The Other Criminalities of Animal Freeze-Killers: Support for a Generality of Deviance

ABSTRACT

This research analyzes the overall arrest histories of persons aged 18-34 convicted for weapon-related deer spotlighting in Virginia during 1997 and 1998. Deer spotlighting, or “freeze-killing,” is a specific form of deer poaching involving shining a deer with a spotlight for an easier kill. Defined as unsporting, freeze-killing constitutes animal abuse. This study isolated and compared arrest rates of white males—90% of the sample in the present research—with estimated rates of a cross-sectional national sample of the same race-sex-age combinations. Results showed that about two in five freeze killers had been arrested, more than one in five for a crime of violence. Freeze-killers had almost twice the rate for violent crime and almost three times the rate for property crime as the control group—after accounting for age and for the time at risk of arrest. The findings’ direction is consistent with the recent literature and a “generality of deviance” approach, and support an earlier call to expand hypotheses about animal abuse to include other criminal correlates in addition to violence.

Agnew (1998, p. 193) has observed that, “individual traits said to cause crime may also cause animal abuse.” The reasoning is sound because intentional harm both to human and nonhuman animals is
conceptually identical—the only real difference is the species victimized. Both involve insensitivity to the results of such behaviors, and both involve a lower inclination to grant other living beings moral deference. Animal abuse and crime are similarly exploitative; therefore, persons who engage in one should be more likely to engage in the other. Agnew’s assertion is consistent with the “generality of deviance” approach (Dembo et al., 1992; Gottfredson & Hirschi, 1990; Harrison & Gforer, 1992; Hirschi & Gottfredson, 1994; Osgood, Johnston, O’Malley, & Bachman, 1988), which argues that “a wide range of criminal behaviors are positively correlated with one another either because one form of deviant behavior leads to involvement in other forms of deviance or because different forms of deviance have the same underlying causes” (Arluke, Levin, Luke, & Ascione, 1999, p. 965).

Virtually all work that identifies a relationship between animal abuse and criminal behavior has focused on interhuman violence. The empiricism upon which these investigators have relied derives from divergent literatures. A mainstay is the psychiatric assertion that links cruelty to animals in childhood to later antisocial tendencies and aggression (Ascione, 1993, pp. 229-233; Felthouse & Kellert, 1987) and is known as the “graduation hypothesis” (MacDonald, 1961). There also are analyses of victimization surveys that begin with the discovery of family violence and then serendipitously identify coincident instances of animal abuse (Ascione, 1998; Ascione, Weber, & Wood, 1997; Deviney, Dickert & Lockwood, 1983; Renzetti, 1992, p. 21; Wiehe, 1990, pp. 44, 45). There also are data from veterinarians and from the backgrounds of certain infamous violent offenders. This potpourri of sources seems to have triangulated a relationship between animal abuse and intrahuman criminal violence from different angles. However, these works are, to varying degrees, problematic because: (a) they are based solely on abuse as a function of criminal offending rather than vice versa; (b) all are arguably unsystematic or unrepresentative in their sampling; (c) they rely on self-reported abuse (subject to error from respondents’ memory decay, interpretation, and withholding of information); and (d) they look only at the relationship between animal abuse and interpersonal violence without considering other forms of criminal behavior.

In contrast, a recent piece by Arluke et al. (1999) addresses all these concerns by beginning with a census of animal abusers prosecuted over a specified
period of time and then comparing their official arrest records to a matched group of non-abusers. Foremost, Arluke et al. take the opposite route of the rest of the literature (i.e., the criminal involvement of abusers rather than the abuse involvement of criminals), and by so doing they give greater clarity to the study of the relationship between animal abuse and interhuman violence. Second, they use a census of cases within a specified time period in a single jurisdiction rather than a nonsystematic or otherwise non-representative sample. Third, they base their sources of abuse and criminality documentation on official records rather than self reports. Fourth, by examining entire criminal histories, they ascertain links between abuse and both violent and non-violent criminality. This last point becomes especially important in light of the generality of deviance perspective. Arluke et al. concluded that although there was no evidence to support the aforementioned “graduation hypothesis,” there was a clear indication that their animal abusers were more likely to be involved in all types of criminal behavior than those in the non-abuser control group. Because the present research design is structurally similar to that of Arluke et al.—taking officially recorded abusers from a single jurisdiction over a specified period of time and then tracking their official criminal histories—it may be treated as at least a partial replication of Arluke et al.

**Crime and Animal Abuse Derive from the Same Trait-Construct**

As noted, the generality of deviance approach asserts that crime and animal abuse are likely to co-exist because they have the same cause. Crime, in whatever form, reflects the exploitation of gain and advantage. Gottfredson and Hirschi (1990, pp. 89-93) build *A General Theory of Crime* (the general theory) around this inference, believing that crime comprises either actual or analogous attempts to procure “money without work, sex without courtship, [or] revenge without court delays.” The general theory will be the basis for the present research because it is most specific about how the generality of deviance is manifested.

The fundamental cause that Gottfredson and Hirschi (1990) believe to be associated with the generality of deviance is a personality trait comprising the propensity for the satisfaction of relatively immediate gratification. This propensity is a continuum and ranges for each individual from very low to
exceedingly high. The lesser one’s tendency toward it, the more “self-con-
trol” one possesses, and vice versa.4 “Self-control,” then, is the fundamental
trait-construct of the general theory. Succinctly, there are six dimensions of
the trait-construct of lower self-control: (a) impulsivity, (b) preference for eas-
ier rather than complex tasks, (c) risk-seeking and risk-taking, (d) easy loss
of temper and low frustration tolerance, (e) preference for physical over men-
tal activity, and (f) self-centeredness and insensitivity toward others. These
six are natural tendencies of human animals, and to the extent that they exist
at early adolescence are a function of guardians’ neglect to teach self-control
at earlier ages.

A major corollary to the general theory is that people with high self-gratification
(i.e., low self-control) are “versatile” in their quests to satisfy it, and in so
doing they engage in a wide spectrum of criminal and noncriminal behav-
iors. Another major corollary to the general theory is that one’s self-control,
be it toward higher or lower on the continuum, is “stable” over time, rela-
tive to age. Individual self-gratification tendencies for everyone rise (relative
to where they are on the continuum) during the period that includes early
adolescence through about age 25 and then taper off throughout the remain-
der of the life course. Property offending peaks in the late teens and violent
offending peaks in the early twenties.

Put another way, the general theory asserts that age-based variations in crime
and analogously motivated behaviors are caused by age. Any analysis of
these behavior rates, then, must control for age. The versatility and stability
of low self-control form the general theory’s basis for the generality of deviance.
The theory states that, after controlling circumstantially for physical oppor-
tunity and self-interest,5 groups of persons who are higher on the self-
gratification trait-construct continuum always will commit the aforementioned
behaviors at a higher rate than groups of persons of the same age who are
lower on the continuum. Exactly how much “higher” the higher gratification
group’s rate must be to support the general theory is based more on good
judgment than on statistical significance.6

Purposeful acute animal abuse appears clearly symptomatic of the low self-
control trait-construct. Bestiality and zoophilia certainly inflict cruelty on an-
imals (Beire, 1997); more important, they epitomize sex without courtship.
Walton (2001, p. 19) differentiates bestiality from zoophilia by noting that
bestiality is used for the moment because it is easy—a “consequence of convenience” (italics added)—a passing interest” whereas zoophilia is characterized by an exclusive preference for animals as sex objects. Cockfighting and dog fighting are thrilling activities for the human animals involved. These activities also are risky enterprises, not only because they are generally illegal but also because they involve the possibility of losses related to high stakes gambling and to expensive animal-property (Darden & Warden, 1996; Forsyth & Evans, 1998; Forsyth, 1996; McCagh & Neal, 1974). Committing abusive acts against companion animals has been identified as a low frustration tolerance response to immediate anger and to a desire for revenge (without court delays) against the owner (Agnew, 1998, p. 197; Ascione, 1993; Kellert & Felthous, 1985). Harming companion animals also has been documented as a means of exerting psychological control over female partners—an act caused by situational low frustration tolerance, but, nevertheless, chosen as yet another psychophysical tool in a much larger battering-control schema. More specifically, harming the companion animal of a partner is a way to demonstrate power, teach submission, and perpetuate the context of terror (Adams, 1995). The critical nexus among all these behaviors is not their illegality but the link to the abuser’s lower self-control. In terms of the general theory, then, the animal becomes merely a situational instrument employed by lower self-control individuals in their versatile attempts to satisfy immediate gratification and establish exploitative relationships. The theory would see animal abuse purely as a vehicle to attain those ends. If exploiting human animals could satisfy the desires, then such exploitation will occur—as well as, or in lieu of, the exploitation of nonhuman animals.

Likewise, the “freeze-killing” of deer, which is the subject of this research, also is a lower self-control behavior that employs animals as instruments—it symbolizes “venison without hunting” as a manifestation of the attempt to procure money without work. Freeze-killing is a particularly un sporting form of poaching that involves shining the deer with a spotlight at night, freezing her or him to facilitate an easy kill. Freeze-killing deer at night is very different from other forms of deer poaching during daylight hours in that this method almost completely incapacitates natural defenses by eliminating otherwise extraordinary abilities to detect the presence of a hunter. Euphemisms such as “shining” and “jacking” have labeled this behavior, but it is termed “freeze-killing” here because that is precisely what it involves. Freeze-killing
seems to be an appealing behavior with which to test the general theory because it involves the abuse of animals and is an offense in which relatively few people engage.

Freeze-killing is a crime, so it is both risky (lights and rifle shots in the dark attract attention and alert authorities) and exciting. In some cases, the motive for the freeze-kill is only for thrill because the dead body is ignored. In other cases, the motive is money without work, as some freeze-killers have sold their ill-gotten venison on the black market (Sawhill & Winkel, 1974). It takes no real planning and requires little cognitive skill. It is often committed impulsively as a response to boredom (Green, 1990) and, in such cases, is a manifestation of low frustration tolerance. Most important, the behavior reflects short-term gratification because its sole intent is to avoid effort in the accomplishment of the kill. Put succinctly, it is easy. In fact, relatively few crimes demonstrate a more obvious attempt to create victim-vulnerability in order to gain advantage. It is a misuse of power over the victim, and it is cheating.

What constitutes “abuse” or “harm” is relative to the definer of that term. Thus, one may conceivably argue that freeze-killing is no more abusive to the deer than daylight killing (or perhaps argue that it is even less abusive because freeze-killing may produce more clean kills and fewer maims). Nevertheless, freeze-killing is abusive *ipso facto* because it is unsporting. Freeze-killing and similar behaviors (using explosives to kill large numbers of fish) are illegal precisely because they are seen to be unfairly abusive to natural resources. Freeze-killing conforms to the general definition of animal abuse put forth by Ascione (1993, p. 228): “[Any] socially unacceptable behavior that intentionally causes unnecessary pain, suffering, or distress to and/or death of an animal.” Ascione (2001, p. 2) clearly implies that freeze-killing falls within his definition of animal abuse because the definition excludes “legal hunting.” Further, one may argue from a functional “efficiency” or “rationality” perspective simply that we would expect deer killers to choose freezing because it is an easy method, regardless of whether the motivation is money, meat, or thrill. Because only a small percentage of deer hunters employ this means, the “efficiency” argument is exactly an argument in favor of the general theory. The theory seeks to differentiate between—on the one hand—those who are more likely to be involved in illegal and other deviant activities because they are easy means to attain an otherwise difficult objec-
tive and—on the other hand—those who are not involved in those behaviors. Specifically, the theory predicts that those who are involved in freeze-killing also would be more likely to be involved with similarly motivated high gratification criminal activities—including those motivated by revenge without court delays (crimes of violence) and money without work (property crimes).

**Method**

As noted at the outset, Arluke et al. were the first to identify a group that has engaged in animal abuse and then look for concordant criminal behavior of many types, and this research takes the same path. Rather than focusing on the abuse-then-violence temporal ordering of the graduation hypothesis, the assumption here, grounded in the generality of deviance proposition and the general theory of crime, is simply is that the two kinds of behavior should co-exist at a higher rate than do criminality and non-abuse. The basic research question, then, is whether persons who commit animal abuse are involved in criminal activity at a higher rate than persons who do not commit animal abuse.

The two behavioral constructs at issue are “abuse of nonhuman animals” (abuse) and “intrahuman criminal victimization” (criminality). The only question that needs answering for each construct is whether it measures what it intends to measure. That is, an involved discourse about what “abuse” or “criminality” ought to comprise is irrelevant.

**Abuser (“Study”) Group**

The abusers are those convicted for freeze-killing deer or attempting to do so. As noted earlier, it is the tangible unfairness, not its illegality, associated with freeze-killing, that makes it straightforwardly and acutely abusive. This criterion is assumed to have face validity so there are no false positives in the study group for the abuser construct (persons who are deemed abusers but are not). An enumeration was created of all officially recorded adult offenders (N = 365) cited during the period January 1, 1997 through December 31, 1998 for violation of *Virginia Code* 29.1-523⁷ (involving a spotlight freeze-kill or its attempt) or *Virginia Code* 29.1-525.A⁸ (involving spotlighting in
possession of a weapon) and who were convicted. The list of offenders was taken from the files of the Virginia Department of Game and Inland Fisheries (Law Enforcement Division) as part of a larger research project for that agency. Both offenses are defined as Class 2 misdemeanors, punishable by a fine not to exceed $1,000 and incarceration not to exceed 6 months, so they are considered relatively serious offenses by the legislature. The study group consequently comprises all adults who were convicted of an overt act to accomplish freeze-killing during a specific time period in a specific jurisdiction, so there can be little question that the persons in the group constitute a distinct and homogeneous animal-abusing cohort. Demographically, the group of 365 included more than 90% white males.

The construct “criminality” for those in the study group is operationalized as any person who had been arrested (that is, booked) after he or she reached 18 years of age for at least one violent crime (criminal homicide, forcible rape, robbery, aggravated assault, and simple assault) or property crime (larceny, burglary, motor vehicle theft, fraud, forgery, and burglary). Arrest entries were assumed to be an indicator of participation in some sort of behavior germane to the charge, regardless of whether the offender was acquitted, whether the offender was convicted of a lesser crime, or whether the record did not contain disposition information. To obtain information for determining the criminality rate in the abuser group, all names in that group were first submitted to the Virginia State Police for in-state arrests and then to the FBI’s National Crime Information Center for out-of-state arrests. The arrest records were then redacted for anonymity and entered into a data set. Because of the data rules for the control group, only one crime was coded for each arrest event, regardless of the number of counts or different offenses listed for that event. When more than one offense type was listed, felonies were coded over misdemeanors. If there was a conflict between different misdemeanors or different felonies, violent crimes were coded over other offenses.

There may be a very low percentage of false positives for the criminality construct in the study group—persons arrested for one or more of these offense behaviors but who actually never engaged in it as an adult. There are potentially many false negatives in the abuser group—persons who have not been arrested for any of the above adult offense behaviors but who engaged in them. Arrests are two steps removed from the offense: whether the offense
comes to the attention of the authorities and, if so, whether they arrest the offender. Theft and violent offenses involving close relational distance between the victim and offender are especially unlikely to come to the attention of the authorities. In such cases of non-reported offenders, they would never appear in arrest records. Even if the offense comes to the attention of the authorities, the offender still may avoid arrest, particularly in theft or violent confrontational offenses involving a victim-offender stranger relationship. In non-confrontational crimes of theft, the victim often has no idea who the offender is, making arrest virtually impossible.\textsuperscript{12}

Consequently there is no doubt that using arrests creates some unknown number of criminality false negatives for the abuser group, and that they far outnumber any false positives that might exist. But the same arguments made above can be made for the control group, which is based on general population arrests. False negative rates and false positive rates associated with arrest records are assumed to occur at their respective levels in both the study and the control groups, thereby becoming cross-canceling random biases. Despite the probable inclusion of many false negatives associated with using arrest records to measure criminality, such records do not have the response error associated with self-reports (memory decay and other failures to be truthful), and they are the best information available to document age-specific longitudinal criminal involvement.

\textit{Non-Abuser (Control) Group}

It was noted that the study group comprises more than 90\% white males. Crime is strongly related to race and sex, so the control group ought to parallel the study group accordingly. Further, because the relationship between age and crime is essentially invariant (Gottfredson & Hirschi, 1986; 1987; 1990) and because most of the crime people commit occurs before their mid-thirties, the control group, to be most efficient, should concentrate, as well, on the earlier adult ages when “the crime rate is maximally variable” (Gottfredson & Hirschi, p. 610). An acceptable control group, then, would be white males between the ages of 18 and 34. About three-fifths of the study group fell within those parameters at the time the records were drawn, so it will contain 215 people after attrition. To coincide with the control group data structure, four age clusters are used: 18-19, 20-24, 25-29, and 30-34.
Whereas Arluke et al. (1999) constructed their control group based on abusers’ demographics and neighborhoods, the non-abuser control group here is based on estimates of the general U.S. population on July 1, 1999 for the four age clusters. All persons in the U.S. population control group are assumed to be non-abusers or “negatives” for the abuse construct. Obviously, there will be false negatives here—persons deemed non-abusers who in fact have participated as an adult in animal abuse, whether it was freeze-killing or some other behavior. Their proportion of the U.S. general population, however, is presumed to be so small that the false negative rate is inconsequential. If anything, including abusers in the control group, works against supporting the hypothesis of the generality of deviance (and the general theory) because if the relationship between abuse and crime is significant, then the control group arrest rates will be artificially inflated by including any abusers. If the relationship between abuse and criminality is not significant, then the criminality of any abusers in the control group will appear to be the same as the group’s true negatives. The inclusion of false negatives under the abuse construct in the control group, then, is of no methodological consequence in favor of the generality hypothesis and may even act against it.

**Rate Constructions and Comparisons**

“Criminality” is presented through a common rate measurement that reflects the number of arrests for each of the four age clusters as a function of the number of person-years at risk for arrest covered by those clusters. Denominators for the study group’s age clusters were determined as follows: If, for instance, at the time the records were drawn there were ten individuals in the 20-24 cluster, two of each age, then the number of years at arrest risk for that category would begin with 30—that is, $1 + 1 + 2 + 2 + 3 + 3 + 4 + 4 + 5 + 5$. All persons in the 25-29 and the 30-34 clusters would also have been at arrest risk for the five-year period during their ages 20-24, so five years would also be added to the denominator of the 20-24 cluster for each person over age 24 at the time records were drawn. The numerators for each of the study group’s age clusters included all relevant arrests that occurred at respective cluster ages.

The criminality for the control group is defined as the national arrest rate of persons aged 18-34, derived from an interpolation of census estimates used
in the *Uniform Crime Reports*’ (UCR) information on persons arrested for 1999 (see Appendix). The *UCR* presents data for persons 18, 19, 20-24, 25-30, and 30-34. The first two ages were collapsed into a single cluster, resulting in the four previously mentioned age groups. The control group arrest rate numerator is the FBI-estimated number of national arrests for the specified offenses in each age cluster. The control group arrest rate denominator is the interpolated 1999 population for respective age clusters multiplied by one. The assumption is a single year at-risk for each person in the denominator because the numerator is based on a single calendar year of arrests—thus, the denominator would equal the population. Strict *UCR* definitions of the five violent and five property offense categories (Federal Bureau of Investigation, 2000, pp. 405-406) were followed in the construction of the violent and property crime rate numerators for the study group, so they are directly comparable to the *UCR*-based numerators in the control group. What results is an exactly comparable time proportionate incidence rate for both groups that denotes per capita arrests per year at risk of arrest according to age cluster.

Aside from the minor inaccuracies in the estimates of the control group rates associated with over- or under-estimating numerators or denominators, if any systematic bias exists in the design, it is against the general theory. Persons erroneously were assumed to be at risk of arrest during any periods that they were incarcerated. This assumption wrongfully increases the denominators of the study group more than it does the denominators of the control group, resulting in more artificial deflation of study group rates. This occurs because many incarceration sentences given to those in the study group involved more than one year (numerous sentences were listed in arrest records, but many were not), whereas by definition, persons in the control group could not be incapacitated for more than a year. The net effect is that persons in the study group who were incarcerated, say, during ages 21-24, are erroneously assumed to have been at arrest risk for all of those years. Persons in the control group given a three-year sentence at age 21 are erroneously assumed only to be at arrest risk for one year. The bias against the general theory is thus an artifact of the longitudinal nature of arrests in the study group as opposed to the cross-sectional nature of arrests in the control group. Especially given the small denominator in the study group relative to the control group, this over-estimation of study group time at-risk causes an undeterminable, but weighty, under-measurement of its average yearly
incidence rates. Therefore, the design here is biased against the generality hypothesis, and the magnitude of the bias would be considerably greater than any systematic bias that might exist in under-estimating arrest rates in the control group.

The general theory assumes its trait-construct is stable relative to the age curve and that opportunities to offend also are stable and randomly distributed. As such, the theory ought to be testable using a common time-proportionate incidence rate as the means of comparison. The measurement unit here—the average number of arrests per person per year at risk of arrest—is a time-proportionate group incidence rate that includes single or multiple arrests of individuals, regardless of whether they had been arrested prior to the time in which the rate is observed. In other words, it does not matter that criminality is measured in the control group by a single-year national cross-section of arrests and in the study group by longitudinal arrests for an offense-selected cohort, because the unit has the same meaning in both applications. Gottfredson and Hirschi (1987, p. 589) themselves implied that patterns predicted by the general theory should be observable in both longitudinal and cross-sectional data. Therefore, the comparison here would be quite fair.

**Results**

As noted, the general theory provides the framework for this research. The at-offense age distribution of freeze-killers (see Figure 1) must resemble the known age-crime relationship that invariably demonstrates higher frequencies in the younger ages with a general decline toward the older ages. Otherwise, the general theory would not be supported because persons who engage in lower self-control behavior would not follow the predicted age dispersal—it cannot look like a bell curve. Thus:

**Hypothesis #1:** The at-offense age distribution of involvement in freeze-killing follows the known, essentially invariant age-crime relationship.

Figure 1 nicely depicts approximately that relationship, supporting Hypothesis #1.

The two most important predictions of the general theory relate to its corollaries of versatility and stability in low self-control behaviors:
Hypothesis #2: Because of the versatility corollary of the general theory, freeze-killing will be arrested for various kinds of criminal behavior—property and violent—at higher rates than the general population.

Hypothesis #3: Because of the stability corollary of the general theory, freeze-killing will be arrested for various kinds of criminal behavior—both property and violent—at higher rates than the general population across all four age clusters.

If freeze-killing arrest histories do not support these hypotheses, the basic assumptions of the theory are disproved. Stability is particularly important for the older age groups. If persons in their late twenties and early thirties are out at night trying to freeze-kill, they are seriously defying the age-crime curve predictions of propensity to be involved in lower self-control behavior and would therefore be particularly likely to participate in versatile criminal activity. Thus, if older persons who are involved in freeze-killing do not have higher offending rates of both violent and property crime than their age.

* The range of ages in Figure 1 is 18-33 because the poaching offenses occurred at least a year prior to the extraction of the criminal histories.
counterparts in the general population, then such a finding would be especially contrary to the general theory’s assumptions.

Table 1 depicts the relative incidences of arrest for the control and study group according to age cluster. Overall, freeze-killers have almost twice the rate of violent crime arrests (1.96:1) and almost three times the rate of property crime arrests (2.88:1) as the control group—supporting Hypothesis 1. For freeze-killers during all ages 18-34, the prevalence rate for any arrest, including for offenses not part of Table 1, was almost two in five (.395) (not shown in Table 1). Therefore, three-fifths did not have an arrest, but many of the three-fifths had not yet passed through its twenties when the records were drawn. Whether the two arrest rates—double for violent crime and triple for property crime—are high enough to consider the relationship between abuse and crime significant in contrast to the relationship between non-abuse and crime is a matter of judgment. There is no doubt, however, that a test with an inherent bias against Hypothesis #2 solidly supported it.

Table 1 also strongly supports Hypothesis #3. Freeze-killers had higher rates of both property and violent arrest than the control group across the four age clusters. The weakest rate differentials were for violent crime arrests in the 18-19 and 20-24 clusters (1.73:1 and 1.21:1, respectively). Recall that the general theory assumes that involvement in violence peaks at or before the early twenties, accounting for the relatively minimal difference between the study and control groups at this time in their lives for this sort of offending. In other words, high involvement in violent crime by the control group—not the lack of violent crime involvement by the study group—accounts for the smaller differences between the groups in these two clusters. The other comparisons are much less equivocal, ranging from 2.12:1 to 6.57:1. As noted, the test of Hypothesis #3 should identify higher rates of property and violent crime arrest, especially within the two oldest age clusters. Those higher rates occurred, especially in the 30-34 cluster. Although we must consider that this (30-34) cluster has the lowest denominator (and therefore small changes in the numerator will translate into large jumps in the rate), it is nevertheless clear that the older freeze-killers are still very active in crimes of violence and theft, relative to their age counterparts in the general population. All told, the general theory’s corollary of stability is unanimously, and in most places robustly, corroborated in the test of Hypothesis #3.
### Table 1. Incidences of Study Group Arrests and Control Group Estimated Arrests: Per Year Per Person

<table>
<thead>
<tr>
<th>Age Cluster</th>
<th>18-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study Group (Freeze-Killers)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>215</td>
<td>200</td>
<td>97</td>
<td>40</td>
<td>215</td>
</tr>
<tr>
<td>N-Years</td>
<td>430</td>
<td>762</td>
<td>350</td>
<td>107</td>
<td>1648</td>
</tr>
<tr>
<td>Arrests</td>
<td>20</td>
<td>39</td>
<td>24</td>
<td>38</td>
<td>16</td>
</tr>
<tr>
<td>Arrests Per Year</td>
<td>.0465</td>
<td>.0907</td>
<td>.0315</td>
<td>.0498</td>
<td>.0457</td>
</tr>
<tr>
<td>Ratio of Study Group Per Person</td>
<td>1.73</td>
<td>2.37</td>
<td>1.21</td>
<td>2.16</td>
<td>2.40</td>
</tr>
<tr>
<td>Arrests to Control Group Estimated Arrests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Control Group</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Estimated N and N-Years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Arrests</td>
<td>56,467</td>
<td>80,616</td>
<td>124,521</td>
<td>110,112</td>
<td>101,515</td>
</tr>
<tr>
<td>Estimated Arrests Per Year</td>
<td>.0268</td>
<td>.0382</td>
<td>.0261</td>
<td>.0231</td>
<td>.0216</td>
</tr>
</tbody>
</table>
Perhaps the most important corollary of the general theory is versatility, because it predicts that lower self-control behaviors will manifest in ways that involve the six dimensions of the trait-construct. Table 2 presents the frequency of all arrest charges recorded for the study group, including multiple charges for single arrest events and charges not included in Table 1 because they fall outside the UCR offenses studied. Unmistakably, Table 2 documents versatility among those who were arrested, demonstrating many manifestations of the three motivations:

1. “money without work”—burglary, fraud, larcenies of all types, robbery, forgery, motor vehicle theft, illegal liquor manufacture, drug sales, and failure to pay child support;

2. “sex without courtship”—rape, sexual assault, intercourse with a minor, and some or all cases of contributing to the delinquency of a minor (charged when a minor sexual partner is between 15 and 17\textsuperscript{13}); and

3. “revenge without court delays”—murder, felonious abduction, malicious wounding, cross burning, assaults of all types (felonies and misdemeanors against both family members and strangers), and telephone threats.

Impulsiveness also is identified in behaviors such as failure to appear/contempt of court, where disobeying the judge is perceived to take care of the problem now. The drug, drunkenness, and drunk-driving offenses indicate criminal use of intoxicating substances. It bears repeating that these charges reflect only criminal behaviors for which the freeze-killers were arrested.

Offenses in Table 2 were committed during an average 7.7-year period for all members of the study group. The average arrest charges for all persons in the study group, including those not arrested, was almost one and one-half, which equates to one arrest charge about every five years for all 215. It is probably a conservative inference to say that there is versatility in many freeze-killers’ overall offending patterns. As mentioned, many of the freeze killers probably are not finished with their offending—they have close to two thousand person-years after the records were drawn to remain at risk of arrest until they reach age 35. Re-examining arrest histories in, say, five years undoubtedly would show higher, probably significantly, prevalence and incidence rates—especially for the group’s very young who have not yet passed
Table 2. Frequency of Arrests According to Charge

<table>
<thead>
<tr>
<th>Charge</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misdemeanor Assault</td>
<td>29</td>
</tr>
<tr>
<td>Firearm Violation</td>
<td>27</td>
</tr>
<tr>
<td>Forgery</td>
<td>21</td>
</tr>
<tr>
<td>Domestic Violence</td>
<td>20</td>
</tr>
<tr>
<td>Fail to Appear/Contempt of Court</td>
<td>14</td>
</tr>
<tr>
<td>Felonious Assault</td>
<td>13</td>
</tr>
<tr>
<td>Contributing to Delinq. Of Minor</td>
<td>12</td>
</tr>
<tr>
<td>Rape/Sexual Assault</td>
<td>7</td>
</tr>
<tr>
<td>Trespassing</td>
<td>5</td>
</tr>
<tr>
<td>Telephone Threats</td>
<td>4</td>
</tr>
<tr>
<td>Sexual Intercourse with a Minor</td>
<td>3</td>
</tr>
<tr>
<td>Felonious Conspiracy</td>
<td>3</td>
</tr>
<tr>
<td>Throwing Missile at a Vehicle</td>
<td>2</td>
</tr>
<tr>
<td>Arson/Threatening to Burn</td>
<td>2</td>
</tr>
<tr>
<td>Failure to Pay Child Support</td>
<td>1</td>
</tr>
<tr>
<td>Cross Burning</td>
<td>1</td>
</tr>
<tr>
<td>Illegal liquor manufacture</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>N = 215 Total Arrest Charges = 302</td>
</tr>
</tbody>
</table>

Mean Arrest Charges Per Person = 1.4

Mean Years at Risk Per Person = 7.66

Mean Arrest Charges Per Person Per Year = .183

a Lesser but necessarily included offenses were not counted. Thus, if there were charges for burglary, theft, and receiving stolen property listed for a single arrest event, only the burglary was counted. If a single drug sales arrest also involved possession of drugs, only the sale was counted (but all sale warrants were counted). If an offender had several check charges with different warrant numbers associated with a single arrest, all such charges were counted. If an offender had a forcible rape and an assault, only the forcible rape was counted, but if he had several different assault charges on different warrants associated with a single arrest event, all assaults were counted. In short, an effort was made not to over-count charges.
through the high crime-prone ages of 20-24 — demonstrating an even stronger relationship between general criminality and animal abuse.

**Discussion**

Following Arluke et al. (1999), the data here indicate unambiguous support for the generality of deviance hypothesis. Their results, however, are not comparable to the ones presented here:

1. Arluke et al. used longitudinal records for both their abuser group and controls whereas this analysis used longitudinal records for the abuser group and cross-sectional data for controls;

2. Arluke et al. did not control for offending as a function of age;

3. The analysis here centered on white males 18-34 years of age, and Arluke et al. included ages 11-76, females, and presumably some non-whites (race was not reported);

4. Arluke et al. used drug and public order offenses in addition to property and violent offenses (drug offenses were available for both groups in the present analysis but were not included because they primarily are a function of proactive law enforcement idiosyncratic to jurisdiction);

5. The analysis here presented the data as a one-year incidence measure whereas Arluke et al. presented the data as a simple prevalence measure over the entire adult life course;

6. The analysis here used both state and FBI records whereas the Arluke et al. study used only the former.

It should be noted that Arluke et al. did not report the kinds of offenses associated with each of their categories. They may have counted more than one offense for each arrest. These latter two considerations may account for major differences in the counting procedures in the two studies, severely affecting the meaningfulness of the comparison.

Our results were similar in direction, but Arluke et al. (1999) found a much higher degree of criminality—their abuser group had a five-time greater chance of arrest for a crime of violence (compared to twice as high here). In addition, they found a four-time greater chance of arrest for a property crime (compared
to three times as high in this research). The discrepancies in the magnitude of the findings of the two studies are undoubtedly due, at least in part, to the several methodological differences between the studies—especially those related to counting rules, offense types included, longitudinal versus cross-sectional presentation, and incidence versus prevalence measurement.

As well, the data here indicate unambiguous support for the general theory. Future investigations into the behavioral correlates of animal abuse should include various types of criminal behavior other than violence, as done here and in Arluke et al. (1999). They also should include noncriminal behaviors associated with lower self-control (alcohol abuse, low educational attainment, unstable employment history, contraction of sexually transmitted disease, gambling, child abandonment, fathering or mothering an unwanted pregnancy, and higher accident rates). Abuse activities such as dog- and cockfighting may be interesting areas in which to apply the general theory’s postulates in the future. Constructs must reflect the foundations of low self-control—anger, revenge, impulsiveness, sexual gratification, and cheating. Ethical hunting and livestock farming would not be violent or abusive behavior under the general theory. Using inappropriate constructs will fail to produce reliable results and would constitute invalid tests of the general theory.

There is a specific ecofeminist perspective that has identified case studies in which males abuse women’s companion animals as part of a systematic schema of violence against those women (Adams, 1996, p. 181; 1995; 1994). More generally, that point of view links male violence against women to male participation in animal abuse. The arrests in Table 2 for domestic violence, rape, and other sexual assault and the manipulation of minors’ sexual consent positively demonstrated the animal abuser’s victimization and exploitation of women, based on his desires for revenge without court delays and sex without courtship. These activities, like freeze-killing, involve the misuse of power over victims. They constitute, however, only a small representation of animal abuser versatility in exhibiting lower self-control, so an exclusive focus on male violence toward women and on male participation in animal abuse misses the larger picture. The ecofeminist supposition, then, is in need of considerable revision and expansion. Research also should look at the same correlates for female involvement in animal abuse, as predicted by the general theory or other hypotheses related to the generality of deviance.
The “graduation hypothesis” that has strongly dominated the animal abuse-human violence literature needs to be closely re-examined in light of the findings here and in Arluke et al. (1999). Future research on animal abuse and the generality of deviance should investigate, in addition to the general theory, other single-cause hypotheses, such as “strain” and “modeling” theories (Agnew, 1998).

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Notes

1 Correspondence should be addressed to Gary Green, Department of Government and Public Affairs, Christopher Newport University, Newport News, VA 23606, USA. Acknowledgments are gratefully given to the following: Colonel Jeff Uerz and Lieutenant Ken Conger of the Virginia Department of Game and Inland Fisheries, Law Enforcement Division; Christopher Newport University students Jessica Mesmer, David Shield, and Diana Weaver for data preparation and entry; Christopher Newport University Office of the Provost for funding of student data tasks; John Camobreco for his encouragement and incisive commentary; and Robert Agnew and Piers Beirne, whose conversations and academic work acted as my cognitive conduits into the literature related to nonspeciesist criminology. The author also thanks three reviewers and the Editor, whose comments helped to couch this research in terms more relevant to the existing literature.

2 For a discussion of methodological problems in this literature, including the absence of proper control groups, survey research that is error-prone because of respondents’ memory decay and selective retrospection, and plainly bad variable constructs and applications, see Beirne, 1999, pp. 123-125; 1995, pp. 19-23.

3 One is rather hard-pressed to find an intentional criminal act where the motivation does not involve an attempt to gain advantage through the victimization of a human or non-human animal. Some criminal acts are motivated by an utterly selfless moral appeal—such as the practice of euthanasia in the purposeful opiate overdosing of very terminal cancer patients—but offenses that do not involve an impetus to personal advantage are almost nonexistent.

4 For criticism and defense of the idea of “self-control” in the general theory, see Geis (2000) and Hirschi and Gottfredson (2000).

5 Self interest is defined in terms of individuals’ perceptions of the certainty and severity of governmental and social repercussions, and, according to Gottfredson and Hirschi, some persons have such low self-control that they are essentially indifferent to perceived sanction threat.
I am cautioning that comparisons of large groups may show a statistically significant difference in the dependent variable(s) predicted by the theory, even though there is a small percentage of explained variance.

§29.1-523 states, in part: Any person who kills or attempts to kill any deer between a half hour after sunset and a half hour before sunrise by use of a light attached to any vehicle or a spotlight or flashlight shall be guilty of a Class 2 misdemeanor. The flashing of a light attached to any vehicle or a spotlight or flashlight from any vehicle between a half hour after sunset and half hour before sunrise by any person or persons, then in possession of a rifle, shotgun, pistol, crossbow, or bow and arrow or spear gun, without good cause, shall raise a presumption of an attempt to kill deer in violation of this section. Every person in or on any such vehicle shall be deemed a principal in the second degree and subject to the same punishment as a principal in the first degree . . .

§29.1-525A states, in part: Any person in any vehicle and then in possession of any rifle, shotgun, pistol, crossbow, bow and arrow or spear gun who employs a light attached to the vehicle or a spotlight or flashlight to cast a light beyond the water or surface of the roadway upon any place used by deer shall be guilty of a Class 2 misdemeanor. Every person in or on any such vehicle shall be deemed prima facie a principal in the second degree and subject to the same punishment as a principal in the first degree . . .

Another 56 were cited but not convicted for these offenses during the time, so they were excluded. They had an overall arrest rate extremely close to that of the study group, so their attrition virtually had no effect on the makeup of the group as it relates to the purpose at hand.

Virginia Code, §18-211.

The term “forcible rape” is used here because it coincides with the FBI offense term used in the control group, differentiating it from “statutory rape” that involves non-forcible sex with a minor. It is acknowledged that all rapes are forcible and that statutory rape is a misnomer because it is not forcible. Where possible, the term “rape” is used instead of “forcible rape.”

Arluke et al. did not acknowledge the undercounting weakness in their data associated with false negatives on the criminality trait.

The same would be true for the Arluke et al. control group, but their work did not address this issue.

Virginia Code, §18.2-371.
The four age groups for comparison are 18-19, 20-24, 25-29, and 30-34. National arrest data were taken from the FBI’s *Uniform Crime Reports*, but because it does not include rates according to age, gender and race combined, the specific rates for our age-sex-race group had to be interpolated. To construct the denominator for the rates, July 1, 1999 population estimates from the Bureau of the Census were used, which are the same rates used in the *UCR*. Population estimates for males according to age were available, but not according to sex, race, and age combined. Because the 18 and 19 year-old males were part of the 15-19 group, 40% of that group was taken to configure the denominator that includes persons 18-19. This figure was added to the remaining three groups to arrive at the overall male total of 32.07 million. From this was subtracted the Bureau of the Census proportion of 17.7%, which represents the proportionate total nonwhite (Black, Native American, and Asian/Pacific Islander) population (the differences between male and female rates across races were extremely small). This left a total white male estimate for these ages of 26.39 million.

Because the *Uniform Crime Reports* is not based on the entire population, but instead on agencies representing a large portion of it, that figure had to be adjusted by the fraction of the total population (272.69 million) that was included in the *UCR* for 1999 (171.83 million), or a reduction of 37%, bringing the estimated *UCR* white male population for ages 18-34 to 16.63 million. This figure was disaggregated according to age cluster based on Bureau of the Census information, providing figures for the denominator in the control group’s criminality rates. This denominator, of course, is an estimate. The extent to which it is higher than reality is the extent to which the criminality rate will be artificially low (i.e., the false negative rate will increase). The opposite is true to the extent that the estimated rate is lower than reality (the false positive rate will increase and the estimate is artificially higher).

A similar exercise was performed for the numerator of the control group’s age cluster crime rates, because the *Uniform Crime Reports* for 1999 include age and sex combined and race separately. As noted in the text, the two types of crime taken from the *UCR* were violent (criminal homicide, forcible rape, robbery, aggravated assault, simple assault) and property (burglary, motor vehicle theft, larceny, forgery, and fraud). *UCR* arrests for these offenses were summed for all male-age presentations that constituted the 18-34 group. To estimate the fraction of nonwhite males included in those figures, the nonwhite female-to-nonwhite male ratio was subtracted from the total nonwhite arrests (to arrive at the number of male nonwhite arrests) and then the
remainder was subtracted from the sum of male arrests for the age group, to result in an estimate of white males in those age groups. To double-check these ratios, for violent crime at least, the ratios were compared to information in the most recent National Crime Victim Survey (NCVS) that estimates proportionate involvement in violent crime according to race and sex based on the perceptions of lone offender victims of violent crime (about 80% of such victims). After removing criminal homicide from the UCR race and sex ratios (it is excluded from the NCVS), the ratios were almost identical to those in the NCVS. The male-to-female ratio in the NCVS was 82% to 18%, and it was 80% to 20% in the UCR; the white-to-nonwhite ratio in the NCVS was 66% to 32%, and it was 64% to 36% in the UCR. The agreement indicates there are criminal sex and race ratios in the UCR that coincide with an independently estimated universe of offenders, although the same ratios may not hold true across age groups or across race and sex combined.

Because involvement in crime according to race and sex differs, based on the offense - violent or property—this proportionate reduction was performed separately for both types of offenses in the analysis. To the extent that these numerators are higher than reality is the extent to which criminality rates for the control group are artificially inflated (that is, the false positive rate increases), and the opposite is true to the extent that the numerators are lower than reality (criminality rates are artificially deflated and the false negative rate increases). These interpolated arrest totals were placed as numerators to the above-described denominators for each age cluster, and an overall annual average-crimes-per-person-per-year-at-risk to commit them (in this case, 1999) was constructed.


References


