dr. Gary Kleck. As a result, he has published a paper at *Criminology* as first author in 2004. In the same year, he was awarded National Institute of Justice Grant with Gary Kleck, and was also awarded funding from the Bureau of Justice Statistics to attend the Inter-Consortium of Political and Social Research workshop on the quantitative analysis of crime and criminal justice data at the University of Michigan.