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## Enuresis, Firesetting, and Cruelty to Animals: The Significance of Two Thirds of This Triad

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The familiar childhood behavioral triad of persistent enuresis, firesetting, and cruelty to animals has been suggested as a predictor of dangerously aggressive acts at a later age [1]. These studies, which support an association between these triadic elements and assaultive behaviors, involve only subjects who have already been identified as "dangerous" or "antisocial." How then does the incidence of a partial or complete triad in an aggressive population compare with that of a nonaggressive population? What is the significance of a single element of the triad or of two out of three elements? Finally, is there a sex-related difference in the significance of a partial or complete triad?

In order to address these questions, literature pertaining to the triad has been reviewed and data from three studies will be presented. The first two studies involved separate psychiatric inpatient populations. Although the subjects of these studies were not preselected by a history of aggressive or antisocial conduct, they were hospitalized for emotional disturbances so they are not representative of the nonpsychiatric communities whence they came. The third study involved female offenders. Again, the prison population is not representative of extramural communities, nor does it approximate psychiatric inpatient populations. The authors assumed, however, that the yield of partial triads in females would be greater in this setting.

### Review of the Literature

In 1963 MacDonald [2] reported a study of 100 inpatients admitted to Colorado Psychopathic Hospital for psychiatric evaluation because they had threatened homicide. He observed that the triad of persistent enuresis, firesetting, and cruelty to animals was often found in the histories of the more sadistic patients. He added, "A history of great parental brutality, extreme maternal seductiveness, or the triad of childhood firesetting, cruelty to animals and enuresis are unfavorable prognostic factors in those who threaten homicide." This latter view was based in part on his clinical experience in examining over 100 persons who had killed. Both observations were impressionistic.

Hellman and Blackman [1] did the first study that gave statistical support to the notion that this childhood triad correlated with violent behavior at a later age. They studied 31 adult prisoners charged with aggressive crimes and 53 prisoners charged with nonaggressive crimes. Three fourths of the subjects charged with aggressive crimes revealed a partial

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or complete triad, whereas only 15 of the 53 nonviolent subjects gave a history of any of these items. Two thirds of those with a positive triad belonged to the aggressive group. Of those with a partial triad, 56% were in the aggressive sample. The authors did not state whether the history of two items correlated more strongly with the aggressive sample than the history of a single item.

The Hellman-Blackman study was weakened by two aspects of the sample selection. Subjects were assigned to aggressive or nonaggressive samples based on charge, not conviction; hence, the data may contain false positives. Of greater concern, however, is the possibility of false negatives. Assignments were made on the basis of a single charge. If a subject's most recent charge was considered nonaggressive then he was placed in the non-aggressive group, apparently regardless of whether or not he had a prior record of charges or convictions for violent offenses. If the nonaggressive sample had consisted of subjects with no record of charges of aggressive crimes, the correlation of the triad with violent offenses might have been even greater.

In a later study MacDonald [3] compared three groups of 20 subjects. The first group consisted of patients hospitalized for purely psychiatric reasons. Subjects in this group were considered nonviolent because they denied a history of homicide or homicidal threats. The second group consisted of prisoners convicted of threatening homicide. Prisoners convicted of criminal homicide composed the third group. In this study the conjunctive incidence of four factors was significantly higher in the homicidal threat group than in either of the other two groups: parental brutality, parental seduction, childhood firesetting, and cruelty to animals. Statistical analysis did not confirm an association between homicide and any of the triadic elements. This negative finding may not be as contradictory to the results of the Hellman and Blackman study [1] as it first appears. In the MacDonald study [3] only two behaviors were considered in assigning patients to each of the three groups: homicidal threats and homicide. This study did not take into account the presence or absence of histories of assaults that did not result in death.

Justice et al [4] concluded that while the triad of enuresis, firesetting, and cruelty to animals may be somewhat useful in predicting violence, the following quartet is more reliable: fighting, temper tantrums, school problems or truancy, and inability to get along with others. Their findings were obtained from a three-part study that included (1) an analysis of literature between 1950 and 1971 for frequency of mention of suggested predictors of violence; (2) interviews with professionals who deal with troubled youths to find what symptoms they considered predictive of violence; and (3) in-depth interviews with eight persons convicted of violent crimes who had manifested behavioral problems in childhood.

The trouble with all three methods is that they may select frequently occurring variables rather than those which are most specifically associated with violent behaviors. Methods 1 and 2 probably reflect the impressions of clinicians and investigators more than signs or symptoms directly observable or reportable by aggressive subjects. Method 3 might have been more useful had the investigators employed a control group. With data from the eight aggressive subjects only, we might surmise that the higher frequency of temper tantrums and other behaviors reported by these subjects largely reflects their higher frequency in many children. Without suggesting that these elements are less specific than the triadic elements, the authors did in fact admit that the quadratic elements are manifested by all children at some time, but they assert that when the factors occur together, either excessively or at inappropriate ages, the four behaviors indicate a strong possibility of violent behavior in adulthood. Unfortunately the authors neglected to define the four items adequately, so there is some lack of clarity about what to make of their findings.

Climent and Ervin [5] also indicated that other signs of childhood pathology show a greater association with later assaultive behaviors: severe stubbornness, temper tantrums, and emotional deprivation. In their study of 40 violent subjects and 40 nonviolent controls,

they did not find any discernible differences as to enuresis, cruelty to animals, or pyromania. The authors did not give their definitions of these traits, so it is hard to know what to make of the negative findings. We must ask if "no difference discernible" means "no difference whatever" or "no statistically significant difference." Also, it must be asked whether the combination of two or three items, as opposed to each item singly, would have shown a significant difference.

A study of 158 female prisoners by Climent et al [6] showed the following variables to be most highly associated with violence: maternal loss before age ten, severe parental punishment, neurological disorders in relatives, the "dyscontrol" syndrome, and easy access to weapons. The triad of cruelty to animals, enuresis, and pyromania was considered "near significant." Again, without definitions of these terms it is difficult to comment on the meaning of this finding. Would two thirds of the three elements also have been "near significant"?

Wax and Haddox [7-9] reported six adolescent males with the triad. Over a twelve-month period the California Youth Authority considered them to be the "most assaultive" youths under its supervision. All six were still enuretic at the time of the study. All had histories of firesetting and animal cruelty which persisted at least into puberty. These cases demonstrate that some highly aggressive subjects continue to show the triadic behaviors well beyond childhood.

None of these articles discussed the significance of two thirds of the triad. From their experience in psychiatric inpatient services and prisons, the present authors have the impression that a history of a complete triad is uncommon. However, a history of two thirds of a triad is not an unusual finding in either setting. With its more common occurrence, two thirds of a triad may be more useful diagnostically, if indeed it is associated with assaultive behaviors.

### Study I

Hospital records of 133 inpatients of a private psychiatric hospital, including males and females from 15 to 30 years old, were examined for notations on triadic behaviors and aggressive behaviors against people. Seventeen of the 22 subjects whose charts explicitly recorded an absence of all three items had no charted history of any aggressive behaviors since early adolescence. Most of those with a single triadic element recorded (21 of 31) also lacked any history of interpersonal violence. The presence of two or three elements of the triad was associated with the presence of two or more of the following aggressive behaviors: homicidal threats, carrying a deadly weapon, and physical assault. However, the number of subjects with two or three elements was too low for statistical analysis.

### Study II

Four hundred twenty-nine psychiatric inpatients and 31 nonpsychiatric subjects at a Naval Regional Medical Center were studied to determine which childhood factors correlate with higher levels of aggressive behavior at a later age.<sup>3</sup> Information was obtained by means of a multiple-choice questionnaire and a clinical interview. For the purpose of studying the triad, each of the elements was defined. Animal cruelty referred to repeated torture and injury of dogs or cats. Destructive firesetting was the deliberate incineration of useful property or natural resources. One episode sufficed to consider the item present.<sup>4</sup> Persistent enuresis was defined as bedwetting beyond nine years of age.

<sup>3</sup>A. R. Felthous, unpublished data.

<sup>4</sup>There were only seven repeaters out of 429 psychiatric subjects. This result is consistent with evidence that arson is not a crime of high recidivism even among those convicted [10].

The psychiatric subjects were assigned to one of five levels of aggressiveness depending on the variety and severity of aggressive behaviors reported through interview. The highest level of aggressiveness was defined by a history of assault resulting in physical injury to an opponent which required medical treatment or dental restoration and a history of either carrying a deadly weapon for potential use against other persons or threats of homicide. Only those aggressive behaviors that occurred after the age of 15 were used to determine aggressiveness level. Level 1 was defined by an absence of any of these three behaviors. Levels 2, 3, and 4 represented intermediate levels.

The presence of two thirds of the triad was more clearly associated with higher levels of aggressiveness in comparison with a single triadic element. Eight of the ten subjects with two of the three elements fell into the group with the highest level of aggressiveness (S5). Figures for each of the five levels are presented in Table 1. A  $\chi^2$  test revealed that the incidence of two thirds of the triad in S5 over that of the three low aggressiveness groups (S1, S2, and S3) was statistically significant ( $P < 0.01$ ). Exclusion of female subjects resulted in a significant difference between S5 versus S1 and S3 ( $P < 0.02$ ).

None of the 429 psychiatric subjects reported a complete triad. Of the 31 nonpsychiatric subjects, none gave a history of two thirds or the complete triad.

Questionnaire items on parental rearing patterns revealed that nine of the ten "two thirds triad" subjects were subjected to parental brutality in childhood. Eight were beaten by a father figure and five of these were beaten by both father and mother figures.

Capsular histories of the aggressive behavior reported by three of the "two thirds triad" subjects are presented to convey the quality of aggressiveness.

#### *Case 1*

A 34-year-old welder in the U.S. Navy gave a history of killing cats and dogs for sport and torturing cats. Once he set a haystack on fire "to get even" with the owner. At 15 years of age he threatened to kill his father after his father beat him, fracturing several of his ribs. As a high school pupil he fought about once every six months.

After leaving high school his fighting waned in frequency but became more serious and generally occurred when he was intoxicated with alcohol. At 21 years of age, after hearing that a friend was having an affair with his wife, he tried to slay him by strangling him until he lost consciousness. Assuming that he had successfully killed his wife's paramour, he was later angered on learning that his victim survived. Another time he spotted a man who had struck him three months earlier. Overcome with vengeful rage, he broke a beer bottle over the man's head, knocking him unconscious.

#### *Case 2*

A 23-year-old infantryman in the U.S. Marine Corps set several houses, outhouses, and grass fields on fire. He did not report torturing dogs or cats, but he was enuretic until ten years of age. His father had beat him, and, on at least one occasion, had knocked him unconscious.

He carried both knife and gun for defensive and assaultive purposes. As a young child he had frequent outbursts of aggression. Once he stabbed his older brother with a knife. His frequent fighting in high school years became even more frequent after he enlisted in the Marine Corps. Since enlistment he averaged one fight per week. He claimed to have "put a lot of guys in the hospital." At 21 years of age he hit another boy in the face with a stick and "knocked his eye out." He explained that his "tough guy" reputation was vitally important: "I don't want to hurt others, but it keeps them away." Small annoyances caused complete loss of self-control. During fights he depersonalized, feeling as if he were "watching a movie" of himself.

TABLE 1—The number of subjects with each combination of the triad corresponding to each sample (S1 to S5) of Study II.

Elements Present	S1 ( <i>n</i> = 120)	S2 ( <i>n</i> = 100)	S3 ( <i>n</i> = 100)	S4 ( <i>n</i> = 56)	S5 ( <i>n</i> = 86)
Enuresis	1	4	2	0	4
Firesetting	2	2	2	3	2
Animal cruelty	1	3	2	2	3
Enuresis and firesetting	1	0	0	0	2
Enuresis and cruelty	0	0	0	0	1
Firesetting and cruelty	0	0	0	1	5
Enuresis, firesetting, and cruelty	0	0	0	0	0

### Case 3

A 19-year-old single white serviceman in the U.S. Navy reported persistent enuresis and cruelty to animals in childhood. He shot stray dogs and cats and tortured cats.

He was raised on an American Indian reservation in Utah where he said there was much racial hostility. He carried a knife "for protection from Indians." He made serious threats and made good his word. He knifed several American Indians and gave one a concussion by striking him on the head with a piece of steel. Several of his opponents were hospitalized. His fights were not limited to American Indians; he had a number of one-to-one scrapes with other white boys in high school. He threatened to kill one with a loaded .33-caliber firearm. In an angry outburst at a girl friend he punched her in the face and broke her nose.

### Study III

Felthous and Yudowitz [11] reported a study of 31 female offenders to determine which historical variables correlate with later convictions for crimes of personal violence. Subjects were divided into two groups, assaultive and nonassaultive. The assaultive group consisted of a conviction of a crime of personal violence ( $n = 11$ ). The nonassaultive group comprised subjects with no known charges of violent crimes. Seven subjects did not meet either criterion and so were not assigned to either group. This study analyzed the significance of childhood variables individually and so did not present data on the partial or complete triad.

The study also found that torturing dogs or cats and injurious paternal punishments to be significantly associated with convictions of assaultive crimes ( $\chi^2$  analysis,  $P < 0.02$ ). Though not statistically significant, enuresis beyond six years of age and destructive firesetting were among the historical variables that showed an increased incidence of more than 20 percentage points in the assaultive sample.

The data were reviewed to identify only those cases with a partial or complete triad. Definitions of the triadic elements were narrowed to approximate those of Study II. Persistent enuresis was defined as primary bedwetting extending beyond nine years of age. Animal cruelty referred to injuring dogs or cats. Firesetting denoted incineration of useful property or natural resources that resulted in suppression by a fire department.

Four subjects reported only a single element of this triad. Three gave a history of two thirds of the triad. None acknowledged the complete triad. Three of the four with one element belonged to the assaultive group. Although the fourth subject had a history of assault she was not assigned to the assaultive group because she lacked conviction for personal violence. All three of the subjects with two thirds of a triad were in the assaul-

tive sample; for all three the combination was enuresis and firesetting. All three of the assaultive females with two thirds of the triad reported brutal and injurious beatings by father figures. One also reported injuries sustained from beatings by her mother.

### **Comment**

Two thirds of the triad—enuresis, firesetting, and animal cruelty—is a diagnostically useful combination of signs because of its association with high levels of aggressiveness. Since two thirds of the triad appears to be more common than the complete triad among patients in psychiatric facilities, clinicians and investigators can observe this combination and its association with aggressive behaviors more frequently.

Although two thirds of the triad appears more often in male subjects, its presence in females seems to have similar significance. Like most of the male psychiatric subjects with two thirds of the triad, all three of the female offenders with this history had a history of early parental brutality and later aggressive behaviors.

Two thirds of the triad may be one component of another triad of greater theoretical and diagnostic value: (1) parental brutality, (2) aggressive behaviors directed against nonhuman objects (which likely serve as displacements); and (3) aggressive behaviors directed against people.

Aggressiveness should not be confused with "homicidal potential." By aggressiveness the authors refer to externally directed aggressive impulses manifested by several different aggressive behaviors. MacDonald's well-controlled study [3], which did not support a correlation between triadic elements and homicide, did not provide information on aggressive behaviors other than homicide or homicidal threats (that is, assault). A number of murderers do not have an impressive history of physical aggression against others [12,13].

Although the triad may not correlate with homicide, the presence of two or more elements strongly suggests the contemporary or later occurrence of aggressive behaviors directed against people. Such aggressive acts are not necessarily homicidal in intent or outcome. Indeed, none of the "two thirds triad" subjects in any of the three studies gave a history of homicide.

It is important to note that most patients with a high level of aggressiveness did not report two thirds of the triad. It should also be noted that the association of two thirds of the triad and aggressive behaviors against others was not necessarily irreversible. As a rule, the triadic behaviors and aggressive behaviors against others decreased with passage through adolescence and early adulthood. The persistence of two thirds of the triad into late adolescence and adulthood may be associated with high aggressiveness of commensurate chronicity, but this possibility will need to be studied in future research.

While focusing on the triadic elements, the authors do not imply that other signs of aggressiveness are of lesser importance. Certainly an adequate clinical evaluation for problems of aggression includes all pertinent data. Though suggestive, two thirds of the triad is not sufficient evidence for determination of assaultive potential. Nonetheless, this combination of signs constitutes an indication for a thorough psychiatric evaluation with special attention given to other signs of aggressiveness.

### **Summary**

The full childhood triad of enuresis, firesetting, and cruelty to animals is seldom reported by patients in acute care psychiatric facilities. Two of the three elements have been reported with greater frequency and constitute useful diagnostic information. Literature on the triad has been reviewed and data from three studies have been presented. The authors concluded that a history of two thirds of the triad is significantly associated with aggressive behaviors directed against people.

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