

Rape and Resistance*

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What are the consequences when rape victims resist rapists? Analysis of a nationally representative sample of rape incidents reported in the National Crime Surveys for 1979 to 1985 yields the following findings: (1) Victims who resist are much less likely to have the rape completed against them than nonresisting victims, a pattern generally apparent regardless of the specific form of resistance; (2) The form of resistance that appears most effective in preventing rape completion is resistance with a gun, knife, or other weapon; (3) Most forms of resistance are not significantly associated with higher rates of victim injury. The exceptions are unarmed forceful resistance and threatening or arguing with the rapist; (4) Even these two forms of resistance probably do not generally provoke rapists to injure their victims, as ancillary evidence concerning assaults and robberies indicates that resistance rarely precedes injury. Attack against the victim appears to provoke victim resistance, rather than the reverse; (5) Only about three percent of rape incidents involve some additional injury that could be described as serious. Thus it is the rape itself that is nearly always the most serious injury the victim suffers. Consequently, refraining from resistance in order to avoid injury in addition to the rape is a questionable tradeoff.

Rape is a crime of domination. The feminist-conflict perspective notes that the traditional socialization process of young women promotes the assumption of the characteristics of being a victim. Women are taught to win a man by being passive and subservient, and to avoid the display of skills traditionally thought to be masculine, including those of self-defense (Brownmiller 1975; Bart 1981). For years women were advised to submit to a rapist in order to avoid injury, while society paradoxically demanded evidence of struggle to prove the sexual encounter was nonconsensual (Amir 1971; Brownmiller 1975; Schwendinger and Schwendinger 1983; Chappell, Geis, and Geis 1977).

Advice to victims commonly focused largely on the risks of additional injury to the victim beyond the rape itself. An alternative view focuses on what affects the completion of the rape attempt. Victim resistance makes rape completion more difficult, i.e. it raises the costs of rape. It increases the effort required of the rapist to complete the act, and it can prolong the time required and thereby increase the risk of discovery by other parties and of capture by the police. Further, when resistance is forceful, it can raise the probability of the offender suffering injury and pain. Simple economic, behaviorist and deterrence perspectives would predict that resistance should, other things being equal, reduce the probability of the completion of the rape attempt. Predictions concerning the effect of resistance on injury are not so clear.

In this paper we review prior research on the consequence of victim resistance to rape, and use victim survey data to assess the effects of various forms of resistance on the probability of rape completion and of additional injury to the victim.

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Prior Research

Brownmiller (1975:397-401, 450-54) has speculated that victim resistance might well be a crucial variable in the avoidance of rape, without automatically escalating the risk of serious injury. At the time of this speculation no studies had been conducted to confirm or deny such a proposition. Early studies, such as that by Menachem Amir (1971), were flawed because they examined only rapes reported to the police. The sexual assault literature is filled with studies of samples that include only reported rapes, or only convicted or incarcerated rapists. Crimes in which victim resistance was successful are by definition those that did not involve injury, crime completion, or property loss. These are precisely the events that are least likely to be reported to the police. Studies that use samples of crimes known to the authorities are therefore biased by systematically excluding cases of successful resistance (Block 1981:749; Williams 1984; Zeigenhagan and Brosnan 1985). Further, the victims of unreported rapes differ from those who report (Koss 1985), while convicted rapists "differ markedly from those who are not apprehended" (Malamuth 1981:141).

Table 1 • Effects of Rape Victim Resistance in Prior Studies^a

Study	Data Type ^c	Sample Type ^d	Rape Completed ^b			Injuries Sustained ^b		
			F	NF	W ^e	F	NF	W
Queens Bench Foundation (1976)	VI	N	–	–	0	0	0	0
McDermott (1979)	VSN	P	–	–	–	+	+	+
Bart (1981)	VI	N	–	±		0	0	
Griffen and Griffen (1984)	VSN	P ^f	–	–		±	–	
Bart and O'Brien (1984)	VI	N	–	±		0	0	
Quinsey and Upfold (1985)	IO/POR	N	–	–	–	–	±	–
Prentkey, Burgess and Carter (1986)	IO/POR	N				+	–	
Lizotte (1986)	VSC	P	–	–	–			

Notes:

- We have not reviewed studies that merely ask captured offenders how they think they would react to resisting victims.
- + = Increased probability (of completion or injury); – = Decreased probability (of completion or injury); 0 = No effect; ± = Mixed results.
- VSC = Victim survey (cities); VSN = Victim survey, (national); POR = Police offence reports; VI = Victim interviews; IO = Interviews with offenders, clinical and prison records.
- P = Probability sample; N = Nonprobability sample.
- F = Forceful resistance; NF = Nonforceful resistance; W = resistance with a weapon.
- Although this study used a probability sample, its authors failed to use case weights, so their results cannot be generalized to the United States population.

The post-1971 research on rape resistance is summarized in Table 1. While some researchers have used samples of reported rapes or imprisoned rapists, others have tried to overcome the unrepresentative nature of rapes known to the authorities by using victim surveys of the general population. Although these studies used a diverse range of methods for acquiring cases and gathering information, they were quite consistent in concluding that victims who resist are less likely to experience a completed rape. This was true for forceful resistance in all eight studies, for three of four studies examining resistance with a weapon, and for five of eight studies assessing nonforceful resistance. The evidence has been more mixed regarding the association of resistance with injury. The general patterns suggest that nonforceful resistance and armed resistance either reduce the risk of injury or at least do not increase it, while forceful (predominantly unarmed) resistance can sometimes increase injury risks.

According to some researchers (e.g., Prentky, Burgess, and Carter 1986), it is hard to judge the effectiveness of different victim resistance strategies because rapists are such a heterogeneous group, some being deterred from further aggression by victim resistance, others being enraged into further violence. However, it remains to be seen how heterogeneous rapists are in this respect, since claims of this sort rely entirely on nonprobability convenience samples of rapists, victims, and/or rape incidents, i.e., samples of doubtful representativeness. We address this problem by examining a national probability sample of stranger rape incidents. The resulting analysis has a stronger claim to generalizability to the entire universe of U.S. rape incidents than any prior study of which we are aware. The goal of the analysis was to explore the correlates and consequences of various victim resistance strategies in rape, especially regarding completion of the rape attempt and victim injury.

Methods

Sample

Our sample was derived from the National Crime Surveys (NCS), which use a rotating panel design in which stratified multistage cluster samples of U.S. housing units are contacted and all residents age 12 and over are interviewed in person, usually by women, and asked about crime victimizations during the preceding six months.

Our sample was limited to rape incidents involving offenders who were strangers to the victim. This same exclusion was adopted by both McDermott (1979) and Lizotte (1986) in their analyses of NCS rape data. There is good reason for doing this. Various data quality assessments of the NCS have consistently indicated serious problems regarding violent incidents among nonstrangers, casting doubt on the representativeness of those cases reported to interviewers (see the studies in Skogan 1981). Violent incidents in general are underreported in victim surveys, and victims are especially reluctant to report rapes by acquaintances (Turner 1981). To include NCS acquaintance rapes would only introduce measurement error and decrease sample representativeness.

The sample includes both attempted and completed rapes, incidents with either male or female victims (although 90 percent of the incidents did involve female victims), incidents with either single or multiple offenders or victims, and cases involving the elements of other crimes such as robbery or burglary. Most important, both reported incidents and incidents not reported to the police are included. The sample analyzed consists of 378 incidents of rape occurring in the United States during the period 1979 to 1985 and involving a victim age 12 or over and an offender who was a stranger to the victim.

In the NCS data, rape is jointly defined by the victim-respondent and the interviewer. Respondents (Rs) are asked general "screener" questions concerning whether they had been attacked or threatened in any way. Later, in the incident report portion of the interview, they are asked *how* they were attacked. If the respondent (R) says anything that the interviewer interprets as indicating an incident was a rape, it is recorded that way. Thus, some rapes may go unrecorded because no direct questions are asked using the word "rape," while sex offenses that did not involve intercourse can get erroneously coded as rapes because the interviewer did not probe further for intimate details.

Variables

Table 2 lists the variables used in the analysis. Most of the variables are binary, with a 1 indicating the presence of an attribute, 0 its absence. For example, COMPLETE is coded 1 if a rape was completed, 0 if it was not. HANDFEET is coded 1 if the offender attacked the victim

with his hands or feet. Note that a victim can be attacked without being injured, since an injury involves some lasting mark such as a gunshot wound, broken bones, internal injuries, cuts, or bruises, or the victim's loss of consciousness; an attack may be an unsuccessful stabbing or shooting attempt, or a punch or kick that did not hit the victim or that hit the victim but left no physical mark. The term "injury" will be used in this paper to refer to injury other than the rape itself.

Table 2 • Variables in Analysis^a

<i>Variable</i>	<i>Interpretation</i>	<i>Mean</i>	<i>s.d.</i>
COMPLETE	Rape completed	0.312	0.464
INJURY	Injury in addition to rape itself	0.399	0.490
SP	V took self-protection action	0.743	0.437
WEAPONSP	V used gun, knife, or other weapon in self-protection	0.036	0.185
PHYSFRSP	V used weaponless physical force in self-protection	0.291	0.455
THREATSP	V threatened, argued, reasoned, etc. w. O	0.237	0.426
GETHEPSP	V tried to get help, attract attention, scare offender away	0.439	0.497
NOFORCSP	V resisted w/o force, used evasive action (ran away, hid, locked door, etc.)	0.283	0.451
OTHERSP	V used some other form of self-protection	0.064	0.245
HANDFEET	O attacked V with hands or feet	0.428	0.495
KNIFE	O attacked V with knife	0.011	0.103
OTHRWEAP	O attacked V with weapon, not gun or knife	0.024	0.152
WEAPPRES	Offender had weapon of some kind	0.310	0.463
HGUNPRES	Offender had handgun	0.097	0.296
ROBBERY	Theft and force involved in incident	0.246	0.431
AOGE30	Offender age 30 or older	0.310	0.463
BLACKOFF	Black offender	0.379	0.486
SEXDIF	Male offender and female victim	0.879	0.327
FEMVICT	Female victim	0.896	0.306
BLAKVICT	Black victim	0.172	0.378
AGEVICT	Victim's age (exact)	28.753	10.087
INCOME	Victim's household income (14 categories)	5.954	4.409
UNDINC	Victim's household income not reported	0.073	0.260
EDUCATN	Victim's years of formal schooling	15.516	6.382
GUNOCC	Victim's occupation required carrying gun	0.008	0.088
DARK	Incident occurred when it was dark outside	0.627	0.484
SUMMER	Incident occurred in June, July, or August	0.326	0.469

Notes:

a. Means and standard deviations (s.d.) are for the full sample of stranger rapes. V = victim, O = offender.

The NCS classifies self-protection or resistance actions taken by victims into eight categories, including one each for resistance with a gun, knife or other weapon. However, resistance with weapons is rare among rape victims, making it necessary to group all forms of armed resistance together into the single variable WEAPONSP.

Table 2 provides some important descriptive statistics of relevance to the efficacy of resistance. Rapists were armed with weapons only 31 percent of the time, and had handguns only 9.7 percent of the time. The figures indicate that offenders were usually not armed, presumably giving victims who were armed a tactical advantage. However, the mean for WEAPONSP

also shows that victims used a weapon to protect themselves in only 3.6 percent of the incidents, indicating that few rape victims exploit this presumed advantage.

Statistical Procedures

Information gathered in the NCS is known to be affected by certain patterns of response bias. In particular, better educated persons consistently report more incidents, especially minor ones; blacks appear to underreport violent incidents, especially minor ones, more than whites (Skogan 1981). By recalling a larger number of uncompleted rape attempts without injury, better educated Rs make it seem their rape victimizations are more likely, on average, to be uncompleted and/or without injury, with an opposite but equally artificial pattern for black Rs. We roughly controlled for these response biases by including the victim's education and race in all initial versions of equations.

There are generally few missing data in the NCS. However, R's household income is a modest exception—it was not reported for 7.3 percent of our sample. The most common way of handling missing data, listwise deletion, creates sample bias unless the data are missing in a random pattern. Therefore a different approach was used. All missing values were recoded to zero. Then we created a "missing data dummy" variable (UNDINC) that was coded one for cases where data were missing on income, zero otherwise. This missing data indicator variable was included in initial specifications of all equations, along with the rest of the variables of substantive interest. Where the coefficient for such a variable is significant it means the data were missing in a nonrandom pattern with respect to the dependent variable and the coefficient for the corresponding substantive variable must be interpreted with caution. The advantage of this method is that all available data are used and there is no possibility of sample bias due to exclusion of cases with data missing on one or more variables. Also, retention of more cases means smaller coefficient standard errors (Cohen and Cohen 1983:281-89).

The principle dependent variables were: (1) COMPLETE, whether the rape was completed or only an attempt; (2) INJURY, whether the rapist inflicted additional injury beyond the rape itself; and (3) SP, whether the victim used any form of self-protection. All of these are binary variables. Using ordinary least square estimation (OLS) would be inappropriate because the assumptions of normality, homoscedasticity, and linearity would all be violated. Therefore we used probit to estimate the final equations. The less expensive OLS was used for initial screening of predictors, using a liberal significance level of $p < .30$ to avoid prematurely excluding a relevant variable. Probit produces results very similar to those produced by logit (Hanushek and Jackson 1977). The LIMDEP software package was used for computations (Greene 1985).

Subsample Analyses

In addition to analyzing the full sample, we also estimated the equations derived from the full sample analysis for three subsets of the sample. It could be argued that some of the incidents reported as rapes in the NCS were not really rapes. If a victim reports a rape to the police, it suggests she was more willing to face police skepticism and more convinced the incident was truly a rape. If so, analysis of only rapes reported to the police could be defended by asserting that these events are more likely to be actual rapes. Remembering the aforementioned biases in such samples, we nevertheless report results for the subsample of cases reported to police.

Second, some rapes are committed as a by-product of other felonies such as robbery or burglary. These cases are probably unusually likely to be reported to both the police and to NCS interviewers because the victim is likely to believe it is less disputable that a crime occurred and that she was in no way responsible. Thus, these offenses probably represent a

misleadingly large fraction of the sample, and especially so given its limitation to stranger rapes. To judge the degree to which they influence results and possibly reduce the generalizability of the findings, we analyzed a subset of cases that excluded incidents with either the element of illegal entry (burglary) or theft or attempted theft (robbery).

In 3.2 percent of the incidents in our sample, the victim reported more than one rape victimization in a six month period. This can cause two kinds of analysis problems. First, the victim may not be able to reliably report the details of any one rape, mixing details of different incidents together. Second, some of the victims of such "series" incidents may have been prostitutes, prisoners, or other persons exposed to unusually high risks of rape, persons who may be very different from the typical rape victim. Again, to assess the impact of these series victimizations, they were excluded from the third subsample.

Temporal Sequence Issues

Under the current NCS interview schedule, there are some difficult problems of temporal/causal order among some of the variables examined in this research. Because there is little reason for offenders to commit additional injuries after the rape is completed, and little reason for victims to initiate any self-protection actions after completion, it is reasonable to treat INJURY and SP as causally prior to COMPLETE, with the first two as independent variables predicting the last one as a dependent variable. And indeed this is the way prior researchers have treated these variables (Lizotte 1986; Griffin and Griffin 1983). However, if we are interested in studying the impact of victim resistance on injury, more difficult causal order problems arise. While victim resistance may stimulate or deter aggression from the rapist, his inflicting of injury may also stimulate or inhibit resistance from the victim. A previously passive victim may be aroused out of her passivity by injury, or may strike back or attempt to flee out of desperation, feeling she has little to lose by resisting.

Nothing in the current NCS interview schedule allows the analyst to distinguish injury that preceded resistance from injury that followed it.¹ Therefore, one can establish no clear causal order between INJURY and SP. It might be desirable to specify a nonrecursive model of the relationship between these variables, but the survey was not designed for testing such a model and does not measure any variables that could serve as "instruments" adequate for achieving identifiability of the model (Johnston 1972:341). Therefore, we alternatively treated INJURY as the dependent variable, with the self-protection variables as predictors, and then SP as dependent variable, with INJURY as one of its predictors. We regard the resulting estimates as purely descriptive of the multivariate associations among the variables, but they nevertheless will prove to be useful later when ancillary sequence information is discussed.

Findings

Table 3 presents the probit estimates for equations with COMPLETE as the dependent variable. They indicate that victims who resist are less likely to have the rape completed against them. Coefficients were negative for all six categories of resistance and significantly different from zero for four of the six. The coefficient for THREATSP (threatening or arguing with the offender) was not quite significant, while the residual category of miscellaneous "other" forms of resistance (OTHERSP) was unrelated to rape completion. The strongest negative association between self-protection and completion was for resistance with a weapon (WEAPONSP). Comparison of the probit and OLS estimates in the first two columns indicates that the findings regarding self-protection and rape completion are not dependent on the esti-

1. At the senior author's request, the Bureau of Justice Statistics and the Census Bureau have field tested a survey instrument containing questions intended to establish time order of resistance and injury.

Table 3 • Completion of Rape

<i>Sample:</i>	Coefficients (ratio, coef./std. error)				
	<i>Full</i>	<i>Full</i>	<i>Reported to</i>	<i>Nonfelony</i>	<i>Nonseries</i>
<i>Estimation:</i>	<i>Probit</i>	<i>OLS</i>	<i>Probit</i>	<i>Probit</i>	<i>Probit</i>
Predictors					
WEAPONSP	−1.247 (−2.08)	−.282 (−2.51)	−4.027 ^a (−0.08)	−4.331 ^a (−0.06)	−1.161 (−1.88)
PHYSFRSP	−.356 (−1.94)	−.117 (−2.40)	−.443 ^a (−1.43)	−.484 (−2.05)	−.352 (−1.90)
THREATSP	−.314 ^a (−1.61)	−.085 (−1.67)	−.154 ^a (−0.49)	.447 (1.78)	−.327 (−1.66)
GETHEPSP	−.491 (−2.84)	−.117 (−2.66)	−.267 ^a (−0.93)	−.486 (−2.12)	−.476 (−2.72)
NOFORCSP	−.746 (−3.72)	−.168 (−3.51)	−.711 (−2.16)	−.815 (−3.26)	−.710 (−3.52)
OTHERSP	−.152 ^a (−0.50)	−.071 ^a (−0.84)	.132 ^a (0.23)	−.196 ^a (−0.50)	−.142 ^a (−0.46)
INJURY	.923 (4.61)	.249 (4.69)	.903 (3.14)	.595 (2.29)	.899 (4.39)
HANDFEET	.387 (2.06)	.108 (2.13)	.393 ^a (1.28)	.573 (2.46)	.400 (2.10)
WEAPPRES	.332 (1.79)	.103 (2.03)	.420 ^a (1.45)	.407 ^a (1.59)	.365 (1.94)
ROBBERY	.235 ^a (1.17)	.076 ^a (1.40)	c ^b	C	.247 ^a (1.21)
BLACKOFF	−.500 (−2.67)	−.111 (−2.37)	−.289 ^a (−0.98)	−.049 (−2.52)	−.508 (−2.67)
BLAKVICT	.508 (2.34)	.120 (2.02)	.212 ^a (0.62)	.575 (1.90)	.514 (2.31)
INCOME	−.047 (−2.45)	−.013 (−2.48)	.000 ^a (0.00)	−.402 (−1.68)	−.043 (−2.18)
UNDINC	−1.713 (−3.83)	−.309 (−3.63)	−1.451 (−2.13)	−4.749 ^a (−0.11)	−1.690 (−3.55)
EDUCATN	−.031 (−2.42)	−.007 (−2.06)	−.066 (−2.74)	−.048 (−2.72)	−.032 (−2.45)
GUNOCC	2.482 (2.57)	0.610 (2.58)	6.143 ^a (0.06)	C	.882 ^a (0.63)
DARK	.449 (2.55)	.092 (2.07)	.403 ^a (1.41)	.604 (2.56)	.473 (2.62)
Constant	−.060	.447	−.069	.002	−.120
Sample size	378	378	151	253	366
Log-likelihood ^c	−167.84	(0.26) ^d	−64.27	−98.19	−163.40

Notes:a. $p > .10$; all other coefficients: $p < .10$, 2-tailed ($p < .05$, 1-tailed).

b. C indicates the variable was excluded because it was constant in this subsample.

c. All equations were significant, $p < .01$

d. Adjusted R squared.

mation technique used. Further, the coefficients for the four significant self-protection variables are consistently negative across the three subsamples examined, although significance levels deteriorate when sample size is reduced, especially in the smallest of the subsets, incidents reported to police. UNDINC had a significant coefficient in the completion equation (Table 3), indicating that incidents involving victims who did not state their income were less likely to be completed rapes; thus income coefficients may be biased.

Table 4 displays the probit estimates when INJURY is treated as the dependent variable, with the self-protection variables as predictors. If we assume for the moment that these estimates could be taken at face value as indicating causal effects of resistance on the inflicting of injury on the victim, the full sample results indicate that there is no effect of resistance with a weapon (WEAPONSP) or of various forms of nonforceful resistance (GETHEPSP, NOFORCSP, OTHERSP) on injury, but that weaponless forceful resistance (PHYSFRSP) and threatening or

Table 4 • Additional Injury Beyond Rape

Coefficients (ratio, coef./std. error)					
Sample:	Full	Full	Reported to Police	Nonfelony	Nonseries
Estimation:	Probit	OLS	Probit	Probit	Probit
Predictors					
WEAPONSP	.544 ^a (1.37)	.125 ^a (1.15)	-.845 ^a (-1.06)	1.002 (1.93)	.672 ^a (1.58)
PHYSFRSP	.436 (2.41)	.105 (2.18)	.090 ^a (0.32)	.483 (2.27)	.503 (2.74)
THREATSP	.493 (2.64)	.117 (2.41)	.419 ^a (1.47)	.739 (3.15)	.532 (2.80)
GETHEPSP	.266 ^a (1.62)	.068 ^a (1.59)	-.083 ^a (-0.34)	.255 ^a (1.23)	.338 (2.01)
NOFORCSP	-.155 ^a (-0.84)	-.031 ^a (-0.68)	-.108 ^a (-0.40)	.048 ^a (0.21)	-.141 ^a (-0.75)
OTHERSP	.004 ^a (0.01)	.001 ^a (0.01)	-.155 ^a (-0.27)	.301 ^a (0.76)	-.014 ^a (-0.04)
HANDFEET	1.337 (8.35)	.426 (9.69)	1.209 (5.06)	1.210 (5.91)	1.386 (8.46)
OTHRWEAP	1.102 (1.67)	.225 (1.66)	3.766 ^a (0.10)	.560 ^a (0.74)	1.035 ^a (1.61)
ROBBERY	.796 (4.24)	.211 (4.31)	C ^b	C	.830 (4.30)
AOGE30	.377 (2.11)	.090 (2.01)	.589 (2.21)	.170 ^a (0.80)	.382 (2.06)
FEMVICT	.540 ^a (1.84)	.124 (1.78)	.475 ^a (0.99)	.520 ^a (1.48)	.308 ^a (1.02)
DARK	.562 (3.27)	.129 (3.04)	.272 ^a (1.05)	.625 (2.91)	.498 (2.84)
Constant	-2.439	-.143	-1.620	-2.524	-2.281
Sample size	378	378	151	253	366
Log-likelihood ^c	-168.76	(0.39) ^d	-79.61	-106.40	-160.94

Notes:
a. $p > .10$; all other coefficients: $p < .10$, 2-tailed ($p < .05$, 1-tailed).
b. C indicates the variable was excluded because it was constant in this subsample.
c. All equations were significant, $p < .01$
d. Adjusted R squared.

arguing with the offender (THREATSP) may increase the victim's risk of injury. The coefficient of WEAPONSP is significant only in the nonfelony subset, the coefficient for GETHEPSP is significant only in the nonseries subset, and the coefficients for NOFORCSP and OTHERSP are consistently insignificant across all three subsamples. In short, resistance with a weapon and three categories of nonforceful resistance not only appear to reduce the likelihood of the rape being completed, they apparently do so without creating any significant additional risk of other injury. At minimum, what these results indicate is that, with multivariate controls, the significant positive association between injury and resistance predicted by the resistance-leads-to-injury thesis does not exist for resistance with a weapon or for three forms of nonforceful resistance, regardless of how the time order issue is resolved.

However, there is some apparent support for the anti-resistance thesis regarding injury and unarmed forceful resistance or threatening or arguing with the offender. Confirming the findings of previous research on resistance in assault and robbery (Kleck 1988), weaponless forceful resistance (PHYSFRSP) in rape was positively associated with injury. These coefficient estimates are highly unstable across subsamples, ranging from 0.090 (and not significantly different from zero) in the "reported to police" subsample to more than five times that in the nonseries subset. On the other hand, the positive coefficients for THREATSP are more stable across subsamples.

Can we conclude that these two types of resistance *cause* an increase in the risk of additional injury? The answer depends partly on resolution of the causal/temporal sequence issue. If resistance usually precedes injury, the anti-resistance thesis is strengthened; if resistance usually comes only after the injury has already occurred, the thesis is weakened. (See Cook 1986 for a detailed discussion of the possible sequences of offender attacks and victim self-protection actions in robberies.)

While the current regular NCS does not establish this critical time order, a limited one-month-only NCS supplement did gather relevant information. The Victim Risk Supplement (VRS) was administered in February of 1984 to 14,258 households and inquired about this sequence. Because rape is the rarest of the crimes measured in the NCS, a single month's worth of respondents did not yield enough rape cases for separate analysis—there were fewer than a dozen rape incidents involving any kind of self-protection. However, some relevant information can be gleaned by analyzing the more numerous assaults and robberies. Among assaults involving both forceful self-protective actions and an attack on the victim, resistance occurred before the attack in only 9.8 percent of the cases. Among assaults with both an attack and victim nonforceful self-protection, only 5.7 percent involved the self-protection action occurring before the attack. For robberies with both attack and self-protection actions, the figures were 0 percent for forceful self-protection and 22 percent for nonforceful self-protection actions. In short, the time sequence of injury and resistance in the overwhelming majority of assaults and robberies is inconsistent with the resistance-provokes-attack thesis (Kleck 1988). If the same is true of rapes, it means that the positive association between weaponless forceful resistance, threatening or arguing with the offender, and injury cannot be interpreted as indicating that resistance increases the risk of injury. Furthermore, Quinsey and Upfold (1985) *did* have information on the sequence of injury and victim resistance actions in a sample of rapes, and they also found that injury usually preceded resistance. Table 5 presents the results of an analysis in which self-protection (of any kind) was treated as the dependent variable and INJURY was treated as a predictor. Taking into account the evidence concerning the causal/temporal order of injury and self-protection, the findings are consistent with the view that injury to the victim can provoke her to take self-protection action, while attacker use of a knife or possession of a handgun apparently inhibits resistance.

It is worth noting the simple completion and injury rates associated with each of the specific forms of self-protection that the NCS classifies, presented in Table 6. They show that completion rates for all specific forms of self-protection are substantially lower than for

Table 5 • Self-Protection as Dependent Variable

Coefficients (ratio, coef./std. error)					
<i>Sample:</i>	<i>Full</i>	<i>Full</i>	<i>Reported to Police</i>	<i>Nonfelony</i>	<i>Nonseries</i>
<i>Estimation:</i>	<i>Probit</i>	<i>OLS</i>	<i>Probit</i>	<i>Probit</i>	<i>Probit</i>
Predictors					
KNIFE	-1.651 (-2.33)	-0.561 (-2.66)	C ^a	-5.255 ^b (-0.113)	-1.686 (-2.37)
HGUNPRES	-0.702 (-2.97)	-0.234 (-3.20)	-0.300 (-3.14)	-1.432 (-3.80)	-0.717 (-2.91)
INJURY	0.355 (2.23)	0.094 (2.08)	-0.017 ^b (-0.26)	0.644 (2.78)	0.389 (2.37)
AOGE30	0.409 (2.39)	0.116 (2.42)	0.181 (2.44)	0.404 (1.90)	0.434 (2.43)
SEXDIF	0.591 (2.73)	0.194 (2.89)	0.156 ^b (1.42)	0.684 (2.68)	0.667 (2.96)
AGEVICT	-0.017 (-2.40)	-0.489 (-2.27)	-0.006 (-2.21)	-0.303 ^b (-0.29)	-0.014 (-1.91)
BLAKVICT	-0.455 (-2.44)	-0.138 (-2.40)	-0.160 (-1.78)	-0.367 ^b (-1.44)	-0.448 (-2.30)
SUMMER	0.425 (2.59)	0.120 (2.63)	0.158 (2.18)	0.431 (2.07)	0.455 (2.67)
Constant	0.406 ^b (1.45)	0.640 (7.48)	0.785 (5.89)	-0.063 ^b (0.87)	0.268 ^b (0.36)
Sample size	378	378	151	253	366
Log-likelihood ^c	-191.67	(0.106) ^d	-66.68	-119.17	-180.31

Notes:

a. C indicates the variable was excluded because it was constant in this subsample.

b. $p > .10$ All other coefficients: $p < .10$, 2-tailed ($p < .05$, 1-tailed)c. All equations were significant, $p < .01$.

d. Adjusted R squared

nonresistance, with the lowest rates, 0 percent, associated with resistance with a gun or knife. The figures for these latter categories are based on too few sample cases to be reliable, but they do accord well with NCS data on self-protection in robbery and assault, where there are sufficient cases of gun and knife resistance to be meaningful (Kleck 1988). Considered in combination with these ancillary findings, they confirm the Table 3 findings indicating that resistance with a gun or knife is the most effective form of resistance for preventing completion of a rape.

Concerning the association between self-protective measures and injury, the Table 6 figures indicate that only nonviolent resistance and the very rare gun-armed resistance have injury rates as low as, or lower than, nonresistance. Excluding the rare knife resistance incidents, self-protection actions are associated with injury rates as much as 90 percent higher than that of nonresistance. If we accept the VRS results concerning sequence of injury and resistance, these figures are most compatible with the claim that injury to the victim commonly provokes the stronger forms of victim self-protection, while uninjured victims either do not resist or limit themselves to nonforceful resistance.

Table 6 • Completion and Injury Rates of Methods of Self-Protection

<i>Method of Self-Protection</i>	<i>Percent Completed</i>	<i>Percent Injured</i>	<i>Number Times Used^a</i>
Used gun	0.09	0.0	2,056 ^b
Used knife	0.0	69.4	4,033 ^b
Used other weapon, not gun or knife	9.9	58.9	14,257 ^b
Used weaponless physical force	29.3	56.9	166,441
Tried to get help or frighten offender	28.6	50.5	251,037
Threatened or reasoned with offender	30.5	57.6	135,632
Nonviolent resistance, incl. evasion	15.2	32.1	161,606
Other measures	27.5	41.8	36,680
Self-protection with weapons	6.9	55.0	20,347
Forceful self-protect. (incl. weapons)	27.7	56.1	181,059
Nonforceful self-protection	25.5	43.3	418,792
Any self-protection	25.1	43.0	424,953
No self-protection	48.9	31.0	146,858
Total, all rapes	31.2	39.9	571,811

Notes:

- a. "Number Times Used" figures for separate self-protection methods will not sum to the totals in the lower rows because each victim could use more than one method. Sample: All stranger rape incidents, U.S. 1979-1985.
 b. Based on 10 or fewer sample cases.

Discussion***Limitations***

Several limits of this research should be noted. First, the analysis and conclusions are limited to stranger rapes in the United States during 1979 to 1985. Resistance might be less successful with rapists known to the victims, perhaps because the victims might be more inhibited about using the more violent, and effective, forms of resistance. A prior relationship might have taught the victim the futility of resistance (or perhaps its utility). On the other hand, less strenuous forms of resistance might be just as effective because there was a relationship between victim and rapist. Also, nonstranger rapes are more likely to take place indoors, and this could influence the types of resistance attempted. Second, the NCS contains only a limited number of variables relevant to rape completion and injury. Coefficient estimates could be biased by the omission of variables associated both with self-protection variables and either injury or completion. Finally, self-protection actions at least occasionally precede injury, and thus there could be a reciprocal causal relationship between injury and self-protection. If so, the coefficient estimates for self-protection variables in the injury equations would be at least slightly biased and inconsistent.

Is Advice Advisable?

Should scholars offer advice to prospective victims based on this and similar knowledge? Some have concluded that silence is the prudent course of action. Certainly it is the easiest course, and seems to entail the least burden of responsibility. However, regardless of whether

experts offer advice, victims will continue to be attacked and will continue to be forced to make decisions as to whether they should resist. All courses of action are subject to doubt because all rely on flawed information—there is no other kind. However, some information is less flawed. Further, both offering advice when it could be hurtful and remaining silent when the advice could be helpful entail risks to victims. The only issue is whether they would be better off with advice based on careful analysis of previous victims' experiences, or should be left to depend on folklore, unrepresentative police "war stories," and the like.

Some have argued that at least a few rapists are indeed incited to further violence by victim resistance, even if this is not true of most rapists. This can lead to either of two conclusions. The first is that experts should counsel nonresistance in most situations, since the victim cannot know when she is dealing with a rapist who will be incited to further violence by resistance (Prentky, Burgess, and Carter 1986; Hazelwood and Harpold 1986). The flaw in this reasoning is that it depends on an unstated, but false, premise that nonresistance does not entail any risks of its own or that these risks are minor compared to additional injury. As we have seen, however, all forms of resistance are associated with substantially lower odds of rape completion, so nonresistance seems to increase the victim's chances of experiencing completion of the rape itself.

The other conclusion that some have drawn is that experts should not provide all-purpose advice covering rape situations in general, since each type of rapist is different. Victims should react differently to different situations, depending on the rapist's personality and motives (Prentky, Burgess, and Carter 1986; Hazelwood and Harpold 1986). While it is indisputable that different rapists may react in different ways to victim resistance, it is not obvious that this implies that experts should not offer general, all-situations advice. If it were somehow possible for a victim to identify rapists who are provoked rather than inhibited by resistance, then it might indeed be sensible to refrain from resistance in some situations. However, it must surely be a rare rape where the victim has both the requisite background information about the rapist and the calm frame of mind needed to make this sort of diagnosis under what ordinarily are the most terrifying of circumstances. In the usual absence of such resources, a rape victim must necessarily rely on more easily applied information about the general odds of completion and injury associated with the various courses of action she might take, as they are known from the experience of previous rape victims, undifferentiated with respect to the type of rapist they faced.

On the other hand, future research might usefully focus on situational variants that victims could reasonably be expected to assess, such as urban vs. rural setting, the victim's strength and health, presence of children and others in the household, and so on. Unlike a diagnosis of the rapist's behavioral tendencies, these are more straightforward matters about which victims would frequently have usable information.

Trading Rape Completion for Injury Reduction

Suppose for the sake of argument that where resistance preceded injury, it was the resistance that provoked the injury. Would this provide decisive support for advice to prospective rape victims that they refrain from some forms of resistance? Advice to not resist depends on the belief that the nonresisting rape victim trades off an increased likelihood of rape completion for a reduced likelihood of injury. Such a trade-off makes sense only if one assumes the additional injury is in some sense a more serious harm to the victim than the completion of the rape itself. NCS data for 1979-1985 indicate that only 39.9 percent of rape incidents involved any additional injury (Table 1) and that only 7.7 percent of the additional injuries suffered by rape victims could be described as serious, i.e., involving a gun or knife wound, broken bones, teeth knocked out, internal injuries, or loss of consciousness. This means that only 3 percent ($.399 \times .077 = .0307$) of the incidents involved an additional serious injury.

In short, the most serious injury the victim faced, in all but 3 percent of the rapes, was the rape itself. Even in the remaining 3 percent, injuries such as teeth knocked out or broken bones would be regarded by many victims as less serious than the rape itself. Therefore the real tradeoff that nonresistance involves, even if one assumed that resistance sometimes provokes offender attack, is an increased probability of the very serious harm of a completed rape versus a reduced probability of other injuries, which are almost always far less serious than the rape.

In light of these considerations, we believe the best course of action for most rape victims is to resist, preferably with a weapon, or by using a variety of nonforceful tactics (see GETHEPSP and NOFORCSP in Table 2). There is of course one possible consequence of a rape that is clearly more serious than the rape itself—the murder of the victim. Inclusion of rape-murders in the analysis could not materially change the results of any of our probit analyses because they are so extraordinarily rare. For the period covered by our NCS analysis, 1979-1985, there were a total of 2,039 murders and non-negligent manslaughters linked by police to "sex offenses," only some of which were rapes (U.S. FBI 1984:12, 1986:12), compared to an estimated 1,164,560 rapes for the same period, a figure that is likely to be an underestimate (U.S. Bureau of Justice Statistics 1981-1987). Thus, fewer than $\frac{1}{6}$ of 1 percent of rapes resulted in the victim's murder (see also Lizotte 1986). Obviously, if a victim could reliably know in advance that she could prevent her death by submitting to a rapist's demands, nonresistance would be a rational course of action. However, it is unlikely that rape victims often possess such knowledge. Nor is there any solid basis for believing that any significant fraction of those murders were provoked by victim resistance.

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