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YOUTHFUL FIRE-SETTERS . . .

an exploratory study in personality and background

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Fires started by children account for a significant and growing proportion of all fires investigated by the California Division of Forestry. In 1954, children were responsible for 10.5 percent of the man-caused forest fires on land protected by the Division. Since then the proportion has more than doubled—to 23.5 percent. Fire control agencies in other parts of the United States also report a growing concern with uncontrolled fires from this source.

This note summarizes findings of a recently completed study¹ of one aspect of this problem—the family background and personality characteristics of children who set fires.

The greatest proportion of children-caused fires are set by single offenders, but the primary focus of this study was the multiple fire-setter, with the single fire-setter used as a comparison. In the light of widespread reports of almost universal interest among young boys in playing with fire, we concluded that to be identified with a single fire incident may be largely fortuitous. It is at least conceivable that the individual so identified may not be strikingly different from a child who has no record of having started a fire.

HYPOTHESES OF THE STUDY

Because of the limited relevant research on the subject and budgetary considerations, the study's objective was conceived as an exploratory one—seeking hypotheses rather than testing them. However, two very broad general hypotheses were posed:

1. Children identified as multiple-fire setters (recidivists) are characterized by a group of associated problems, not a single distinguishing characteristic. These problems are likely to include excessive activity, aggression, psychosomatic difficulties (physical problems stemming from psychological factors), learning problems, behavior problems, and family difficulties.

ABSTRACT: In an exploratory study of personality and background, children who, according to California Division of Forestry files, had set two or more fires were compared with children who had set only one fire. Multiple-fire setters were characterized by several associated problems, such as excessive activity, aggression, and psychosomatic difficulties as well as family and school difficulties, rather than by a single distinguishing attribute. First offense firesetters who show any evidence of these associated problems should be considered potential fire-problem children. Their early identification appears possible, and would improve chances for effective treatment.

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RETRIEVAL TERMS: incendiary fires; fire causes; children; emotional disturbance.

2. The core problem in fire-setting is the way in which rage is handled. In the more extreme or clear-cut cases, two types of children are discernible: one characterized by withdrawal and anxiety, with their anger directed against themselves; the other by anxiety, restlessness, antisocial behavior, and anger directed at others or at things outside the individual.

Theoretical and practical considerations suggested that the study be limited to preadolescents; that single fire-setters would be compared with recidivists (those identified with two or more fire-setting episodes); and that both the family and the child would be studied. A number of approaches would be used to get at the variety of factors in question.

METHODS

The first phase of the study was conducted with two groups of fire-setting boys, 30 multiple-fire setters and 22 single-fire setters identified from California Division of Forestry files and those of cooperating fire departments. Personal interviews were conducted with the mother of each child. A variety of areas were covered in the life of the child and his significant family and peer relationships. In addition, a medical history and personality questionnaire was completed for each child. The Thematic Apperception Test (TAT) was administered to half of the children, selected at random.

In a later phase of the study, a control group of boys in the San Francisco Bay Area (N=27) who had no fire-setting history was similarly studied. Later still, a mail questionnaire was sent to the mothers of a Statewide list of fire-setting boys and to a control group of mothers of boys who had no record of having set fires. (There were 192 returns from the fire-setter sample, or a 65 percent return, and 81 returns from the control group, or a 75 percent return.) Data from the second phase were not available when the original report¹ was written. But the findings from this second phase support those of the initial phase. Single-fire setters share some characteristics of both non-fire-setters and recidivists, but they appear to be more like the non-fire-setting control group over-all than like the multiple-fire setters.

On the basis of a combination of Division of Forestry reports and mothers' responses² the boys were divided into two groups: those who were reported to have started only one fire, or non-recidivists (NR); and those who had started two or more, or recidivists (R). This classification was used as the major breakdown in the analysis of the study. In

some sub-analyses, the recidivists with a record of three or more fires were considered separately as the R+ group. Age of child (above and below the median) was also used in the analysis, but is not reported because no observable pattern emerged on this variable.

The children in this study can *not* be thought of as a sample, and, therefore, commonly used measures of statistical significance are not appropriate. Findings are reported only if the magnitude of difference is relatively large or if the differences are consistent over a series of related questions.

RESULTS

Family Constellations

The families of NR and R groups differed in a number of ways. These differences frequently were most apparent in families where the fire problem was most severe. The families of recidivists tended to be lower on the socioeconomic scale as measured by income and education. Fathers of multiple-fire setters were only half as often represented among the professional, technical, and managerial occupations as were NR fathers.

Recidivist children were found to be more likely to come from large families, and to be middle children in such families.

The recidivists' families tended to have more, and more-severe problems than did NR families. These problems included serious health problems of one or the other of the parents, marital discord, and father absent from the home—either through work that took him away for long periods or, more commonly, through death, separation, divorce, imprisonment, or a combination of these circumstances. Even when physically present, the father was typically aloof or estranged from the family. In half of the R families (twice the rate of the NR families), one or more family members other than the subject had previously sought psychiatric help or counseling. The disorganization of these families can be seen also in the frequency of moves they had made. Almost a quarter of the R families, as opposed to five percent of the NR families, had moved more than six times since the birth of the subject child.

Relationships Inside and Outside the Family

Relationships between mothers and sons—The mothers of recidivist boys showed strong, preferential attitudes toward these children, but this feeling was coupled with equally strong dissatisfaction. The

mothers lacked insight regarding their relationship. The mother's relationship with her son was often colored by strained relationship with her husband.

The relationship of mothers of non-recidivist boys to their sons was strikingly different. As a whole they were positive toward their sons, but less extreme in both positive and negative feelings. They were not so close, but displayed a greater over-all acceptance of their child—as well as of their husband. Although recognizing faults, they liked the child as he was and did not wish anything were different.

Relationships between fathers and sons—Mothers of multiple-fire setters reported that they had close relationships, but sons and fathers often failed to communicate. At best the father had little time for the child because of job demands or the burden of a large family. In families with NR children, the relationship between fathers and sons was characterized by closeness, mutual respect and time spent together.

Relationships with siblings and peers—Relationships of R and NR children with their brothers and sisters did not differ markedly. Mothers of both types of boys regarded the relationships as good or “normal.”

The R and NR groups were quite different, however, in their relationships with children outside the family. R boys were much more apt to be considered “loners” than were NR boys. They were less likely to take a leadership role, and they experienced difficulty in getting along with other children. R boys often got into fights with other boys.

R children were also much less likely than NR children (53 percent vs 70 percent) to get along well with adults outside of the family—such as school teachers.

Children's Personality

Mothers' over-all description—The mothers' description of R children left the impression of children given to changeable moods, impulsively rushing into things, frequent and extreme displays of anger with accompanying destructiveness.

The NR children were seen by their mothers as having no overwhelming problems and as being fairly well-rounded in their interests and abilities. They appear to be fairly well-adjusted, outgoing, responsive children. Some of the more impulsive have problems in school, but such problems generally develop within a personal context of feelings of competency in other areas, good peer-group relations, and a fairly happy family environment.

Children's fantasy behavior—Data for this section were obtained from the Thematic Apperception Test (TAT) administered to 14 recidivists (including 7 R+); 12 non-recidivists; and 6 children who had never set fires. The groups could be differentiated on 10 of the 12 cards used in the test.

The recidivists tended to see more violence, death, murder, and suicide in the stimulus pictures than did the others. They also saw threatening or unhappy situations or outcomes. Content that was highly characteristic of R boys is a preoccupation with escape, parting or quarrelling couples, punished or lost children, or children who run away or are afraid.

In contrast, the non-recidivists saw much less violence. Even when they did they tended to see the outcome as positive. The non-fire-setting comparison subjects saw even less violence.

Medical History

The medical histories of recidivist boys showed a greater incidence of physical problems in all categories but those of accidents, hearing difficulties, and bed-wetting, than did the histories of non-recidivists. Premature birth and the complications accompanying this or those accompanying pregnancy were mentioned more often in the R group.

The frequency of reports of respiratory problems at birth, during infancy, and later, among recidivists was especially striking. Hayfever and other allergies occurred two or more times as frequently in R children as in NR children.

Frequent upset stomach and temper tantrums were also characteristics of recidivists.

Bed-wetting is closely related to fire-setting in a prevailing hypothesis, but this association was not supported in these data. On the contrary, it was found to be more characteristic of single fire-setters than of recidivist fire-setters (30 percent NR vs 16 percent R).

The incidence of problems was slightly but consistently greater for recidivist children in 26 out of 28 other items included in the medical questionnaire.

Emotional History

Emotional problems were common among the recidivist children, with the difficulties becoming more numerous and more acute as the history of fire-sets increased. Anger was the most frequently mentioned problem. Among the R+'s, anger was particularly explosive, often accompanied by physical tremors and deliberate destructiveness—including that of self and prized possessions. Nightmares were also more common.

Considering all these symptoms, it was not surpris-

ing that R children (47 percent) were much more apt to have seen a counselor, psychologist, or psychiatrist than were NR children (18 percent).

Recidivist children definitely were doing less well than the non-recidivists in adjusting to school.

Although the NRs present an over-all picture of better functioning than do Rs, they should not be seen as indistinguishable from children who have *no* record of fire-setting. The non-recidivists also show a higher than expected proportion of children with learning difficulties.

Recidivist children showed about as much interest in sports as the non-recidivist children, but they had less skill, according to the mothers' reports. They were more often described as poorly coordinated, clumsy, left-handed, awkward at sports.

Behavior Problems

Both R and NR mothers regarded fire setting as the most serious problem that their child may have had, when compared with 11 other possible behavioral problems. As expected, the proportion of R mothers regarding it as the most serious problem was greater than the proportion of NR mothers. The Rs also engaged in other antisocial behavior more frequently. They were more likely than NRs to have told "fibs" often, to have skipped school, to have stolen something from their mothers' purse or from a store, to have smoked, or to have gotten into trouble with the police. The differences are sizeable, especially for the more serious offences, Rs being at least twice as likely to have stolen or gotten into trouble with the police. Fighting with other children often or fairly often was four times more characteristic of Rs than of NRs.

About one-half of both the NRs and the Rs (by actual diagnosis, or by clear inference from the general descriptions) showed the symptoms of what has come to be called MBD (minimal brain dysfunction syndrome). This syndrome is characterized by difficulty in reading, abnormally high level of physical activity, short attention span, being easily moved to tears or anger, and poor coordination. The rate among R and NR fire-setters was about five times that reported among males in the general population. This high level suggests the possibility that an organic disturbance may be at the root of the fire-setting problem and other associated behavioral problems. Fire setting as a preponderantly male phenomenon may thus be tied to such seemingly unrelated observations as those showing that reading disorders are as much as eight or nine times more frequent among boys than girls, and that behavior disorders are

two to three times more common among boys.

Fire Setting

It is difficult to isolate a clearcut pattern of firesetting. Among both recidivists and non-recidivists, most fires are started away from home with other children—often brothers or sisters—present. The mothers of repeated fire-setters more often report that they were away, usually at work, at the time. The father was also more likely to have been absent from the household at that period in the repeater child's life.

Perhaps the most striking difference between the NR and R groups is in the greater frequency with which the child himself came to tell his parents about the fire (nearly one-third of the NRs as opposed to less than one-tenth of the Rs). Factors of probable significance in explaining the differences are that NR parents tend to be more lenient in punishment generally, and that NR children are less troubled to begin with.

There were slight but consistent differences between the R and NR parents in punishing children. R mothers tended to be somewhat more punitive generally and more inclined toward the use of physical punishment than NR mothers. Spanking, beating, "a good whipping," or angry shouting were disciplinary methods that were most characteristic of R mothers. NR parents were more apt to assign additional chores, take away privileges, or send the child to his room.

Some NR mothers implied that the proper use of fire can and should be taught and that fire need not be simply a taboo. These parents appear to be giving the child a legitimate outlet for his interest in fire, conveying the impression that certain behaviors are acceptable within limits of time, place, and adult supervision. The R mother is generally either so fearful of fire herself, or so unsure of her son's ability to control his fire interest that she strictly prohibits any fire activity of any kind, under any circumstances—a prohibition she obviously has been unable to enforce.

Preliminary Typology of Multiple-Fire Setters

It would be premature to suggest that the relatively few children studied can be separated into clear-cut subgroups sharing common characteristics, but the R+ recidivists (boys who have set three to five fires) do seem to fit roughly in one or the other of the two broad categories originally hypothesized.

The first type is given to impulsive acting out. One can note an almost continuous progression of this characteristic syndrome, starting with a small group

of moderately impulsive children in the NR (single-fire setter) category, a larger proportion of such children in the two-fire-setter group of Rs, and a more severe and aggressive subgroup in the R+ category (the three-or-more-fire setters). This group of symptoms is associated with lovability, gregariousness, and high-spirited energy in the NR group, but it becomes progressively more associated with anger, destruction, and behavior problems in the R+ group.

The second type among the R+ children is much like the other in being overly active and having difficulties in relationships with other children. The primary symptom, however, appears to be anxiety rather than obvious anger. Children in this type are characterized as loners, prone to withdraw from others to a world of their own. Several in this small group were observed to be extremely bright, with unusual scientific curiosity or artistic ability or both.

INTERPRETATION OF FINDINGS

The purpose of this study was to generate ideas about the characteristics of fire-setting children, rather than to test predetermined ideas. (The limited existing state of knowledge concerning fire setters necessitated such an orientation.) Some of the findings are sufficiently clear cut, however, as to warrant at least tentative consideration in action programs dealing with fire-problem children.

The general assumptions of the study were well substantiated: (a) Problem fire setting does not exist by its self, but it is associated with a variety of other behavioral problems and occurs in a disturbed family setting; and (b) not only do recidivist children differ from non-recidivists and non-fire setters, but they also differ among themselves; at least two basic types were identified in the extreme group.

Among the most conspicuous factors related to the multiple fire setting are those having to do with the characteristics of the family and the child's relationship to other family members. Problems associated with low family income, low educational attainment by parents, large family size, and marital discord or breakup of the marriage were particularly characteristic of R families. The lack of effective father-son relationships among the R group was striking. Without an adequate male role model with whom to identify, a boy experiences grave difficulties in learning proper social behavior. The situation is further complicated for the R boys by mothers who tend to use their child as a substitute for the husband and whose feelings toward their child appear to waver between adoration and despair.

Certain types of physical disabilities are frequently

produced, or intensified, by psychological factors. R children (who showed a slight preponderance of all symptoms on the medical checklist, except hearing difficulties, bed-wetting, and accidents) had a much greater frequency of disabilities that are often of psychogenic origin, such as asthma and allergies.

Many of the children in this study showed the symptoms of an organic disturbance called MBD or minimal brain dysfunction syndrome. The effects of MBD are not developed in a vacuum. In a very favorable home and school situation the consequences may be minimal. But, a child with MBD will have difficulty coping with problem situations, such as those created by a disturbed family background. When such a child enters school he soon is likely to find coping with the added demands intolerably frustrating.

Out of this troubled setting come recidivist children who more or less resemble either of the two broad types delineated earlier. Both types are characterized by anger and impatience, but in the one case, the child tends to direct his anger outward toward other people; in the other it is directed inward and is expressed in anxiety. Fire setting may have quite different meanings for these different types of children. For the former, it may be a means of revenge, a way to gain attention and perhaps the awed admiration of adults. For the latter, it may be primarily a cry for help—a plea for adult authority to help the child deal with feelings too intense and dangerous for him to handle.

IMPLICATIONS FOR EDUCATION AND PREVENTION

Much additional research is needed to validate the tentative conclusions of this study and to explore hypotheses that have emerged from it. Still, the findings have important implications for the identification and treatment of potential fire-problem children. Single-fire setters, in general, were observed to have much in common with "normal" boys, but some among them have the potential for becoming repeated fire setters. Fire investigators should be alert to this possibility. For example, the findings suggest that children who present school problems are poor risks; there is a high probability that the fire-setting population is most likely to come from this group. Adequate counseling and remedial work for children with school difficulties may reduce the likelihood of frustration and attendant antisocial behavior—which may well include fire-setting. Such children can usually be identified by at least the second or third grade when reading difficulties or other school

problems become apparent. In some cases, the problem may be suspected or diagnosed even earlier.

Fire investigators should be alert to any evidence of any of a pattern of characteristics among first offenders. Having set one fire, a child coming from a disturbed family situation, who is having difficulties in school, and shows some of the psychological or medical problems noted, is a high risk candidate for recidivism. Action beyond a simple warning would seem appropriate. Investigative procedure should routinely include the kinds of questions which would identify the appropriate symptoms. Inquiry in the home or school should be directed toward obtaining this type of information. Although machinery for such action may not be presently available or is limited, we should be looking toward the provision of psychological counseling through the school, social welfare agency, or other resources, for such children even after the first offense.

Besides receiving counseling help with the root sources of their difficulties, such children might well be given special training in the prevention of fire, and its acceptable and unacceptable use, in addition to that regularly provided in the schools. The data on these children suggest that fire education is likely to be more successful when it removes some of the taboos which intensify its fascination.

Teaching about "the fire without," while at the same time ignoring "the fire within" these high risk children, obviously may be an ineffective halfway measure. An objective of such education should be to help them achieve a sense of competence and success which would make it unnecessary to use the vicarious mastery implied by fire-setting. The idea that fire can be a friend as well as an enemy, given the ability to impose limits on it, should be conveyed. In fact, fire education might be particularly appropriate in developing the child's feeling of competency. If a troubled child could be given experiences in which, under supervision, he learned to light fires for limited and useful purposes (such as fire in the fireplace), to keep them under control, and finally to put them out, this experience might serve to divert angry energies within

him toward constructive and limited goals.

Admittedly, these suggestions are speculative. Yet they do offer some intriguing possibilities. And at least some of them would seem amenable to trial with little possibility for unacceptable side effects. We do not expect the fire control specialist to function in any sense as a trained psychologist or therapist. But with some insight into the problem and some awareness of sources of assistance, he may be able to get help for a child at a time when a little therapy would be effective in stemming a potentially insoluble problem.

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NOTES

¹*Children who set fires: an exploratory study*, by Ellen Y. Siegelman, on file with the California Division of Forestry, Sacramento, Calif. 70 p. 1970.

²A direct question to a mother about whether her son had ever started fires was asked as part of a series of 12 behavior problems of growing boys, such as getting into fights and stealing.

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