Victim Injury and Social Distance: A National Test of a General Principle of Conflict

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Our inquiry focuses on why some violent offenses but not others result in injury to the victim. Building on existing theory nested in the paradigm of pure sociology, we propose and test a general principle of conflict: Victim injury varies directly with social distance. This principle predicts that offenders are more likely to harm victims with whom they are less well acquainted and less similar culturally. We test three hypotheses derived from this principle with data from the National Crime Victimization Survey and find little support for the theory. Rather, findings suggest exactly the opposite of that predicted: As social distance between offender and victim increases, the odds of victim injury decreases. Recommendations of additional research are made.

N ot all violent offenses result in physical harm to the victim; some escape unscathed, whereas others are bruised, cut, or shot. What distinguishes violent crimes that result in victim injury from those that do not? Commonly explored variables include whether the victim resists (Tark & Kleck, 2004; Wright & Decker, 1997), if the offender possesses a firearm (Wells & Horney, 2002), and the sociodemographic traits of individuals (Apel, Dugan, & Powers, 2013), or of entire communities (Baumer, Horney, Felson, & Lauritsen, 2003). In this article, we focus on a factor derived from the paradigm of pure sociology—social distance.

Wherever there are two or more people, there is social distance. In this sense, social distance is as old as human history. There are two types of social distance: relational distance and cultural distance (Black, 1976). The former refers to how much people are involved in each other's lives, whereas the latter is the degree of cultural similarity between them. More intimacy and cultural likeness amount to "closer" or "smaller" social distance. The

question addressed in this article is whether offenders are more or less likely to injure victims with whom they are closer in social distance.

Drawing on the work of Black (1998) and Cooney (2006), we propose that when an offender is less intimate with the victim and they are more distinct culturally, the perpetrator is more likely to injure the target. Among other ways, our study contributes to the literature by being the first to test this theory with a nationally representative dataset. In what follows, first, we describe pure sociology and prior research. Then, we state our hypotheses and detail the data, methods, and analytic techniques used to test them. After presenting our findings, we discuss their implications for future research and theory.

PURE SOCIOLOGY

The goal of pure sociology is to explain social behavior as a function of social traits (Black, 1976, 1995). Any social behavior may be theorized with this perspective. To date, pure sociology has been used to explain medicine, art (Black, 1998), welfare (Michalski, 2003), drug trade (Jacques & Wright, 2014), predation (Cooney, 2006), and several types of social control, including law (Black, 1976, 1980, 1989, 1998; Cooney, 2009), vigilantism (Black, 1983; Cooney, 1998, 2009; Phillips, 2003; Phillips & Cooney, 2005), lynching, rioting (Senechal de la Roche, 1996), genocide (Campbell, 2010), and terrorism (Black, 2004a).

As explained by pure sociology's creator, Black (1995), what makes the paradigm "pure" is that it does not incorporate psychology, it does not make assumptions about motivation, and people are not the unit of analysis. According to pure sociologists, the benefit of taking a nonsubjective, nonteleological, and nonanthropocentric approach is it increases the testability and generality of theory (for further details, see especially Black, 1995).

On that note, pure sociology's analytic focus is the social geometry of cases, not people *per se* (Black, 1995). Social geometry refers to the social status of and social distance between everyone involved in an interaction. To be clear, pure sociology explains behavior by analyzing the joint characteristics of who is involved in an interaction, which is distinct from analyzing the effect of an individual's or group's characteristics (e.g., self-control, disadvantage) on behavior.

Social status refers to rank in a hierarchy; it increases, for instance, as does one's wealth, community engagement, organization, and sophistication but decreases concomitantly with greater subjection to social control. Whereas social status is the property of a single actor, the focus of this article—social distance—is a joint property.

As mentioned earlier, there are two kinds of social distance: relational and cultural. Relational distance is the amount of intimacy between actors. People who have interacted more with each other are closer in relational distance (i.e., more intimate). For example, two strangers are less intimate than acquaintances. Cultural distance is the amount of similarity between actors in their expressions and evaluations of what is good, true, or beautiful. As people become more similar in that regard, they become closer in cultural distance. Two people who speak or dress alike are closer than two people who do not, for instance. Thus, as a whole, social distance decreases as actors become more intimate and more culturally alike.

Social Distance and Violence

This article draws on two existing pure sociological theories, namely Black's (1998) theory of self-help and Cooney's (2006) theory of predation. Self-help is defined as a unilateral action against a perceived wrongdoing (Black, 1983); assault is an example (Jacobs & Wright, 2006). Predation is the nonmoralistic seizure of another actor's property (Cooney, 2006), as are many robberies (Wright & Decker, 1997). Black and Cooney theorize, respectively, that self-help and predation vary directly with social distance. Herein, this direct relationship between social distance (relational and cultural) and self-help/predation is referred to as a *general principle of conflict*—or *GPC* for short (see Rennison, Jacques, & Berg, 2010). To be clear, predation and self-help constitute two sides of conflict: predation can start it, self-help is a way to handle it.

The GPC applies to both the rate and seriousness of violence. Regarding the rate, it suggests that people who are less intimate and less culturally alike are more likely to retaliate against and prey on each other. A wealth of cross-cultural evidence supports this assertion (e.g., see especially Black, 1983, 1998; Cooney, 1998, 2006, 2009; Phillips & Cooney, 2005). However, the focus of the present article is the *seriousness* of violence, which is often operationalized as whether injury results. The GPC suggests that people who are further apart in social distance are more likely to injure each other during a violent event.

The effect of relational distance on injury is illustrated by a case in which J-Rock, a drug dealer, mercifully punished a snitch; as the dealer explained, "I would have killed him right there [but didn't because] we was tight [friends]" (Topalli, 2005, p. 819). Another example relates to how some drug dealers hire robbers to attack business partners who made a misdeed; when the dealers and partners are friends, however, the employer's order will come with a stipulation: "If you are going to hurt him, hurt him. But try not to do too much shit to him. *No lo maten* [i.e., do not kill him]" (Contreras, 2013, p. 150). And an example of how cultural distance affects injury comes from Anderson's (1999) ethnography of street life. He found evidence that robbers are less likely to injure victims that, like them, know the code of the street (see also Baumer et al., 2003). Put differently, an offender is more likely to hurt a victim who is further from them in cultural distance.

One study to test the GPC is that of Phillips (2003; see also Phillips & Cooney, 2005). He explored the differential handling of conflicts by employing a case-control method. This entailed interviewing convicted murderers about two events: the conflict that ultimately resulted in killing someone, and a similar conflict that resulted in less or no injury. Phillips found that the relational distance between parties affected whether a miscreant was killed or not. Specifically, participants were significantly more likely to kill persons with whom they were less acquainted. For example, a drug dealer was owed money by a friend and by a business acquaintance; the friend was threatened but the acquaintance was killed. A limitation of this study is it did not explore the effect of cultural distance on injury because the sample was culturally homogenous.

It is possible that violent encounters involving socially distant parties are more injurious because such incidents involve more lethal weapons (Black, 2004b). Weapon lethality is an object's potential to inflict bodily harm (Black, 2004b). Black's (1998, 2004b) and Cooney's (2006) theories predict that when violent events occur, less lethal weapons are involved when the involved parties are better acquainted and alike culturally. For example, the notoriously violent Yanomamo of South America kept to manual combat during intragroup fighting but would use cutting implements (e.g., ax, knife) against outsiders. Sometimes, they used sticks when fighting among themselves but would be careful to

not seriously injure one another (Chagnon, 1977). Similarly, members of Hadza tribe of Tanzania were expert in shooting lethal arrows, but camp members practically never shot at each other, instead only hitting one another with the bow (Woodburn, 1979). These examples show how social distance affects weapon lethality, and in turn, may affect injury (see also Cook, 1991; Wells & Horney, 2002).

In two prior studies, we used National Crime Victimization Survey (NCVS) data to test the proposition that weapon lethality varies directly with social distance (Rennison, Jacques, & Berg, 2010; Jacques & Rennison, 2013). The first study showed that perpetrators used more lethal weapons when targeting stranger victims and those of a different race/ethnicity (a proxy measure of cultural distance). A follow-up study focused on how victims reacted to offenders as crimes unfolded. This second investigation found that among the victims who responded physically (i.e., engaged in self-help), more lethal weapons were used against offenders who were strangers or a different race/ethnicity.

As reviewed earlier, the GPC predicts that violent encounters result in more injury when occurring between persons who are further in social distance. Although there are ample qualitative findings in support of the theory (see e.g., Black, 1998; Cooney, 2009), quantitative research has hardly examined it. To our knowledge, only one quantitative study, namely that of Phillips (2003), has explicitly tested the theory. Although it found supportive results, his study was limited in that it could not analyze the effect of cultural distance; also, the generalizability of the findings is unknown because of the sampling procedure (Phillips, 2003). And although our prior research finds that social distance affects the lethality of weapons used in violent interactions, this work did not look at how relational and cultural distance is related to victim *injury* (Rennison, Jacques, & Berg, 2010; Jacques & Rennison, 2013).

THE PRESENT STUDY

The purpose of this article is to test with a nationally representative dataset whether victim injury varies with social distance. We hypothesize that (H1) offenders are most likely to injure a stranger of a different race, least likely to injure a known person of the same race, and moderately likely to injure a known person of a different race or vice versa. In addition, we break down the concept of social distance into its two parts—relational and cultural distance—to separately test for their effects; we predict that (H2) offenders are more likely to injure a stranger than a known person, and (H3) offenders are more likely to injure a different race person than a same race person.

Data

We use 1993–2011 NCVS data to test our three hypotheses. NCVS data are gathered from a large, household sample that is representative of noninstitutionalized people age 12 years or older in the United States. In recent years, approximately 80,000 persons in 40,000 households are interviewed in person or by telephone every 6 months for a total of seven interviews. Based on a series of screening questions on the instrument, it is determined whether a respondent was a victim of a threatened, attempted, or completed crime during the preceding 6 months. Additional instrument questions gather detailed information about the nature of victimizations, victims, and offenders. These dates are selected because 1993 marks the first full year of NCVS data available following a series-breaking redesign. Furthermore, 2011 represents some of the most recent NCVS data available. These

data are aggregated to maximize the number of available cases. Aggregation is especially important given some forms of nonfatal violence are relatively rare events (e.g., violence with firearms, violence resulting in an injured victim). The descriptive statistics provided are based on the full 1993–2011 period. Regression analyses are based on data beginning in quarter 3 of 1993 through the end of 2011. Quarter 3 of 1993 marks the first quarter in which pseudostratum and secucode (standard error computation unit code) variables were included on the NCVS data file. These variables in conjunction with the "person weight" are required to account for the complex sample design of the NCVS during regression (e.g., the survey weighted regression functions in STATA).

Our analyses are based on standard NCVS definitions of violent crime which include threatened, attempted and completed rape, sexual assault, robbery, aggravated assault, and simple assault. Rape includes verbal threats of and forced sexual intercourse including psychological coercion and physical force. Forced sexual intercourse includes vaginal, anal, or oral penetration by the offender(s) using body parts or foreign objects. Sexual assault includes a broad variety of victimizations including verbal threats of, attacks or attempted attacks of unwanted sexual contact which may or may not involve force (e.g., grabbing or fondling). Victims of rape may be male, female, heterosexual, or homosexual. Robbery includes attempted and completed theft from an individual of property or cash by threat of or use of force or threat of force during face-to-face contact. Robbery may or may not include a weapon, and it may or may not result in an injured victim. Aggravated assault involves an attempted or completed attack with a weapon, regardless of whether the victim was injured. Aggravated assault also includes an attack without a weapon that results in a seriously injured victim (e.g., broken bones, loss of consciousness, etc.). Simple assault includes attacks without a weapon that result in minor or no injury to the victim. For more detailed information about weighting in the NCVS, see Rennison and Rand (2007).

The NCVS has several notable strengths for the present purposes. First, it offers a large, nationally representative sample of violent victimizations in the United States of persons age 12 years or older. Such a large sample enables the ability to disaggregate the data and examine specific characteristics of violence (e.g., relational distance, injuries, weapon presence, etc.). A second advantage of these data is that it is characterized by high response rates for both households and individuals. During the 1993–2011 period, the household response rate averaged approximately 93%, whereas the individual response rate was approximately 88%. Third, in contrast to many other crime surveys, the NCVS collects detailed incident-level information, which is important given this study's focus. Fourth, NCVS data offer information on victimizations regardless of whether they were reported to the police or not. Given this, the NCVS data are not subject to well-established variation in crimes reported and not reported to the police. Readers interested in additional information about the NCVS are directed to Rennison and Rand (2007).

Limitations of NCVS data include limited population coverage because one must live in a housing unit or group quarter and be 12 years of age or older to be eligible for this survey. Because the NCVS does not gather information on violence against persons living in military barracks, the homeless, prisoners, or others residing outside a housing unit or group quarters, our findings may not be representative of victimizations found in these populations. A second drawback of the NCVS is limited coverage of violence because the survey does not collect data on an exhaustive assortment of violence; for example, the NCVS does not offer information on homicide because it requires victim responses. Given this, these findings may not apply to any number of other types of violence such as stalking or kidnapping.

A third shortcoming of the dataset is it does not include systematically gathered information on offenders' social status (income, employment, marital status, or formal education), although the survey does collect such information for victims. As it relates to testing pure sociology theories, the absence of such data is a limitation because tests should control for the difference in status between an offender and victim, not simply one or the other's status. However, the NCVS is useful for testing the social *distance* aspects of pure sociology theories because the survey does collect information on the victim-offender relationship (a direct measure of relational distance) and their race (an indirect measure of cultural distance).

Another limitation specific to this work is that the NCVS does not distinguish between retaliatory and predatory acts of the offender. This limitation does not directly apply to our results but does preclude our ability to make claims about how retaliatory and predatory violence may behave differently. For a short discussion of differences in violent predation and retaliation with respect to relational distance, see Cooney and Phillips (2002, p. 86).

A perennial issue with the NCVS concerns series victimizations. Series victimizations are victimizations that are ongoing in nature, in contrast to a discrete violent event. Extant literature identifies limitations of the methods used to deal with series victimizations (see e.g., Rand & Rennison, 2005; Tjaden & Thoennes, 2000). To account for series victimizations, we selected the Lauritsen, Owens, Planty, Rand, and Truman (2012) protocol. This approach enumerates series victimizations based on the victim's estimate of the number of times the victimizations occurred during the 6-month reference period, with a maximum of 10 victimizations per interview.

Regardless of these issues, NCVS data provide a valuable opportunity to examine the relationship between social distance and victim injury. The analyses that follow are based on a sample of 32,694 (unweighted) nonfatal violent victimizations occurring from 1993 to 2011. Following the dropping of missing data, the regressions are based on an unweighted sample size of 31,292 nonfatal violent victimizations.

Measures

This research models the degree to which victim injury is a function of social distance. The dependent variable, *victim injury*, is measured using a dummy variable in which 0 = *no injury* and 1 = *any physical injury to the victim*. The NCVS measures four categories of injury: no injury, minor injury, serious injury, and completed rape without additional injury. In most research, completed rape without additional injury is aggregated with serious injury, and the vast majority of injuries captured by the NCVS are minor in nature (e.g., bruises, cuts, black eyes). In the present research, 22% of all victimizations examined were minor in nature and 4% were serious in nature (including completed rape without additional injury). Given the little variation in the type of injury, we opted to dichotomize our injury variable to reflect injured or not injured.

Social distance is the independent variable of interest. Two methods of measuring social distance are used in the following analysis. One approach to measure social distance is to disaggregate it into its two components: relational distance and cultural distance.

Relational distance is the aspect of social life defined by actors' interaction with each other and is measured as a dichotomous variable: 0 = *known participants* and 1 = *strangers*. Note that an alternative operationalization of relational distance is a three-category variable: intimate, other known, and stranger. This approach would indicate that "intimates" are closer relationally than are "other known," but given the way the data are

collected, it is not possible to ensure this is the reality. Research routinely defines intimates as current or former spouse, boyfriend, or girlfriend. The problem is that it is not clear that an "ex-spouse" is closer relationally than some "other known" person (e.g., one's best friend). Although it is possible to parse current and former spouses in the NCVS, this cannot be done with current and former boyfriends and girlfriends. Given these conceptual considerations, we opted to go with the two-category presentation of relational distance. This approach accurately represents the theory examined. Analyses include only those violent victimizations in which the victim and offender relationship could be determined.

Cultural distance is measured as the similarity between victim and offender's race. Victims and offenders characterized by the same race are considered closer in cultural distance and are coded as 0 = *same race* and 1 = *differing race*. The analysis only includes victimizations where the victim and offender race could be established. Furthermore, given differences in measurement of race for victims (which includes a multitude of categories such as White, Black, American Indian, Asian, biracial, Hispanic, etc.) and offenders (which includes only White, Black, and other) in the NCVS, only victimizations involving White or Black participants were included. Disaggregation of social distance allows a more nuanced understanding of the contribution of each component. A second method used in the analysis is the use of an aggregated/composite social distance measure. This measure is based on the aggregation of cultural and relational distance. This measure is ordered in nature and based on three categories from less to greater social distance: same race, known parties (i.e., closer social distance); either same race, strangers or different race, known parties; different race, strangers (i.e., greater social distance).

All regression models control for relevant correlates. These include social status measures of victims, including their wealth (vertical status), employment and marital status (radial status), and level of formal education (symbolic status; see Black, 1976, 1995, 1998). Pure sociology theory also suggests whether the number of persons involved in a violent encounter can affect its outcome (Black, 1998; Cooney, 1998). For instance, a single offender may be encouraged, or even joined, by friends to injure a victim, but neutral or "crosscutting" parties may discourage such violence. For these reasons, we control for whether there were multiple offenders or bystanders present. Note that the NCVS does not provide information for every aspect of social structure, such as data on offender's wealth, employment, family, education, or data on the legal history (e.g., past arrests) of the victim or offender.

In addition, the models control for known correlates of victim injury or factors that alternative perspectives specify as pertinent. Situational factors that may be relevant include the location of the offense or victim's home (Burgason, Thomas, & Berthelot, 2014; Wilson, 1996). Offenses in which an offender possesses a firearm are also known to result in more injury (Wells & Horney, 2002). Theoretically, this could be because it is easier to hurt a victim by pulling a trigger than other methods (e.g., trying to throw a punch), or it could represent that the offender intended from the outset to hurt the victim (see Felson & Messner, 1996; Phillips & Maume, 2007). Theories and research focused on individual traits suggest that, for various plausible reasons, the age and gender of both victim and offender influences injury of the former. Generally, research finds that younger persons and males are involved in more serious violence as victims and offenders (Gottfredson & Hirschi, 1990; Heimer & De Coster, 1999; Rennison, 2002; Rennison & Rand, 2003). There is a theoretical argument to be made that attacks are more likely to occur against smaller and less strong persons (Felson, 1996), such as women and the elder ethnographic research supports this contention (see e.g., Wright & Decker, 1997).

However, the odds of an attack and whether injury occurs are separate issues. Recent research finds that robbers, at least, are more likely to strike victims who are perceived as more capable and likely to resist—a perception based on, in part, whether the victim is male (Lindegaard, Bernasco, & Jacques, 2015).

Some frequently used correlates of victimization are not used as controls in these models. First, race/ethnicity of the victim is not included given issues of multicollinearity between White non-Hispanics, Hispanic (any race), and *cultural distance*. Multicollinearity between cultural distance and offender's race also precluded the inclusion of offender's race in the models. Details about all included variables are available in the Appendix.

Analytical Strategy

In the following analyses, binary logistic regression is used to address the research questions.[1] This approach models the classification of cases into categories of the dependent variable. For this research, models demonstrate the likelihood of victim injury based on social distance. A second analytic consideration is the sampling methodology used in the NCVS. Because the data are gathered from a stratified, multistage cluster sample, the assumption of independence between observations is violated. Failure to account for this complex sample design leads to biased standard errors and inflated *t* statistics (i.e., Type I errors). To account for this, the following analyses use Taylor series linearization to allow for accurate estimation and significance testing. Furthermore, all analyses use the appropriate weights available on the file to account for nonresponse and undercoverage. A disadvantage of adjusting for the complex sampling in the logistic regressions is that traditional goodness-of-fit diagnostics cannot be estimated for the survey-weighted models (Hosmer & Lemeshow, 2000). Following the recommendation of Hosmer and Lemeshow (2000), we present model fit statistics based on non-survey-weighted logistic regressions. A final consideration focuses on missing data. With one exception, there are little missing data (see Table 1) so we proceed with complete case analysis (Allison, 2001). The sole exception is that 13.7% of victimizations are characterized by missing data on the annual household income variable. Given the large percentage of missing data on this variable, we opt to include this missing data category in the regression analyses rather than remove the cases.

FINDINGS

Before addressing our research questions, Table 1 describes the sample used in our analyses. Most (74%) nonfatal violent altercations involve a victim who is not physically injured. About one-quarter (26%) are injured, and 0.1% of victims cannot say if they were or were not injured. About 6 in 10 (58%) victims knew the perpetrator, and 82% were victimized by someone of the same race. Most victims were male (53%), had a high school diploma or equivalent (45%), never married (53%), and employed (61%). About half of victims live in the suburbs (47%). The mean age of victims was 21 years old. Few nonfatal violent victimizations involved a perpetrator with a firearm (7%). About one-third of the violence occurred in or near the victim's home (33%), involved one offender (84%) and a bystander (66%).

Hypothesis 1: Injury and Social Distance

Our initial hypothesis is that greater social distance—in terms of relational and cultural distance—is related to a greater likelihood that the victim would be injured.

TABLE 1.   Descriptive Statistics, Unweighted *N* = 32,694, NCVS 1993–2011

Dependent Variables	%
Victim injury	
No injury	74.2
Injury	25.7
Missing data	0.1
Independent Variables	**%**
Social distance	
Same race, known parties	51.8
Same race strangers or different race known parties	36.2
Different race, strangers	12.0
Relational distance	
Known	57.8
Stranger	42.2
Cultural distance	
Similar race	81.9
Different race	18.1
Social Status Variables	**%**
Vertical status	
Annual household income	
Less than $7,500	8.6
$7,500–$14,999	11.3
$15,000–$24,999	14.3
$25,000–$34,999	12.6
$35,000–$49,999	13.8
$50,000–$74,999	12.9
$75,000 and greater	11.8
Missing data	13.7
Radial status	
Victim's marital status	
Never married	53.3
Divorced, widowed, separated	21.0
Married	25.3
Missing data	0.3

(Continued)

TABLE 1. Descriptive Statistics, Unweighted $N = 32{,}694$, NCVS 1993–2011 *(Continued)*

Social Status Variables	%
Victims' employment status at time of violence	
Not employed	39.1
Employed	60.9
Corporate status	
Number of offenders	
One offender	83.5
Multiple offenders	16.5
Presence of bystanders	
No bystanders	33.1
Bystanders present	65.5
Don't know	1.0
Missing data	0.4
Symbolic status	
Victim's educational attainment	
Less than high school degree	15.7
High school diploma or equivalent	45.2
Any college	38.3
Missing data	0.8

Control Variables	
Victim's age	$M = 21.2$
	SD 30.9
Victim's gender	
Male	52.5
Female	47.5
Victim's home ownership	
Rented	47.8
Owned	52.2
Victim's place of residence	
Urban	35.5
Suburban	47.0
Rural	17.6

(Continued)

TABLE 1.   Descriptive Statistics, Unweighted *N* = 32,694, NCVS 1993–2011 *(Continued)*

Control Variables	%
Offender's age	
Younger than 18 years	20.9
18–29 years old	32.8
30+ years old	36.4
Mixed age group	7.6
Missing data	2.5
Offender's gender	
Male	79.0
Female	17.6
Males and females	3.2
Missing data	0.1
Location of incident	
In/near victim's home	32.6
In/near friend's home	8.2
Other area	59.3
Firearm presence	
Firearm	7.0
No firearm	93.0

Note. NCVS = National Crime Victimization Survey.

Specifically, we hypothesized that violent offenders are most likely to injure a stranger of a different race, least likely to injure a known person of the same race, and moderately likely to injure a known person of a different race or vice versa. Results in Panel A of Table 2 fail to offer support for this hypothesis. Results from this binary logistic regression show that a nonfatal violent incident between different race strangers (compared to same race, known combatants) is characterized by 28% lesser odds that a victim will be injured ($b = -0.33$, $p < .001$, A$OR = 0.72$) holding all other correlates constant. Findings also show, all else being equal, that a nonfatal violent incident between same race strangers or different race known parties (compared to same race, known party incidents) is characterized by 21% lesser odds that a victim will be injured ($b = -0.24$, $p < .001$, A$OR = 0.79$).

Hypothesis 2: Injury and Relational Distance

Findings from the regression in Panel A failed to demonstrate support for the hypothesis that greater social distance—in terms of an aggregated relational and cultural distance measures—is associated with a greater likelihood of victim injury. Hypothesis 2, addressed next, seeks to identify the role of relational distance on victim injury. Specifically, Hypothesis 2 tests whether offenders are more likely to injure a stranger versus a

TABLE 2. Binary Logistic Regression Models Social Distance Predicting Victim Injury for Total Violence, 1993–2011, N = 31,292 NCVS

Variables	Panel A Victim Injury				Panel B Victim Injury			
	AOR	b	SE	p Value	AOR	b	SE	p Value
Independent variable: Social distance								
Composite measure								
Same race, known parties (reference)	—	—	—	—				
Same race strangers or different race known parties	0.79	−0.24*	0.05	0.00				
Different race, strangers	0.72	−0.33*	0.08	0.00				
Disaggregated measures								
Relational distance								
Known (reference)					—	—	—	—
Stranger					0.70	−0.35*	0.05	0.00
Cultural distance								
Similar race (reference)					—	—	—	—
Different race					1.03	0.03	0.06	0.57
Social status control variables								
Symbolic status								
Victim's educational attainment								
Less than high school degree	1.18	0.16	0.09	0.06	1.17	0.15	0.09	0.07
High school diploma or equivalent	1.14	0.13*	0.05	0.02	1.14	0.13*	0.05	0.02
Any college (reference)	—	—	—	—	—	—	—	—

(Continued)

TABLE 2. Binary Logistic Regression Models Social Distance Predicting Victim Injury for Total Violence, 1993–2011, N = 31,292 NCVS (Continued)

Variables	Panel A Victim Injury				Panel B Victim Injury			
	AOR	b	SE	p Value	AOR	b	SE	p Value
Vertical status								
Annual household income								
Less than $7,500	1.10	0.10	0.10	0.34	1.10	0.09	0.10	0.35
$7,500–$14,999	0.98	−0.02	0.10	0.86	0.99	−0.01	0.10	0.89
$15,000–$24,999	1.10	0.09	0.10	0.35	1.10	0.09	0.10	0.36
$25,000–$34,999	1.13	0.13	0.10	0.20	1.13	0.12	0.10	0.21
$35,000–$49,999	0.98	−0.02	0.10	0.84	0.98	−0.02	0.10	0.82
$50,000–$74,999	0.98	−0.02	0.09	0.84	0.98	−0.02	0.09	0.83
$75,000 and greater (reference)	—	—	—	—	—	—	—	—
Missing data	1.02	0.02	0.10	0.81	1.02	0.02	0.09	0.83
Radial status								
Marital status								
Never married (reference)	—	—	—	—	—	—	—	—
Widowed, divorced, separated	1.26	0.23*	0.07	0.00	1.25	0.23*	0.07	0.00
Married	0.82	−0.20*	0.07	0.01	0.82	−0.20*	0.07	0.01
Employed when victimized	0.79	−0.24*	0.05	0.00	0.78	−0.24*	0.05	0.00
Corporate status								
Multiple offenders	1.36	0.31*	0.08	0.00	1.40	0.34*	0.08	0.00

Bystanders								
No bystanders (reference)	—	—	—	—	—	—	—	—
Bystanders	0.80	−0.23*	0.05	0.00	0.80	−0.23*	0.05	0.00
Don't know if there were bystanders	0.64	−0.45	0.30	0.13	0.64	−0.45	0.29	0.12
Criminological control variables								
Victim characteristics								
Age	0.99	−0.01*	0.00	0.00	0.99	−0.01*	0.00	0.00
Female	1.30	0.27*	0.05	0.00	1.28	0.24*	0.04	0.00
Owned home	0.92	−0.09	0.05	0.08	0.92	−0.09	0.05	0.08
Place of residence								
Urban (reference)	—	—	—	—	—	—	—	—
Suburban	1.00	0.00	0.05	0.92	1.00	0.00	0.05	0.93
Rural	0.89	−0.12	0.08	0.13	0.89	−0.12	0.08	0.14
Offender characteristics								
Age								
Younger than 18 years (reference)	—	—	—	—	—	—	—	—
18 to 29 years old	1.35	0.30*	0.08	0.00	1.38	0.32*	0.08	0.00
30+ years old	1.09	0.09	0.08	0.28	1.12	0.11	0.08	0.17
Mixed age group	0.86	−0.16	0.12	0.18	0.87	−0.14	0.12	0.22
Gender								
Male (reference)	—	—	—	—	—	—	—	—
Female	0.77	−0.26*	0.07	0.00	0.76	−0.27*	0.07	0.00
Males and females	0.71	−0.34*	0.17	0.04	0.70	−0.35*	0.17	0.04

TABLE 2. Binary Logistic Regression Models Social Distance Predicting Victim Injury for Total Violence, 1993–2011, N = 31,292 NCVS (Continued)

Variables	Panel A Victim Injury				Panel B Victim Injury			
	AOR	b	SE	p Value	AOR	b	SE	p Value
Incident characteristics								
Location of violence								
In/near victim's home (reference)	—	—	—	—	—	—	—	—
In/near friend/acquaintance's	1.17	0.16	0.08	0.05	1.18	0.16*	0.08	0.04
Other area	0.61	−0.50*	0.05	0.00	0.62	−0.48*	0.05	0.00
Firearm Presence	0.68	−0.38*	0.10	0.00	0.69	−0.37*	0.10	0.00
Constant		−0.65*	0.17	0.00		−0.68*	0.17	0.00

Pearson χ^2 (26889) = 28011.63   Pearson χ^2 (27082) = 28209.07

Prob > χ^2 = 0.0000   Prob > χ^2 = 0.0000

Note. NCVS = National Crime Victimization Survey; Prob = probability.

*$p < .05$.

known victim. Findings presented in Panel B in Table 2 offer no support for the hypothesis that greater social distance is related to greater victim injury. Rather, findings show that relational distance (i.e., known/stranger offender) is negatively related to victim injury and that violence between strangers versus known participants is associated with a 30% decrease in the odds that the victim will be injured ($b = -0.35$, $p < .001$, AOR = 0.70).

Hypothesis 3: Injury and Cultural Distance

The final hypothesis (number 3) suggested that violent offenders are more likely to injure a victim of a different race compared to a victim of the same race. No support for this hypothesis was measured as shown in Panel B of Table 2. Using the disaggregated social distance measure, findings indicate that cultural distance (i.e., same/different race) is unrelated to victim injury. That is, violence between different race versus same race participants is no more or less likely to result in an injury to the victim ($b = 0.03$, $p = .57$, AOR = 1.03).

Predicted Probabilities

One way to illustrate the role of relational and cultural distance on victim injury is through illustration of predicted probabilities. Figure 1 shows the predicted probability of victim injury by the four types of victim/offender relationships (i.e., relational distance) and victim/offender race (i.e., cultural distance) while holding all other variables in the model at their mean. Figure 1 shows that the predicted probability of a victim of violence being injured is 0.24 when the victim and offender are strangers. This finding persists regardless of cultural distance (i.e., victim and offender race). Figure 1 also shows that the predicted probability of a victim being injured is 0.27 with less relational distance (i.e., when the parties are known to one another). Again, cultural distance appears unimportant when holding all other control variables at their means.
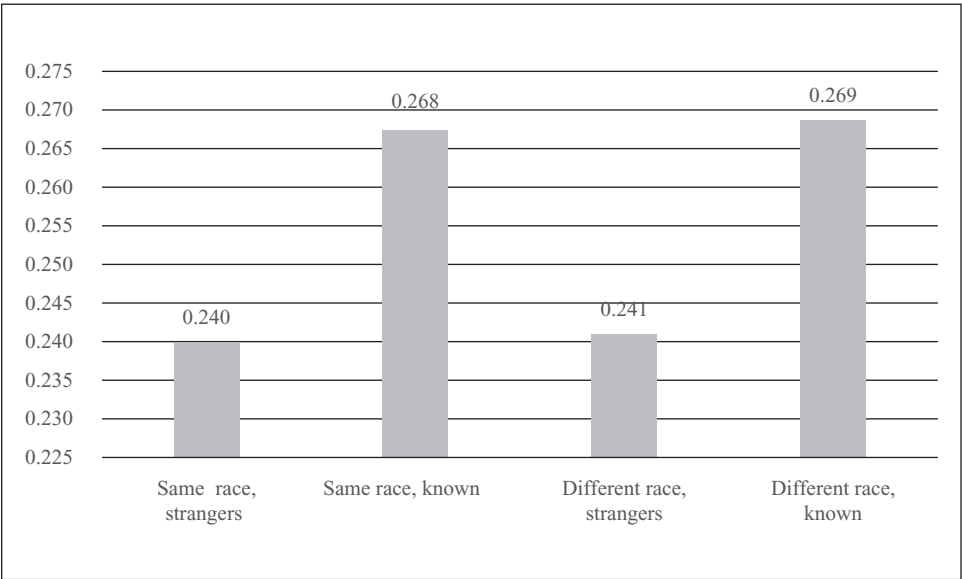

Figure 1. Predicted probability of victim injury.

DISCUSSION AND CONCLUSION

When combined, Black's (1998) theory of retaliation and Cooney's (2006) theory of predation provide a general principle of conflict or GPC (see also Rennison, Jacques, & Berg, 2010). Among other outcomes, the GPC predicts that victims who are less intimate with and less culturally similar to assailants are more likely to be injured during acts of interpersonal violence. In the present article, we used data from the NCVS to test three hypotheses: victim injury varies directly with (H1) social distance, (H2) relational distance, and (H3) cultural distance. No support for the hypotheses was found, however. Not only was there no support for the hypotheses put forth but also the direction of several significant effects measured were in the opposite direction than predicted in most tests. As it turns out, victims who were closer in social distance to offenders were more likely to be injured during acts of interpersonal violence. And when considering the components of social distance separately, findings showed that a person is more likely to be injured at the hands of a known assailant compared to a stranger assailant but that cultural distance had no influence on victim injury.

What explains our unexpected results? Of course, it could be that the theory is wrong, a point that we more fully consider in the following texts. Relatedly, it could be that other influences have a more substantive effect. Our analysis found evidence that victim injury is more likely when the victim has a high school diploma (or equivalent) compared to "any college" (i.e., lower in cultural status), never married or unemployed (i.e., lower in radial status), which could be interpreted as in line with Black's (1983) theory of self-help. The odds of victim injury were also greater when there were multiple offenders, but lower when there were bystanders; these findings reflect predictions made by Black (1998) and Cooney (1998) that third parties affect the likelihood of violence. Our models also controlled for factors outside the realm of pure sociology. We found that older persons and males were significantly less likely to be injured, which may in part represent a greater physical ability to ward off attack without sustaining injury (Tark & Kleck, 2004). Injury was also less likely when the incident took place away from the home of the victim or a friend/acquaintance; perhaps, this is because public settings restrain violence by increasing the risk of legal consequence (e.g., a report to police) or by fostering third-party intervention (see Cohen & Felson, 1979; Cooney, 1998). Victims were more likely to be injured when attacked by someone of 18–29 years of age, which approximates the age-crime curve and thus may be a facet of offender self-control (Gottfredson & Hirschi, 1990). Victims were more likely to be injured when an assailant was female, which could reflect a gendered disposition against (or toward) serious violence or disparities in strength (see Heidensohn & Silvestri, 2012). Finally, note that offenders who had a firearm were less likely to injure victims, which suggests that the *threat* of lethal violence was enough to satisfy the offense motive (Wright & Decker, 1997).

It could also be that the theory under focus is valid but our method is flawed. A limitation of the NCVS is that it does not include homicide because the survey is based on self-report. Yet, adding fatal violence would hardly, if at all, change the substantive findings given that homicide makes up less than 1% of all violence in the United States. It is also true that this research pertains only to a limited number of nonfatal types of violence. Should other types of violence such as stalking or kidnapping be included, results may vary. Another potential limitation of the NCVS is distorted reporting by participants. Pure sociologists and others have suggested that the NCVS undercounts victimization between

intimates (Straus, 1999). Among other reasons, this may happen if people are less likely to interpret offenses by known persons as "victimization," less likely to remember such events, or less likely to disclose them on a survey. To the extent this critique has merit, the strength of our results is tempered.

It may also be the case that examining this theory using a variable-oriented approach is misguided. Other methods may be more appropriate. An example is conjunctive analysis, which focuses on the relationship between the situational context and the outcome (Miethe, Hart, & Regoeczi, 2008).

Another potentiality is that different results would be obtained if more precise measures are analyzed. In the interest of parsimony, we chose to employ broad measures of the key variables. Injury was simply measured as any physical injury from a violent encounter. The GPC predicts that this all or none variable should vary directly with social distance, which we did not find to be the case. But the GPC also lends itself to more refined predictions; for instance, violence between more socially distant parties should be more likely to result in internal injuries than surface bruising. Future research should explore such possibilities.

We measured relational distance by whether a victim knew his or her assailant. Although this is a sound operationalization, there are many levels of intimacy. Examples include the difference between "friends" and "acquaintances" and also that some friends have spent more time together. Furthermore, the relational distance between people is constantly in flux, such as acquaintances becoming friends or friends growing apart. The GPC predicts that these cross-sectional and longitudinal gradients of intimacy should impact the amount of injury that results from interpersonal violence; testing whether that is true is another potentially fruitful line for future work.

Although we analyzed direct measures of injury and relational distance, our measure of cultural distance—same or different race offender/victim pair—is a proxy indicator. Culture refers to expressions and evaluations of what is good, true, or beautiful (Black, 1976). People who are more similar in these regards are closer in cultural distance. Clearly, race and culture are not the same thing. The correlation between these two factors depends on the time and place, which affects the extent to which the former can be used as a proxy measure for the latter. In the United States, there are still differences in the *average* culture of persons who identify as belonging to one or another race, which is why our proxy measure of cultural distance is reasonable. Nonetheless, subsequent research may benefit from using more direct measures of cultural distance, such as the degree of similarity in how people dress and talk.

If future studies find, as we did, that injury and social distance vary not directly but rather inversely, the logical conclusion is the GPC needs to be reworked. It is possible to develop theory in two broad ways: inductively or deductively. Because the goal of pure sociologists is to find patterns in social life and then state them as falsifiable patterns (Cooney, 1998), a potential implication of our results is that the injury component of the GPC should simply be reversed: People who are less intimate and less culturally alike are less likely to injure each other. This inductive theory could then be further tested to determine its validity and generalizability.

Another way to use the findings to build theory is to discern their implications for deductive theory building. Although the following statement is somewhat of an overstatement, our read of the pure sociology literature is that theorists working in this tradition often deduce specific propositions from a "general theory of social life": People are treated more favorably as they gain status or become closer in social distance. For example, less law is applied to wealthy persons who are integrated in the community (Black, 1976); more financial support

is given to persons who are conventional and respectable (Michalski, 2003); and drug dealers give better bargains to their friends (Jacques & Wright, 2014). But what our findings suggest is that injury behaves in the opposite manner, at least with respect to social distance (recall we were unable to test for the effect of social status owing to limitations of the NCVS; see footnote 2 for details). If the general theory of social life has validity, it begs an answer to the question: Are there circumstances in which being injured is a more favorable outcome than not being injured? The initial response may be "of course not." Yet, this is likely the case, sometimes at least; one example is that robbery victims may prefer to be punched and bruised over having a gun pointed at their head while remaining uninjured.

The example directly above leads to a final point: injury is not the only measure of violence seriousness. When people think of violence, they consider not only whether they were injured or not but also which weapons were displayed, how many times each weapon was used, and which body parts were aimed at and struck. Each aspect of violence seriousness presents a unique phenomenon to investigate. As already noted, weapon lethality has been found to vary directly with the social distance between offenders and victims (Rennison, Jacques, & Berg, 2010; Jacques & Rennison, 2013; Black, 2004b). Other questions include, for instance, why are some victims struck, stabbed, or shot once versus multiple times? And why are some victims shot in more traumatic places, like the head or heart, instead of the arm or leg? The GPC holds that the answer has to do with social distance: Victims are struck, stabbed, and shot more times at more traumatic body parts when less intimate with and less culturally similar to offenders. Whether such patterns hold up to empirical scrutiny is yet to be established.

NOTES

1. Another option is the use of a proportional odds logistic regression model (Long, 1997; Hosmer & Lemeshow, 2000). This approach models the probability that weapon lethality falls in the four intervals defined by the three cut-points based on the measurement of social distance. This proportional odds model compares a single outcome response to one or more reference categories and resulting inferences from them lend themselves to a general discussion of direction of response and without a focus on specific outcome categories. We opted not to use this approach for several reasons. First, it is not possible to properly test for the assumption of parallel regression using postestimation techniques when using the survey weight procedures required by NCVS data. As an exercise, a model was run using nonsurvey weighted ordered logistic regression and postestimation tests demonstrated that the assumption of parallel regression was violated. That is, these postestimate tests indicated that should a model be run separately for each category of the dependent variable, slopes of the regressions would not be parallel—a requirement of using a proportional odds model (Long & Freese, 2005). Second, the use of a series of survey-weighted binary logistic regressions provides more useful information to the reader. For example, with a proportional odds logistic regression, only one set of coefficients are presented for each independent and control variable. By using the multiple models approach, one can examine how coefficients vary in terms of value and sign across models.

2. The NCVS is not the best tool for testing the effect of *social status* on violence because it does not systematically gather information on *offenders'* income, employment, marital status, or formal education, although the survey does collection such information for victims. As relates to testing pure sociology theories, the absence of such data is a limitation because tests should examine the difference in status *between* an offender and victim and not simply one *or* the other's status. However, the NCVS is useful for testing the social *distance* aspects of pure sociology theories because the survey does collect information on the victim-offender relationship (a direct measure of relational distance) and their race (an indirect measure of cultural distance).

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APPENDIX

Description of Variables

Variables	Description
Dependent variable	
Victim injury	The outcome variable of interest—victim injury—is measured using a dichotomous variable where 0 reflects *no injury* and a 1 reflects a *physical injury*. Injuries include bruises, black eyes, cuts, scratches, swelling, completed rape, broken bones, lost teeth, internal injuries, loss of consciousness, and any unknown injury resulting in hospitalization.
Independent variables	The independent variable of interest is social distance which is composed of relational and cultural distance. In the regressions, the concept is measured in two ways: aggregated/composite and disaggregated. Each of these is described next.
Social distance	The aggregated/composite measure of social distance is included in the model using three categories: "same race, known parties" (reference category), "same race strangers or different race known parties," and "different race, strangers."
Relational distance	When disaggregated, the models use relational distance and cultural distance separately. Relational distance is a dichotomous variable which distinguishes between whether the victim and offender knew one another or were strangers. Stranger is coded as 1, whereas known members of the violent duet are coded as a 0.
Cultural distance	Cultural distance is accounted for in the analyses based on whether the victim and offender were the same or different races. Different race is coded as 1 and same race is coded as 0.
Control variables	
Symbolic status of victim	
Educational attainment	The victim's educational attainment is measured using three categories: "Less than high school education," "high school diploma or equivalent," and "any college" (reference category).
Annual household income	Annual household income is measured using eight categories of unequal width. From lowest to highest, they are less than $7,500; $7,500–$14,999; $15,000–$24,999; $25,000–$34,999; $35,000–$49,999; $50,000–$74,999; $75,000 and over. Also included is a category for missing data given 14% of the sample failed to offer information for this variable. The excluded reference category is $75,000 and over.

(Continued)

APPENDIX

Description of Variables *(Continued)*

Variables	Description
Radial status of victim	
Marital status	Victim's marital status is measured using three dichotomous variables: "never married," "married," and "widowed, divorced, separated." Never married serves as the excluded reference category.
Employment	Employment is measured using a dichotomous variable in which 0 = *unemployed at the time of the victimization*, and 1 = *employed at the time of the victimization*.
Corporate status	
Multiple offenders	The number of offenders present during the violence is measured using a dichotomous indicator in which 0 = *one offender* and 1 = *two or more offenders*.
Bystanders	The presence or absence of a third party or bystander is measured using three categories: "no bystanders" (reference category), "bystanders," and "don't know if there were bystanders."
Criminological control variables	
Victim's age	To account victim's age, a continuous measure variable ranging from 12 to 90 years is included. Persons age 90 years or older are included in the "90" category.
Victim's gender	To account for victim's gender in the models, a dichotomous variable 0 = *male* and 1 = *female* is included.
Owned home	Home ownership is accounted for by a dichotomous measure in which 0 = *rented home* and 1 = *owned home*.
Place of residence	To account for where one lives, three dichotomous measures are included: "urban," "suburban," and "rural." Urban is the excluded reference category.
Offender's age	Offender's age is controlled in the models using four dichotomous indicators: "younger than 18," "19–29," "30 plus," and "mixed age group." Younger than 18 is used as the excluded reference group.
Offender's gender	To account for the offender's gender, three dichotomous variables are used: "male," "female," and "males and females." "Male" refers to a single male or a group of male offenders. "Female" identifies a single female offender or a group of all female offenders. "Males and females" indicates a group of offenders with both males and females. "Male" serves as the reference category.

(Continued)

APPENDIX

Description of Variables *(Continued)*

Variables	Description
Location of violence	A three category variable is included to account for the location of the violence: "In/near victim's home" (reference), "in/near friend's home," and some "other place."
Firearm presence	Firearm presence is accounted for in the analyses with a dichotomous variable in which 0 reflects no firearm present during the violence, and 1 indicates a firearm was present during the victimization.