The Effect of Early Childhood Experiences, Such as Physical Abuse, on Crime
Discipline and Deviance: Physical Punishment of Children and Violence and Other Crime in Adulthood*

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This paper presents a theoretical model of the antecedents and consequences of the use of physical punishment by parents and teachers and preliminary tests of that theory using data from a variety of sources. Most notably the 3,300 children and 6,000 couples in the National Family Violence Survey. Over 90 percent of American parents use physical punishment to correct misbehavior. The findings support the theory that although physical punishment may produce conformity in the immediate situation, in the longer run it tends to increase the probability of deviance, including delinquency in adolescence and violent crime inside and outside the family as an adult. However, since the findings are based on cross sectional studies, experimental studies are needed to test the causal nature of the relationships. If the results of such experiments support the theory, important implications emerge for both individual parents and national policy. For individual parents, the theory suggests that parents who use no physical punishment will, on the average, have better behaved children. At the national policy level the theory suggests that one of the steps needed to achieve a society with a minimum of crime and violence is for parents to avoid all use of physical punishment.

In this paper I present a theoretical model intended to aid research on physical punishment of children and its consequences. The model focuses primarily on the hypothesis that while physical punishment by parents or teachers may produce conformity in the immediate situation, in the long run it tends to increase the probability of deviance, including delinquency in adolescence and wife-beating, child abuse, and crime outside the family (such as robbery, assault, and homicide) as an adult. This hypothesis involves considerable irony since the intent of physical punishment is to increase socially conforming rather than deviant behavior. As shown below, almost all parents and a majority of teachers believe that physical punishment is an appropriate and effective form of discipline.

Because of ethical restrictions on experiments using physical punishment versus other disciplinary practices, research on this issue is extremely difficult. Survey research may show that children who are physically punished have higher rates of delinquency and other psycho-social problems. However, such studies cannot show that it is the physical punishment which causes the problems rather than the deviant behavior of the child which causes the punishment. Even longitudinal research faces the problem of disentangling the effects of physical punishment from other aversive behavior which is confounded with physical punishment, such as verbal assaults on the child. For these and other reasons, previous comprehensive reviews (Maurer 1974; Steinmetz 1979), the review conducted for this paper, and the empirical analyses presented in this paper, have produced a great deal of "smoking gun" type of evidence, but not proof of the negative effects of physical punishment per se.

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1 Although the paper is not concerned with "child abuse" (severe and illegal violence against children), the available evidence suggests that the theoretical argument is even more applicable to child abuse (Widom 1989).
Importance of Research on Physical Punishment

There are several reasons why, despite the problems summarized above, it is important to pursue research on physical punishment. The first reason is the universality of the experience. The rates presented below indicate that almost the entire U.S. population is involved in physical punishment, either as the recipient or the administrator.

Second, physical punishment remains central to the primacy and continuity of the socialization process. Physical punishment often begins in the first year after birth and continues during the pre-school years when the deepest layers of personality are presumably formed. For about half of all children, it continues into the teenage years. Consequently, we can reasonably assume that there may be lasting effects.

Third, physical punishment may serve to legitimize violence. Since physical punishment is used by authority figures who tend to be loved or respected and since it is almost always used for a morally correct end when other methods fail, physical punishment teaches that violence can and should be used under similar circumstances. The intriguing question is whether this legitimation of violence spills over from the parent-child relationship to other relationships in which one has to deal with persons who persist in some wrongdoing, such as a spouse or friends.

Fourth, if research supports the theory that physical punishment is part of the etiology of criminal violence, it suggests an important approach to primary prevention. An example of such an effort is the program being developed by the National Committee For Prevention of Child Abuse which is based on the assumption that eliminating use of socially legitimate physical punishment will reduce the incidence of physical abuse of children.

Definitions

Physical Punishment

Exploring such issues as the legitimacy of physical punishment requires some definition of terms. Physical punishment is a legally permissible physical attack on children. The most common forms are spanking, slapping, grabbing, and shoving a child "roughly"—with more force than is needed to move the child. Hitting a child with an object is also legally permissible and widespread (Wauchope and Straus 1990). Parents in the United States and most countries have a legal right to carry out these acts, as do teachers in most U.S. states and most nations; whereas, the same act is a criminal assault if carried out by someone not in a custodial relationship to the child.²

The section on "General Justification" of violence in the Texas Penal Code, for example (9.61, West Publishing Company 1983), declares that the use of force, but not deadly force, against a child younger than 18 years is justified (1) when the actor is the child’s parent or step-parent or is acting in loco parentis to the child, and (2) when and to the degree that the actor reasonably believes that force is necessary to discipline the child or to safeguard or promote welfare.

²However, Sweden and several other countries forbid corporal punishment by parents as well as teachers (Haeuser 1985). The purpose of the Swedish law is not to punish parents or teachers, and the legislation is not part of the criminal code. Rather, the law was enacted with two main objectives in mind: (1) as a statement of national standards; (2) as a vehicle to identify parents who need help in managing their children and to authorize expenditures for services to help those parents.
The New Hampshire Criminal Code (627:6:1, Equity Publishing 1985) similarly declares that "A parent, guardian, or other person responsible for the general care and welfare of a minor is justified in using force against such a minor when and to the extent that he reasonably believes it necessary to prevent or punish such a minor's misconduct." Both these statutes cover parents and teachers, and neither sets any limit except "not deadly."

Is Physical Punishment Violence?

Since the concept of violence is used in this paper as often as physical punishment, it also needs to be defined. Though the lack of a standard definition or consensus on its meaning results in considerable confusion, the following definition makes clear the conceptual framework of this paper, even though it will not be accepted by all readers: Violence is an act carried out with the intention, or perceived intention, of causing physical pain or injury to another person.

This definition and alternative definitions are examined in detail in Gelles and Straus (1979). As defined, violence is synonymous with the term "physical aggression" as used in social psychology (Bandura 1973; Berkowitz 1962). This definition overlaps with but is not the same as the legal concept of "assault." The overlap occurs because the definition of assault, like the definition of violence, refers to an act, regardless of whether injury occurred as a result of that act. However, the concept of assault is more narrow than that of violence because not all acts of violence are crimes, including acts of self-defense and physical punishment of children. Some violent acts are required by law-for example, capital punishment.3

The fact that physical punishment is legal is not inconsistent with the definition of violence just given, since, as noted, there are many types of legal violence. An examination of the definition shows that physical punishment of children fits every element of the definition of violence given. Thus, from a theoretical perspective, physical punishment and capital punishment are similar, despite the vast difference in level of severity.

Physical Punishment of Children

As the Primordial Violence

Incidence of Physical Punishment by Parents

Ninety-nine percent of the mothers in the classic study of Patterns of Child Rearing (Sears, Maccoby, and Levin 1957) used physical punishment as defined above on at least some occasions, and 95 percent of students in a community college sample reported having experienced physical punishment at some point (Bryan and Freed 1982). Figure 1 gives incidence rates from the National Family Violence Surveys (Straus 1983; Wauchope and Straus' 1990), studies of large and nationally representative samples of American children conducted in 1975 and 1985 (see Methodological Appendix). Both surveys found that almost all parents in the United States use physical punishment with young children—over 90 percent of parents of children age 3 and 4. A remarkable correspondence exists between the results of these four surveys in the near universality with which physical punishment was used on children age 2 to 6; and also between the two national surveys in showing that physical punishment was still being used on one out of three children at age 15.

3 This brief discussion shows that the fact of a physical assault having taken place is not sufficient for understanding violence. Several other dimensions also need to be considered. It is also important that each of these other dimensions be measured separately so that their causes and consequences and joint effects can be investigated. Other dimensions include the seriousness of the assault (ranging from a slap to shooting), whether a physical injury was produced (from none to death), the motivation (from a concern for a person's safety, as when a child is spanked for going into the street, to hostility so intense that the death of the person is desired), and whether the act of violence is normatively legitimate (as in the case of slapping a child) or illegitimate (as in the case of slapping a spouse), and which set of norms are applicable (legal, ethnic or class norms, couple norms, etc.). See Gelles and Straus (1979) for further analyses of these issues.
Despite the widespread use of physical punishment, there is nonetheless considerable variation—more than enough to enable empirical study of the correlates of physical punishment. First, we see that the percentage of people experiencing physical punishment drops off rapidly with age so that by age 13 there are nearly equal numbers of children who are and who are not punished. Second, at each age, there is enormous variation in how often a specific child experiences physical punishment (Wauchope and Straus 1990).

Incidence of Physical Punishment in Schools

In 1989 all but eleven states permitted physical punishment of children by school employees. A 1978-79 national survey of schools found an annual incidence of 2.5 instances of physical punishment per 100 children. Only five states reported no instances of physical punishment (calculated from Hyman 1990:Appendix B). These figures are probably best interpreted as “lower bound” estimates, and the reported absence of physical punishment in five states must also be regarded with some caution.

A Theoretical Model

In the light of the above incidence rates and the previously listed reasons for the importance of research on physical punishment, a framework is needed to help stimulate and guide research. This section presents such a framework in the form of a causal model. The model was created on the basis of previous theoretical and empirical research.

Cultural Spillover Theory

An important component of the theoretical model to be presented is what I have called “Cultural Spillover Theory” (Baron and Straus 1987; Baron, Straus, and Jaffee 1988; Straus 1985), which holds that violence in one sphere of life tends to engender violence in other spheres, and that this carry-over process transcends the bounds between legitimate and criminal use of force. Thus, the more a society uses force to secure socially desirable ends (for example, to maintain order in schools, to deter criminals, or to defend itself from foreign enemies) the greater the tendency for those engaged in illegitimate behavior to also use force to attain their own ends.

Cultural Spillover Theory was formulated as a macro-sociological theory to explain society-to-society differences in violence rates, such as the huge differences between societies in the incidence of murder and rape. My colleagues and I tested this theory using a 12 indicator index to measure the extent to which violence was used for socially legitimate purposes ranging from physical punishment of children to capital punishment of criminals. We found that the higher the score of a state on the Legitimate Violence Index, the higher the rate of criminal violence such as rape (Baron and Straus 1987, 1989; Baron, Straus, and Jaffee 1988) and murder (Baron and Straus 1988).

We must also understand the individual-level processes which underlie the macro-level relationship. These can be illustrated by considering the hypothesis that use of physical punishment by teachers tends to increase the rate of violence by children in schools. The individual level aspect of this hypothesis is based on two assumptions: (1) that children often mistreat other children, (2) that teachers are important role models. Therefore, if children frequently misbehave toward other children, and if teachers who serve as role models use violence to correct misbehavior, a larger proportion of children will use violence to deal with other children whom they perceive as having mistreated them than would be the case if teachers did not provide a model of hitting wrongdoers.

The Cultural Spillover Theory overlaps with the “Brutalization” Theory of capital punishment (Bowers 1984; Hawkins 1989), and the “Cultural Legitimation” Theory of homicide (Archer and Gartner 1984). All three of these theories can be considered a variant of what Farrell and Swigert (1988:295) identify as “social and cultural support” theories of crime, including the Differential Association Theory, the Delinquent Subculture Theory, and the Social Learning Theory. Each of these theories seeks to show that crime is not just a reflection of individual deviance (as in psychopathology theories of crime) or the absence of social control (as in Social-Disorganization Theory). Rather, crime is also engendered by social integration into groups which share norms and values that support behavior which the rest of society considers to be criminal. Thus, the processes which produce criminal behavior are structurally parallel to the processes which produce conforming behavior, but the cultural content differs.

*There are a number of other theories relevant to the issues discussed in this paper. The larger theoretical task will be to integrate Cultural Spillover Theory and the theories just listed with theories such as Control Theory (Hirschi 1969), Labeling Theory (Scheff 1966; Straus 1973), Social Learning Theory (Bandura 1973; Berkowitz 1962; Eron, Walder, and LeKowitz 1971; Gelles and Straus 1979; McCord 1988), and a variety of personality mediated theories. Although space limitations required deletion of my initial attempts to specify some of the interrelationships, the concluding theoretical discussion is a small step in that direction. I argue that physical punishment might bring about changes in personality, such as lowered self-esteem or increased powerlessness and alienation. These personality variables can, by themselves, serve as risk factors for violence. At the empirical level, it will require a competing theories research design and triangulation via several different types of research to adequately investigate these issues.*
The Model

The theoretical model diagramed in Figure 2 depicts the causes and consequences of physical punishment and suggests salient issues for empirical investigation. It is a "system model" because it assumes that the use of physical punishment is a function of other characteristics of the society and its members and that physical punishment in turn influences the society and its members. Specifically, the dashed lines indicate that physical punishment affects the characteristics of the society and its members, which in turn influence the probability of future use of physical punishment.1

Each of the blocks in Figure 2 should also have arrows between the elements within each block; except for Block II at the center of the model, they were omitted to provide a clear picture. The arrows within Box II posit a mutually reinforcing relationship between physical punishment in the schools and by parents. It seems highly plausible that a society which approves of parents hitting children will also tend to approve of teachers doing the same, and that when physical punishment is used in the schools, it encourages parents to also hit children. This type of relationship is illustrated by Lambert, Triandis, and Wolf’s (1959) study of non-literate societies which found that societies that rely on physical punishment tend to also have a religious system in which deities are punitive. In the United States, most state laws grant permission to both parents and teachers in the same statute (see the two examples given earlier).

Figure 2 • System Model of Causes and Consequences of Physical Punishment

Empirical Tests

Although the central purpose of this paper is to present a theoretical model, data from several studies were also analyzed as one means of evaluating the plausibility of the theory. However, the empirical findings are limited in at least two ways. First, they cover only a small part of the theory. Second, the empirical analyses use cross-sectional data, whereas a full test of the theory requires longitudinal and historical data. Nevertheless, there are reasons why even these preliminary cross sectional analysis needed to be undertaken and presented. First, the empirical analyses are "tests" in the sense that they offer the possibility of falsifying the theory. Second, preliminary evidence is needed because, to a certain extent, the theory that spanking children engenders crime is counter-intuitive. Consequently, evidence which is consistent with, even though not proof of the theory, must be present to justify the difficult and expensive experimental, longitudinal, cross-cultural, and historical research which adequately testing the theory requires.

Antecedents of Physical Punishment by Parents

Block I at the left of the model identifies characteristics of the society, of the

1However, these feedback loops also indicate a major limitation of Figure 1. The feedback loops specified would produce an escalating downward or upward spiral, depending only on the direction of the starting effect. This would soon destroy any real system. In principle this can be corrected by including the elements necessary to specify a "cybernetic" or "general systems" model, such as system goals, decision nodes, branches stemming from those decisions, and morphogen processes which enable structural changes to be made in order to maintain the goals of the system. Although creation of that type of model is beyond the heuristic objectives of this paper, the possibility and utility of such a model is illustrated by the cybernetic systems model of violence between married and cohabiting couples in Straus (1973) and the analysis of cross-cultural differences in family violence in Straus (1977).
schools, of families, and of individual parents which are hypothesized to influence the extent to which physical punishment is used. This list is far from exhaustive, as are the hypotheses to be tested. Both are intended only to illustrate some of the many factors which might influence use of physical punishment.6

Societal Norms

Physical punishment is deeply rooted in Euro-American religious and legal traditions (Foucault 1979; Greven 1990). It would be difficult to find someone who could not recite the biblical phrase “spare the rod and spoil the child.” The common law of every American state permits parents to use physical punishment. These are not mere vestiges of ancient but no longer honored principles. In addition to defining and criminalizing “child abuse,” the child abuse legislation which swept through all 50 states in the late 1960s often reaffirmed cultural support for physical punishment by declaring that nothing in the statute should be construed as interfering with the rights of parents to use physical punishment. There is a certain irony to this legislation because, as will be suggested below, use of physical punishment is associated with an increased risk of “child abuse.”7

Approval of physical punishment. Attitude surveys have repeatedly demonstrated high approval of physical punishment. Ninety percent of the parents in the 1975 National Family Violence Survey expressed at least some degree of approval of physical punishment (Straus, Gelles, and Steinmetz 1980:53). Other studies report similar percentages. For example, a 1986 NORC national survey found that 84 percent agreed or strongly agreed that “It is sometimes necessary to discipline a child with a good, hard spanking” (italics added). Moreover, this approval does not apply only to small children. The New Hampshire Child Abuse Survey (described in the Methodological Appendix and in Moore and Straus 1987) found that less than half of the parents interviewed (47 percent) strongly disagreed with the statement “Parents have a right to slap their teenage children who talk back to them.” When asked whether “Spanking children helps them to be better people when they grow up,” only one out of six disagreed (16.7 percent).

Approval of hitting and actual hitting. There is evidence that, as hypothesized by the path going from Block I.D2 of the theoretical model to Block II.A, parents who approve of physical punishment do it more often (Figure 3).

6Moreover, due to space limitations, I will only discuss the paths for which I carried out empirical tests. However, since a reader of an earlier draft of the paper questioned the hypothesized paths and feedback loop running from use of corporal punishment back to low teacher and parental skill (I.C3 and I.D5), the reasoning needs to be summarized: It is simply that to the extent parents and teachers use corporal punishment as a means of inducing appropriate behavior they get less practice in using other means of inducing appropriate behavior and, therefore, do not enhance their skills in those techniques, thus further increasing the probability of using corporal punishment.

7A study of the reasons for including reaffirmation of corporal punishment in the child abuse legislation might provide important insights on American attitudes about children and violence. Such a study could be undertaken by analysis of the proceedings of state legislatures. For the moment, I would like to suggest two scenarios, both of which may have been operating. The first reason is that both spring from a concern about the welfare of children, and specifically the idea that children need to be protected from abuse but also need “strong discipline” (including physical punishment “when necessary”) if they are to become responsible law-abiding citizens. The second reason is that the combination reflects a political compromise which the advocates of “child protection” needed to make in order to have the legislation pass. However, these two reasons overlap to a certain extent because conservative members of the legislature who needed to be placated favor physical punishment because they deeply believe it is in the best interests of children.
Parents who approve of slapping a teenager who talks back report hitting their teenager an average of 1.38 times during the year, about four times more often than the average of .33 for the parents who did not approve. For younger children, the frequency of physical punishment was much greater (an average of 4.9 times for preschool children and 2.9 times for 6-12 year old children), but the relationship between approval and actual hitting was almost identical.

**Role Modeling**

The path in Figure 2 from I.D2 to II.A, and from II.A to IV.C2 is based on the assumption that children learn by example, and we have seen that over 90 percent of parents provide examples of physical punishment. However, as noted above, there is a great deal of variation in how long physical punishment continues to be used and in the frequency with which it is used. This variation made it possible to test the hypothesis that the more a person experienced physical punishment, the more likely such persons are to use physical punishment on their own children.

Figure 4 shows a non-linear relationship ($F = 4.96, p < .001$). For the most part after 11 or more instances, the trend turns downward.

**Effects of Physical Punishment by Parents**

Block IV on the right side of Figure 2 illustrates the hypothesized effects of physical punishment on individuals, schools, families, and the society. The empirical analyses to be reported are all derived from the proposition that the "legitimate violence" of physical punishment tends to spill over to illegitimate violence and other crime. If subsequent research supports these effects, the next step will be research to identify the processes which produce them.
Analysis of the New Hampshire Child Abuse Survey (Moore and Straus 1987) shows that parents who believe in physical punishment not only hit more often, but they more often go beyond ordinary physical punishment and assault the child in ways which carry a greater risk of injury to the child such as punching and kicking (Figure 5). Specifically, parents who approved of physical punishment had a child abuse rate of 99 per 1,000 (upper right of Figure 5), which is four times the rate for parents who did not approve of physical punishment (28 per 1,000 as shown in the lower left of Figure 5).

Assaults on Siblings and Spouses

From the 1975 National Family Violence Survey (Straus 1983), we know that children who were physically punished during the year of that survey have almost three times the rate of severely and repeatedly assaulting a sibling three or more times during the year (Figure 6). Though it is likely that many of these children were physically punished precisely because of hitting a sibling, it is also clear that the physical punishment did not serve to reduce the level of assaults to the rate for children who were not physically punished.

Similarly, findings from the 1975 National Family Violence Survey (Straus 1983) clearly show that for both men and women the more physical punishment a respondent experienced as a child, the higher the probability of assaulting a spouse during the year of the survey (Figure 7). These findings are consistent with the hypothesized path from Box II.A to IV.C3.

Physical Punishment And Street Crime

The theoretical model predicts that ordinary physical punishment increases the probability of “street crime” (path from Box II.A to IV.D.4). Evidence consistent with that hypothesis is presented in Figure 8 for juveniles and Figures 9 and 10 for adults.
The juvenile crime data are from a 1972 survey of 385 college students (Straus 1973, 1974, 1985) who completed a questionnaire referring to events when they were high school seniors. The questionnaire included an early version of the Conflict Tactics Scales (see Methodological Appendix) and also a self-report delinquency scale. Figure 8 shows that significantly more children who were physically punished engaged in both violent crime and property crime.

The findings on crime by adults were obtained by an analysis of covariance of the 1985 National Family Violence Survey sample, controlling for socioeconomic status.

Figure 9 shows that the more physical punishment experienced by the respondent as a child, the higher the proportion who as adults reported acts of physical aggression outside the family in the year covered by this survey. This relationship is highly significant after controlling for SES. The results are parallel when physical punishment by the father is the independent variable.

Although the arrest rate of respondents in the 1985 National Family Violence Survey was very low (1.1 percent or 1,100 per 100,000 population), this is very close to the 1,148 per 100,000 rate for the entire U.S. population (Federal Bureau of Investigation 1985). Consequently, despite the low rate, we examined the relationship of arrests to physical punishment experienced during the teenage years. Although the differences overall are statistically significant ($F=3.75, p < .001$), the graph does not show the expected difference between those who were and were not hit as a teen. Instead, only respondents who were hit extremely often (eleven or more times during the year) had the predicted higher arrest rates. It is possible that these erratic results occur because the base rate for arrests is so low. A statistical analysis based on a characteristic which occurs in such a small percentage of the population is subject to random fluctuations unless the sample is much larger than even the 6,002 in the 1985 survey.

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*Socioeconomic status was measured by a factor score index based on a principle components factor analysis. The analysis revealed that all items had a high loading on the first factor. The items in the index are the Trieman occupational prestige scores for the husband and the wife, the educational level of the husband and the wife, and the total family income.
Effects On Parents

To further test the idea that a certain proportion of people inappropriately generalize the use of violence from legitimate to illegitimate situations, we tested the hypothesis that the likelihood of such a spillover effect is greatest for those actually engaging in the legitimate violence, particularly if the legitimate violence is required. Shwed and Straus (1979) previously found support for this hypothesis by comparing military personnel in combat and non-combat commands and found a higher rate of physical abuse for parents in combat units, even though most of those personnel were in non-combat roles such as mechanics, truck drivers, and cooks.

Both the “role practice” and the “role obligation” specifications of the theory may apply to parental use of physical punishment. Although the law permits rather than requires physical punishment, there are a number of reasons why, de facto, it is virtually required: (1) As shown earlier in this paper, there is an almost universal belief that the welfare of the child, and indeed the society, requires use of physical punishment when necessary. (2) If the heavy reliance on physical punishment is partly due to a lack of skills and practice in alternative modes of discipline, this leaves parents with few options, even though they may not like hitting their children (Carson 1986). (3) Peer pressure and support for using physical punishment coerces those who oppose using physical punishment (Carson 1986).

Based on the above reasoning, the more a parent uses physical punishment, the greater the probability of also hitting a spouse. Consistent with this hypothesis, Figure 11 shows that the more physical punishment used by fathers, the higher the probability of an assault on their wives, and the greater the use of physical punishment by mothers, the higher the probability of an assault on their husbands. However, when analysis of covariance was used to control for gender of the respondent, socioeconomic status of the family, and whether the spouse also used physical punishment, the results are different.

As predicted by the Cultural Spillover Theory, wives’ use of physical punishment is strongly related to the rate of assaults on husbands, net of all other variables (Beta = .17, p < .002), whereas the husbands’ use of physical punishment is not significantly related to assaults by the wife (Beta = .07, p < .90). However, for assaults by husbands on wives, the results are contrary to the theory: The beta for the effect of the husband’s use of physical punishment on the husband’s assault rate is low and not significant (Beta = .07, p < .65). Also not predicted by the theory, the wife’s use of physical punishment is significantly related to the probability of an assault by husbands on wives (Beta = .19, p < .001). Thus, use of physical punishment by wives is related to assaults on husbands by wives when other factors are controlled, but use of physical punishment by husbands is not related to assaults on wives by husbands when other factors are controlled.

One possible explanation for these findings is that violence is much less a part of the normal life experience and values of women than is the case for men. Consequently, the learning of violent behavioral scripts and practice in violent roles in the form of administering physical punishment is related to assaults by women, but the same role learning process is not “needed” by men.

Physical Punishment in Schools

Although the extent to which physical punishment is used in schools is not completely a reflection of the laws, legislation serves as one indicator of acceptance. Illustrating the growing sentiment to abolish physical punishment in U.S. schools as well as the support to maintain its use, the number of states prohibiting physical punishment grew from just four to eleven between 1979 and 1989 (Hyman 1990). We see an example of the opposing pressures in the refusal of states such as Georgia, Pennsylvania, and Texas to prohibit physical punishment in schools in 1990. The support for use of physical punishment in schools is not nearly as great.
as support for physical punishment by parents, but there are strong advocates, including fundamentalist Christians, school boards, and teachers' organizations (Hyman 1987, 1990; Eisele 1991). Teachers and large segments of the public believe that, just as parents must have the right to use physical punishment "when necessary," teachers also need a similar right or discipline and order in schools will decline. The proposed theoretical model suggests the opposite hypothesis: that the use of physical punishment in schools (II.B) engenders rather than reduces violence (IV.B).

Hyman's tabulation of state laws (1979) shows that there is considerable variation among the states in the extent to which physical punishment in schools is authorized. Some states permit only the principal to hit children; others permit the principal and teachers, but only under certain circumstances; and some permit any school employee to hit a child and impose restrictions on the circumstances. At the time Hyman's data was gathered, the Florida legislature even prevented school districts from forbidding physical punishment.

The state-to-state differences documented by Hyman (1979) were used to create a Physical Punishment Permission Index score for each state (see Appendix). To generate each state score, a point was given for each type of school employee who was authorized to physically punish, and a point was given for each circumstance under which physical punishment is authorized. For purposes of this analysis, the states were grouped into four categories: 0 (prohibit physical punishment), 1, 2-4, and 5-9.

Physical Punishment and School Violence

The line for Student Violence in Figure 12 relates the Physical Punishment Permission Index to the within-school assault rate (from the National Safe School Study 1978). It shows that the more physical punishment is authorized, the higher the rate of assault by children in schools. Of course, it is quite possible that the causal effect, if any, goes in the reverse direction. Even then, the use of physical punishment in schools is not an adequate cure for violence because it does not reduce the level of within-school violence to the level

WASHINGTON — Girls younger than 18 are victims of more than half the rapes reported to police; and the younger the victim, the more likely the attacker is a relative or acquaintance, the Justice Department reported Wednesday.

Girls younger than 12 are the victims in 16 percent of rapes reported to police, according to the grim estimates from the department's Bureau of Justice Statistics. One in five rape victims younger than 12 is raped by her father.

Both the statistics bureau and private experts said the actual percentages of underage girls raped are undoubtedly higher than these numbers gathered from police reports, because the younger the rape victim, the less likely the crime is to be reported to police.

In separate data from 1991, the statistics bureau said family members or acquaintances accounted for 96 percent of rapes of girls younger than 12 in a three-state survey and for 94 percent in a survey of state inmates convicted of rape. The percentage of rapes by strangers increases as the age of the victims increases, which experts said reflects the more sheltered lives of younger females.

"People tend to think rape happens to adults," said Professor Dean Kirkpatrick, director of the Crime Victims Research and Treatment Center at the Medical University of South Carolina. "And they have the most to lose, in parental care. If they report an incident.

"Some children who try to report a rape are not believed," added Patricia Toth, a former prosecutor who directs the private National Center for Prosecution of Child Abuse in Alexandria, Va.

The statistics bureau, using police reports from 11 states and the District of Columbia, said girls younger than 18 were the victims in 51 percent of rapes in 1992 even though girls of that age made up only 25 percent of the U.S. female population.

The 1992 "Rape in America" study found that 61.8 percent of all rapes of girls younger than 18. But that study, adopted by the Senate Judiciary Committee in drafting rape prevention programs now in the Senate's version of the crime bill, included rapes acknowledged by victims in interviews but not reported to police.

"Child and adolescent cases are the most likely to go unreported," said Kirkpatrick, co-author of the "Rape in America" study. Thus, "the government estimate is a separate underestimate, because they are only dealing with reported cases."
prevailing in schools without physical punishment.

Physical Punishment and Homicide

The Homicide line in Figure 12 shows the relationship between physical punishment and the 1980 homicide rate disproportionately by persons who were physically punished in school a decade or more earlier, but such a direct link is not likely. What then accounts for the relationship between physical punishment in the schools and the murder rate? Both may be manifestations of an underlying set of social organizational (Federal Bureau of Investigation 1985). A more subtle interpretation is needed for that relationship because few children commit murder. Of course, the murders in 1980 could be committed and cultural factors which engender violence, with each factor helping to maintain and reinforce the other.

Cross National Differences

The final hypothesis tested is that the approval of physical punishment by teachers is associated with an elevated rate of homicide of infants. The importance of this hypothesis stems from the fact that it is counter-intuitive. Teachers who favor physical punishment do not favor murdering infants. Yet a higher infant homicide rate is predicted by Cultural Spillover Theory.

Burns and Straus (1987) tested this hypothesis using data from Edfeldt (1979) on the degree to which teachers in ten nations approved of physical punishment (see Methodological Appendix). The homicide rate for infants was the dependent variable. Because both the infant homicide rate and attitudes favoring physical punishment are confounded with other variables (high military expenditures per capita, wealth in the form of Gross National Product per capital, educational expenditures, and the availability of physicians), multiple regression was used to control for these four variables. A strong net effect of attitudes favoring physical punishment on the infant homicide rate was found (Beta = .53, p < .02). This relationship is shown graphically in Figure 13 in the form of a standardized partial plot (Noursis 1988:B241).

These results can be interpreted as evidence of the cultural spillover principle because approval of physical punishment by teachers in no way implies that teachers approve of murdering infants. However, such approval creates the conditions for increasing the incidence of infant homicides. First, approval of physical punishment probably increases the probability that physical punishment will be used at all age levels, including infancy. Second, infants are extremely vulnerable. Shaking a six year old will rarely produce an injury, but shaking a

*The homicide mortality rates for infants (children under one year) are from the World Health Statistics Annual. These data need to be interpreted with caution because they might reflect differences in procedures for recording the cause of death.
six month old can be fatal. Thus, the more a society favors physical punishment, the more frequent it will be used, and the earlier in life it is likely to be used. The combination of early onset, frequent use, and vulnerability means that more infants are at risk of being killed in a society which favors physical punishment, even though no one favors killing infants.

Summary and Conclusions

This paper formulated a theoretical model of the links between physical punishment of children and crime and also presented preliminary empirical tests of some of the paths in the model. Although the empirical findings are almost entirely consistent with the theory, they use data which cannot prove the theory because they do not establish the causal direction. Nevertheless, the fact that so many analyses which could have falsified the theory did not strengthen the case for the basic proposition of the theory: that although physical punishment may produce short term conformity, over the longer run it probably also creates or exacerbates deviance.

The Causal Direction Problem

The causal direction problem can be illustrated at the macro level by the correlation between laws authorizing physical punishment in schools and the homicide rate. It is likely that at least part of this relationship occurs because both physical punishment and crime are reflections of an underlying violent social climate. When crime and violence flourish, even ordinarily law-abiding citizens get caught up in that milieu. When crime rates are high, citizens tend to demand "getting tough" with criminals, including capital punishment and laws such as those recently enacted in Colorado and other states. These laws added protection of property to self-defense as a circumstance under which a citizen could use "deadly force." The question from the perspective of Cultural Spillover Theory is whether such laws, once in effect, tend to legitimize violence and, therefore, further increase rather than reduce violent crime.

The causal direction problem in the individual-level findings is even more obvious because it is virtually certain that part of the linkage between physical punishment and crime occurs because "bad" children are hit, and these same bad children go on to have a higher rate of criminal activity than other children. However, the question is not whether misbehaving children are spanked but whether spanking for misbehavior, despite immediate compliance, tends to have longer term negative effects. Research by Nagaraja (1984), Patterson (1982), and Patterson and Bank (1987) suggests that this is the case. This research found an escalating feedback loop which is triggered by attempts to use physical punishment or verbal aggression to control deviant behavior of the child. These processes together with the hypothesized legitimation of violence are modeled in Figure 14.

\[^{10}\text{I emphasize "a higher rate" because most "bad" children, regardless of whether they have been physically punished do not become criminals. The theory put forth in this paper does not assert that corporal punishment is a necessary and sufficient cause of violence and other crime. On the contrary, crime is a multiply determined phenomenon, and corporal punishment is assumed to be only one of these many causes. Consequently, many individuals who have not been assaulted as children engage in crime, just as many who have been assaulted by teachers or parents avoid criminal acts.}^\]
It should be noted that physical punishment usually does not set in motion the deviation amplifying process just discussed, at least not to the extent that it produces seriously deviant behavior. We must understand the circumstances or branching processes which produce these different outcomes. The variables identified in Box III of Figure 2 ("Conditions Under Which Punishment is Administered") and by the diagonal path in Figure 14, are likely to be crucial for understanding this process. Three examples can illustrate this process. (1) If physical punishment is administered "spontaneously" and as a means of relieving tension, as advocated by a number of child care "experts" (e.g., Ralph 1989), it may increase the risk of producing a person who as an adult will be explosively violent, as compared to physical punishment administered under more controlled circumstances. The latter is assumed to provide a model of controlled use of force. (2) If physical punishment is accompanied by verbal assaults, it may increase the risk of damage to the child's self-esteem compared to physical punishment administered in the context of a supportive relationship. (3) If physical punishment is administered along with reasoned explanations, the correlation between physical punishment and child's aggressiveness may be reduced. A study by Larzelere (1986) found such a reduction, but also found that despite the lowered relationship, a statistically significant relationship remains.

Research Implications

Both the overall theoretical model (Figure 2) and the micro-process model (Figure 14) can only be adequately investigated with longitudinal and experimental data. There are already examples of studies at the macro-level which meet these criteria, including the research of Archer and Gartner (1984) on the effects of war on the homicide rate and research on the "brutalization" effect of executions (Bowers 1984; Hawkins 1989). At the individual level, McCord's follow up of the Cambridge-Somerville Youth Study (1988) sample illustrates what can be done with a longitudinal design. As for experiments, it would be unethical to randomly assign groups of parents to "spanking" and "no spanking" conditions. However, the fact that almost all parents do spank makes a number of experiments possible because the treatment can be in the form of helping parents use alternatives to spanking. One example would be an interrupted time series using volunteer parents. Another example would be a randomized field trial of a "no-spanking" parent education program.

There are hundreds of research questions that spring from the theoretical model presented in this paper. The process of transforming that model into meaningful research can be aided if criminologists and family violence researchers collaborate more than in the past to seek a full accounting of the links between physical punishment and crime outside the family. There are no serious structural or theoretical barriers to discourage such mutually informed work, but there is a set of beliefs that continues to define "family violence" in ways which inhibit research on physical punishment. Among family violence researchers, but especially those concerned with wife-beating, there has been a reluctance, and sometimes even condemnation, of considering ordinary physical punishment as part of the same continuum as wife-beating and child abuse (Breines and Gordon 1983: 505, 511). Spanking children is not seen as "real family violence." Similarly, among criminologists, physical punishment of children is not seen as important for understanding "real crime."
The theory developed in this paper and the research evidence so far available on that theory support the opposite formulation. However, there is no contradiction between the idea that all violence has something in common and the idea that there are important differences between various types of violence. Both propositions can be correct, and both approaches are needed for research on this complex phenomenon. Whether one focuses on the common elements in all violence or on the unique aspects of a certain type of violence depends on the purpose of the study. Research intended to inform interventions designed to aid “battered women” or “abused children,” or to deter “wife-beating” or “street crime” must focus on the specific situation of those specific types of victims and offenders (Straus 1990c). However, for research intended to inform programs of “primary prevention” (Caplan 1974; Cowen 1984) of violent crime such as wife beating and homicide, it is essential to understand the social structural and social psychological process by which violence becomes an integral part of both legitimate and criminal behavior. The theoretical model presented in this paper suggests that the almost universal use of physical punishment in child rearing is part of the process.

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Methodological Appendix

The presentation in this paper differs from the usual paper reporting research findings, and these differences need to be specified to avoid misunderstanding: (1) All of the data were originally gathered for other purposes, and there are many aspects of the model for which no data are currently available. Consequently, not all of the paths identified in Figure 2 can be tested. Moreover, since the data are from several data sets, it is not possible to test the model as a whole. (2) The empirical sections are in the form of a summary of findings, some of which have been reported in greater detail elsewhere but not necessarily within the theoretical framework just described. (3) Since the purpose of the paper is primarily theoretical and exploratory, some analyses are presented which would be too limited to warrant publication by themselves. However, in the context of the larger theoretical pattern, they are at least suggestive.

Survey Data on Physical Punishment

National Family Violence Surveys. The first survey was conducted in 1975-6 and the second in 1985. Both are based on interviews with parents in nationally representative samples of U.S. families (1975 N=1146, 1985 N=3,229). In a random half of the cases the parent was the mother, and in the other half, the father. Comparison of the demographic characteristics of these samples with the corresponding census data for American families indicates a close correspondence (Straus and Gelles 1986, 1990a; Straus, Gelles, and Steinmetz 1980).
New Hampshire Child Abuse Survey. Moore and Straus (1987) surveyed 958 parents of children age six months through 17 in the spring of 1987 using random digit dialing to select the sample. Because comparison of the characteristics of the sample with census data revealed that the sample overrepresented persons with high education, the analyses reported weight the data to produce the equivalent of a representative sample of parents.

Student survey. These data were obtained by questionnaires distributed in introductory sociology and anthropology classes at a state university in New England during 1971 and 1972 (Hotaling, Straus, and Lincoln 1989; Straus 1973; 1974). Of the 583 questionnaires distributed, 95.2 percent or 555 were completed. However, the number of cases for the analyses in this paper which require data on both parents is 334 because the remaining students were not living with both parents that year.

A limitation of the student sample is that it describes only families with a child in college, which, for example, probably have a lower crime rate than a general sample. Nevertheless, a great deal of family violence and non-family crime was reported. Moreover, the central issue of this paper is not the amount of family violence or the amount of crime, but the question of whether these are correlated. Consequently, since a correlation is not affected by the absolute level of the two variables, valid results are possible, even if the two variables are each severely underestimated (Straus 1969; 572-573), provided there is no “interaction” between the reasons for the underestimate and either the independent or dependent variable.

Measure of physical punishment of respondents. Respondents in the three surveys were asked “Thinking about when you yourself were a teenager, about how often would you say your mother or stepmother used physical punishment, like slapping or hitting you? Think about the year in which this happened the most. Never, Once, Twice, 3-5 times, 6-10 times, 11-20 times, More than 20 times.” This was followed by a parallel question asking about the physical punishment the respondent experienced at the hands of his or her father.

This is far from an ideal measure. First, there is the questionable reliability and validity of recall for events which took place many years prior to the interview. Second, although the questions ask only about ordinary physical punishment, they do not exclude physical abuse. Although it is likely that few of the respondents who reported having been physically punished were also “abused” (as that term was defined above), it is likely that all respondents who were abused also experienced less severe physical punishment. This confounding of ordinary physical punishment with “abuse,” particularly for respondents who experienced frequent physical punishment might account for the relationships to be reported. Fortunately, the second measure of physical punishment avoids that problem.

Physical punishment and physical abuse by respondents. All three of the surveys used the Conflict Tactic Scales or CTS (Straus 1979; 1990b) to measure use of physical punishment by the respondents and also to measure violence which carries a higher risk of injury to the child, which we will call “physical abuse” (e.g., kicking, punching, and hitting with objects). The CTS measures three tactics used in interpersonal conflict within the family: reasoning, verbal aggression, and physical aggression. The CTS begins with the following introduction: “Parents and children use many different ways of trying to settle difference between them. I’m going to read a list of some things that you might have done WHEN YOU HAD A PROBLEM WITH THIS CHILD. I would like you to tell me how often you did it with (him/her) in the last year.” The physical aggression items used in the CTS are as follows:

- Pushed, grabbed or shoved...(child)... Threw something at him/her
- Slapped or spanked him/her
- Kicked, bit, or hit him/her with a fist
- Hit or tried to hit him/her with something
- Beat him/her up
- Burned or scalded him/her
- Threatened him/her with a knife or gun
- Used a knife or fired a gun

The response categories were 0 = none, 1 = one incident, 2 = twice, 3 = 3-5 times, 4 = 6-10 times, 5 = 11-20 times, and 6 = 20 or more times.

The first three of the above items are considered “minor violence” as contrasted with the remaining items which are considered to be “severe violence,” because they carry a greater risk of injury. If the parent carried out one or more of the acts in the severe violence list, the child was classified as having been physically abused, whereas if the parent engaged in one or more of the minor violence acts, but did not do any of the things in the severe violence list, the child was classified as having been physically punished. See Wauchop and Straus (1990:137) for a discussion of the boundary between legitimate physical punishment and child abuse.

Attitudes to Physical Punishment in Ten European Nations

These data are from a study of Edelfelt (1979) of violence in children’s everyday lives. A questionnaire was sent to human service professionals in 24 countries. These “experts” were asked to give their opinions on how teachers and parents respectively would rank six different activities used by adults in the child’s socialization process. The other activities were as follows: Reward, Example, Loss of Favor, Reprimand, and Exclusion. For brevity of exposition, we refer to the attitudes of teachers. However, it must be remembered that these
are actually the opinions of experts who ranked what they believed to be the attitudes of teachers toward disciplinary practices.

The average ranking of physical punishment (on a scale from one to six) was used as an indicator of the acceptability of physical punishment in these countries. We reversed this scoring to facilitate interpretation of the correlations and specifically so that the more favorable the attitude to physical punishment, the higher the score.