ON THE LAW OF THE HOUSEHOLD: THE PRINCIPLES USED BY PARENTS IN DISCIPLINING THEIR CHILDREN

Steven Shavell[*]

In this article I first describe the basic principles that parents employ in disciplining their children. The description is based on a survey of parents, the major results of which are that parental sanctions are premised on wrongdoing—not on the mere causation of harm; that parental sanctions tend to be greater when wrongdoing results in harm than when it does not; that parental sanctions for intentionally harmful conduct exceed those for negligence; and that parental sanctions are not raised when the probability that wrongdoing would be discovered is low.

I then develop a theory to explain the principles of discipline as functional for parents. The kernel of the theory is that the rules of discipline maximize the expected utility of parents—assuming that the utility of parents is reduced by the occurrence of harm and also reflects the well–being of their children.

After elaborating the theory, I comment on several related issues, including the possible influence of childhood experience on our preferences as adults over legal rules; and I remark on the similarity between the principles of criminal law and those applied by parents in disciplining their children.

INTRODUCTION

The subject to be addressed here is the principles under which parents discipline their children in the household, an arena of patent importance for the use of rules and sanctions. The main objectives are two: to describe the principles in fact; and to explain why they may be functional for parents—serve their ostensible purposes.

In Part I of the article, I discuss the findings of a survey of parents on the circumstances under which they would discipline their children in some manner.[1] Participants in the survey

[*] Samuel R. Rosenthal Professor of Law and Economics at Harvard Law School and Research Associate at the National Bureau of Economic Research. I thank Lucian Bebchuk, Ryan Bubb, Robert Ellickson, Yehonatan Givati, Scott Hemphill, William Hubbard, Louis Kaplow, Gregory Keating, Daniel Kelly, Ivy Kramer, Richard McAdams, Randal Picker, A. Mitchell Polinsky, Haggai Porat, Kathryn Spier, Matthew Stephenson, and Lior Strahilevitz for comments on this article, Spencer Livingstone and Justin Yim for research assistance, and the John M. Olin Center for Law, Economics, and Business at Harvard Law School for research support. I am especially grateful to Arevik Avedian for her extensive help and advice on implementing the survey of parental attitudes about the disciplining of children reported here.

[1] I will use the word discipline and the terms penalize, punish, correct, and sanction essentially interchangeably to refer to actions of parents that are meant to be unpleasant for their children. Such actions include frowning at children, sending them to their rooms, and, for some parents, spanking them. But the particular type of sanction that parents choose to impose will not be a concern here because the conclusions reached will be largely independent of that consideration.

were presented with scenarios in which children might cause harm, such as spilling a glass of juice, breaking a window, or hurting a sibling. These scenarios varied in a number of respects, and notably in regard to whether a child's behavior was wrongful[2]—in the sense of having been either negligent or intentionally harmful[3]—and in whether it eventuated in harm.

The survey responses show unmistakably that parents are guided by the fundamental principle of punishment based on wrongdoing: parents tend to impose sanctions only when a child's behavior was wrongful. The responses also tell us that parents are not guided by another basic principle, namely, to penalize children for the mere causation of harm. This latter principle that parents could employ but in fact eschew will be referred to as harm–based punishment.[4]

Given that disciplining of children by parents is premised on undesirable conduct, what further rules[5] govern its use? The major conclusions drawn from the survey are the following. First, parents generally impose sanctions for wrongful behavior whether or not it turns out to result in harm. But second, the scale of sanctions for misbehavior tends to be higher if harm occurs than if not. Third, parents are likely to penalize intentionally harmful conduct more seriously than negligent behavior. Fourth, parents are inclined to discipline wrongful behavior to the same extent regardless of the probability that they were able to detect it; specifically, they do not elevate sanctions when the chance of discovery of misbehavior was low. Last, and qualifying the principle just stated, parents usually raise the degree of punishment if children engaged in cover–up, that is, attempted to conceal their misbehavior.

These descriptive conclusions about the rules regulating parental disciplining of children I view largely as confirmations of what many readers would expect. A basic question that the descriptive account evokes is *why* parents correct their children in the ways that they do. That question is addressed in Part II of the article. I advance there a theory under which the rules of discipline that parents have adopted can be understood as those that serve to maximize their utility. In other words, if we consider parents to be law–givers whose goal is to foster their own utility, we can see that they would wish to select the principles of punishment that they have in fact embraced. The theory derives mainly from two assumptions about the utility of parents: parental utility falls when harm occurs in the household; and parental utility reflects the well–being of their children.[6]

As is initially noted in Part II, these simple assumptions imply that negligent and intentionally harmful conduct of children lower parental utility, primarily because such conduct tends to generate harm in the household without producing offsetting benefits. Hence, parents should wish to combat that conduct.

But why does it follow that the organizing principle of parental discipline ought to be as it is, punishment for wrongdoing, rather than the harm–based alternative? The argument that is

---

[2] I will also refer to wrongful behavior as misbehavior, bad conduct, wrongdoing, and the like.
[3] Negligent and intentionally harmful acts will be defined below; see Section II.A.
[4] Harm-based punishment is, of course, not a purely notional regime of responsibility. It is illustrated by the use of strict liability in tort law, on which see Restatement (Third) of Torts: Physical and Emotional Harm (2014), ch. 4, and by the imposition of pollution taxes, surveyed, for example, in Stavins (2003), as well as other payments and penalties based on expected harm aimed at reducing detrimental external effects of activities.
[5] I will use the terms rules and principles synonymously in this article.
[6] It will also be assumed that parental utility depends on effort to police children's behavior.

made is not self–evident and may be summarized as follows. On one hand, it is apparent that the prospect of wrong–based punishment can discourage wrongful behavior. Children who know that they will be chastised for intentionally spilling juice at the breakfast table or for horseplay that could easily result in that outcome will be led to refrain from such misbehavior.

On the other hand, harm–based discipline could *also* deter wrongful behavior. Children who would be punished whenever they spilled juice would be inhibited from behaving badly at the breakfast table because that would be especially likely to result in the spilling of juice and thus in a sanction. Accordingly, the use of a harm–based disciplinary regime would be expected to lead to a reduction in misconduct.

Furthermore, the use of a harm–based disciplinary regime would not require parents to ascertain whether their children behaved badly. Under the harm–based principle, parents would not have to know whether spilled juice was due to their child's tantrum or to his or her negligence—all that parents would need to verify is that their child spilled juice. Consequently, a regime of harm–based sanctions might be easier to administer than a regime of wrong–based sanctions.

If each of the two basic rules of sanctions would often discourage wrongful conduct and if the harm–based rule could be easier to implement, why is it asserted that the wrong–based rule is superior for parents? Three reasons will be offered.

First, under a wrong–based regime, appropriate conduct is not penalized, whereas under a harm–based regime, appropriate conduct would be penalized if it happened to result in harm. Such punishment of proper conduct would be disadvantageous for parents: it would make their children unhappy (on whose well–being parental utility is presumed to depend) and yet would not contribute to the deterrence of bad conduct (punishment of good conduct cannot deter bad conduct). Moreover, this shortcoming of pointless but detrimental–to–parents sanctioning would be experienced with real frequency under a harm–based regime, for even when children do not misbehave, they will often cause harm given their young age and the typical circumstances of the household.

Second, under wrong–based discipline, punishment of misbehavior can occur whenever a parent notices it, whereas under a harm–based regime, discovered bad conduct could be sanctioned only when it resulted in harm. Thus, under a harm–based regime, parents would forgo valuable opportunities to correct observed misconduct that did not turn out to cause harm.

A third reason that parents should find wrong–based discipline superior to harm–based concerns their desire to teach children the nature and importance of appropriate and inappropriate behavior—as opposed to their wish to deter misbehavior when its nature is already appreciated by their children. This *tutelary goal* of parents derives from their assumed underlying objectives, for teaching children about proper conduct will reduce harm in the household and will also result in less sanctioning for misbehavior, raising parental utility through two channels.

To amplify, it will be argued that the tutelary ambition of parents is more likely to be satisfied under wrong–based sanctioning than under harm–based sanctioning. Under the wrong–based principle, punishment will by definition be the consequence of a parent's knowledge that a child misbehaved. In this circumstance a parent will benefit from a valuable opportunity to teach a lesson by explaining why the sanctioned behavior was undesirable. Under the harm–based rule,

however, the parent would not necessarily know that punished behavior was bad (could a child's spilling of juice have been accidental?) and thus punishment could actually interfere with the tutelary objective.

On the basis of these considerations, it will be suggested that wrong–based disciplining enjoys an overall advantage in relation to harm–based. In other words, the conjecture is that the relative merits of wrong–based punishment—that it does not result in the wasteful imposition of punishment in the absence of misbehavior, that it does not squander valuable opportunities to sanction bad behavior, and that it better serves the tutelary objective—outweigh the relative merit of harm–based punishment—that it does not require parents to know whether misbehavior occurred.

Following this articulation of a rationale for wrong–based punishment, the main principles governing its application for misconduct will be analyzed for their functionality. One such principle is that sanctions for bad conduct tend to be imposed whether or not it results in harm. The thrust of the explanation for this principle is that punishment of bad conduct regardless of the occurrence of harm is a more powerful deterrent of that conduct and also better accomplishes the tutelary objective than punishment of bad conduct only when harm occurs.[7]

However, the argument just outlined does not suggest that misbehavior that results in harm should lead to greater punishment than misbehavior that does not cause harm, even though we do observe this pattern. A possible rationale for the pattern is that the occurrence of harm may lead to an inference that the bad act in question was more dangerous than an outwardly similar act that did not result in harm.

The principle that intentionally harmful acts are sanctioned stringently and more than negligent acts is also analyzed and justified. Here the essence of the explanation is that acts that are intentionally harmful are likely to be more dangerous than merely negligent acts (making the intentionally harmful acts more important to discourage) and also to yield greater utility to children (rendering the acts more difficult to discourage). It will be argued that both of these differences lead to the desirability for parents of use of higher levels of sanctions for intentionally harmful acts.

A somewhat puzzling issue arises in regard to the observation that bad acts are ordinarily sanctioned to the same degree regardless of the likelihood of their detection. This parental practice contravenes the well–known conclusion of the theory of law enforcement that sanctions should be increased when the probability of detection of violations of rules is low, lest deterrence of bad acts be undesirably diluted.[8] Why should parents countenance a weakening of the deterrence of misbehavior by failing to raise the level of punishment when discovery of misbehavior is unlikely? Several thoughts are offered, but they do not provide an altogether pleasing explanation for the parental practice that we observe.

The remaining principle addressed is that cover–up of misbehavior leads to greater punishment. This principle modifies the one just mentioned because it means that when a low

[7] The point that penalizing wrongdoing whether or not harm occurs generates greater deterrence than penalizing wrongdoing only when harm occurs is essentially identical to the second advantage mentioned above of wrong-based discipline over harm-based discipline.

[8] An early expression of this point is made in Bentham (1789), pp. 173–174; see also references on the theory of law enforcement such as Polinsky and Shavell (2000), p. 50, and Shavell (2014), pp. 482–484, 505.

probability of detection of misbehavior is engineered by a child rather than is the product of circumstance, the punishment is raised. The functional explanation for the penalty for concealment of bad acts is that concealment intentionally subverts the efficacy of the institution of discipline in the household; concealment in itself undermines both deterrence and the achievement of the tutelary objective.

Finally, in the concluding Part III, I briefly consider three issues going beyond the substance of the prior sections. The first issue concerns the interpretation of the functional explanation of the principles of disciplining of children. The point made about this matter is that parents display only limited explicit attention to the effects of their rules of discipline on deterrence of unwanted behavior, raising questions about the notion that they actively choose the rules on the basis of their functionality.

The second issue is the hypothesis that one's childhood experience of having been disciplined on the basis of wrongdoing can shape an individual's attitude toward that principle, contributing to a preference for it per se as an adult. To the extent that this is so, parents will wish to employ the wrongdoing principle in disciplining their children because of its intrinsic appeal as distinct from its functional attributes. Furthermore, adults would be expected to exhibit a liking for the wrong–based principle of sanctions in our formal legal system (such as for the negligence rule over strict liability in tort law) independently of its consequential characteristics.

The third issue relates to our criminal law. In this regard, it is suggested that the functional explanation for wrong–based punishment of children is analogous to the functional explanation for wrong–based punishment of criminals. The chief reason for the similarity in these rationales is that in both contexts, the actual imposition of punishment is costly for the party designing the system of sanctions (parents experience disutility from penalizing children, society suffers detriments from incarcerating criminals).

Before proceeding with this article, let me comment on its scope and on writing of relevance to it. As to the former, my concern is with behavior of children that might cause harm to other individuals in the household and their property. It is not with behavior that can be detrimental to a child himself or herself. Thus I do not consider behavior resulting in the danger of children injuring themselves, in children's excessive consumption of sweets, in their neglect of schoolwork, and the like. The primary reason for this limitation in the scope of my inquiry is that it is in children's own interest to avoid harming themselves. That basic motive of children implies that the rationale for parental discipline to induce children to act in their self-interest will arise primarily when they do not properly understand the nature of their self-interest. Accordingly, the need for parental discipline to prevent children from acting against their self-interest is of a different character from the need for parental discipline to lead children to behave with appropriate concern for others.

In regard to writing relating to my topic, the primary body of social–scientific research on parental disciplining of children is of course found in the field of psychology.[9] That work is the product of an expansive and long–standing effort and has been concerned with identifying and assessing different approaches that parents employ to curb undesirable conduct of their children.

[9] For an overview of this research, see the textbook Siegler et al. (2020), especially pp. 433–439, the handbook Grusec and Hastings (2015), and review articles such as Gershoff (2002), Larzelere (2000), Maccoby and Martin (1983), and Maccoby (2015).

These approaches range from patient explanation of proper behavior, to mild admonition and periods of time out, to more rigorous actions, including scolding, denial of privileges, withdrawal of affection, and corporal punishment, notably spanking. In recent decades, psychologists have placed emphasis on what is known as a parenting style, a term of art referring to a constellation of factors governing parent–child interactions surrounding misbehavior.[10] Much of the research on parenting styles and on particular methods of discipline has been directed toward evaluating their effects on the socialization of children, on their performance in school, and on outcomes in their adult lives.

The literature in psychology does not, however, delineate the qualitative rules guiding parental discipline that I adduce in the survey reported in Part I.[11] Thus, the literature does not observe that in actuality a fundamental choice has been made by parents in favor of discipline premised on wrongdoing over discipline based on the occurrence of harm. Nor does it state that parents tend to penalize intentionally harmful conduct more rigorously than negligent conduct, that parents do not raise sanctions for wrongdoing when the probability that it was discovered was low, and so forth.

Within the field of economics, two areas of research bear on this article. The first is a growing literature on the family. In that writing, parents are typically posited to care not only about themselves in the usual selfish sense but also about the utility of their children, and parents act accordingly.[12] Hence, a crucial assumption made in this article—that the motivations of parents reflect the utility of their children—is a central one in economic writing on the family. Yet the economic research on the family has left the subject of the disciplining of children essentially unaddressed and thus does not have specific implications for the conclusions obtained here.[13]

The other economic literature that is germane to this article is writing on crime and law enforcement.[14] One connection between that literature and this article I already mentioned several paragraphs above, concerning the similarity between the functional explanation for the focus on wrongdoing in criminal law and the functional explanation for the same focus applying to parents and children in the household. Another connection relates to the optimal magnitude of sanctions, as I will note in Section II.C.

---

[10] See Baumrind (1967) for an influential article defining and studying four distinctive parenting styles; and see also, for example, Baumrind (1973), Grusec and Goodnow (1994), and Siegler et al. (2020), pp. 434–437 on this subject.

[11] I have not found sources addressing these rules through online searches of literature; moreover, the publications cited in note 9 and the extensive bibliography contained in Siegler et al. (2020) do not include works referring to the rules.

[12] The literature is broad in range, covering not only parental decisions about child-rearing, but also parental choices about whether and whom to marry, the number of children to bear or adopt, labor market participation, and the allocation of expenditures within the family. See the important treatise of Becker (1981, 1991) and the following books and surveys: Browning et al. (2014), Doepke et al. (2019), Doepke and Zilibotti (2019), Ellickson (2008), and Lundberg and Pollak (2007).

[13] None of the sources in the previous note, including the survey on parenting by Doepke et al. (2019), mentions the topic of the disciplining of children for misbehavior. I have, however, found two economic articles on that subject: Amuwo et al. (2004), focusing on the choice that parents make between corporal and non–corporal punishment, and Wittman (2005), providing an economic interpretation of the views of child psychologists on the disciplining of children. Neither of these articles describes the set of rules of discipline that parents employ (and thus neither analyzes whether those rules promote parental utility).

[14] See Becker (1968); and see also the survey Polinsky and Shavell (2000) and Shavell (2004), chs. 21–24.

I. Description of the Principles Used by Parents In Disciplining Their Children

The objective of this part is to identify the primary qualitative principles that parents follow in sanctioning their children. To do so, I conducted a survey in which respondents were presented with scenarios involving the behavior of children and were asked whether they would or would not be inclined to sanction a child if they were the child's parents. The ages of the children in the scenarios were generally between seven and ten years.[15] If a respondent reported that he or she would discipline a child, the respondent was instructed to say how seriously on a scale of 1 to 7. Respondents were told that punishment could range from a mild admonition, to a scolding, to denial of a privilege, or to whatever the respondent considered appropriate for the top of the scale. Respondents were also required to provide brief explanations for their views and to state what they might say to a child in the relevant circumstances.

The survey was limited to parents and was conducted online; details about it are provided in an Appendix to this article. I report in the part here summaries of responses to the survey questions. The part is organized into seven sections, each describing a claim that is supported by the survey results.

A. Children Are Not Ordinarily Disciplined for the Accidental Doing of Harm

The assertion here is that children are not usually disciplined for causing harm if they did not misbehave. To confirm this claim, let us consider four questions in which a child's action resulted in harm but in which the child would probably not be regarded as having misbehaved.

> Question 1. *Your seven–year–old daughter Sally is eating pancakes for breakfast. As she reaches for a pitcher of syrup to pour on them, her elbow accidentally brushes against her glass of juice. The juice glass topples onto the floor and breaks. Would you or would you not discipline Sally?*

The fraction of respondents who said they would not punish Sally was 84%.[16] When asked to explain why not and what they would say to her, the respondents made such statements as "There's no way it was on purpose and was merely an accident," "It was an accident, this stuff happens all of the time," "Because it was an accident and she didn't mean to do it," and "I would tell her that it's okay, but to be careful about it. . . ." Statements made by the 16% of respondents who reported that they would punish Sally included "I will say her to be careful and not repeat this" and "Sally broke the glass of juice."[17]

Next consider

---

[15] I chose a limited range of ages to maintain consistency across questions. I am thus assuming that the qualitative principles of parental discipline that are adduced in the survey would not be meaningfully different if the age range was modified (even though the nature and scale of punishment of children and what a parent would tell a child about his or her behavior presumably would be affected by age).

[16] The number of respondents considering this question was 57, with 48 answering that no disciplining was needed and with 9 answering that it was. See Table 1 in the Appendix for these statistics on each of the questions in the survey.

[17] Here and throughout, I have chosen what I believe are representative statements of respondents.

Question 2. *Your ten-year old boy Rick generally leashes the family dog Buddy and takes him for a walk in a nearby park in the afternoon. One day Rick returned home from his walk—but without Buddy. Rick said that a large aggressive dog had charged them, causing Rick to lose his grip on the leash as Buddy bolted and tore away. Would you or would you not discipline Rick?*

In this situation, 94% of the respondents said that they would not punish Rick. Typical statements offered by these respondents were "I would not discipline him for something that is not his fault," "He did not want his dog to get loose, it was an accident," "because it wasnt his fault that another dog attacked them. . .," "He didn't mean to lose the dog. It was an accident" and "oh no you have to be more careful lets go find buddy." Among the answers of the respondents who said they would punish Rick are "He acted irresponsible," "You had one task and you should have held onto the leash" and "i think that discipline. . . is very important the good beahvior in our lives."

Consider also

Question 3. *Your ten–year–old girl Sarah loves sports and is constantly out in the backyard, practicing with her soccer ball. One day you see Sarah kick the ball toward the goal some distance away. Just before the ball reaches the goal, her four–year–old brother Tim happens to dart out from nearby bushes where he had been hiding—unbeknownst to Sarah. The ball hits Tim in the stomach, making him cry. Would you or would you not discipline Sarah?*

Of the respondents to this question, 90% answered that they would not sanction Sarah, explaining that "She did not know he was there nor hit him on purpose. It was a fluke accident," "she didnt know he was there and it wasn't malicious," and the like. Comments of respondents who said that they would sanction Sarah included "Inconsistency in applying discipline will not help a child respect his or her parents" and "Sarah should have used more caution when she kicked the ball."

The other scenario was given in

Question 4. *Your nine–year old boy Billy likes to practice batting a baseball in your large back yard by throwing the ball up in the air and taking a swing at it. One afternoon, you see Billy hit the ball, but it improbably ricochets off a tree toward the end of the yard and breaks a small window in the side of your detached garage. Would you or would you not discipline Billy?*

Here 73% of respondents said that they would not penalize Billy, making such statements as "It was a freak accident," "This was an accident and not malicious," and "I would tell him that he needs to wait until he gets to an open field with nothing around." Examples of answers given by the respondents who said they would sanction Billy were "because he is not being careful" and "For not thinking of the possibility of damaging the property."

The respondents' reactions to the foregoing questions corroborate the hypothesis that parents tend to refrain from punishing a child for causing harm when the harm does not result from wrongdoing. This is so in two respects. First, a large majority of the respondents—85% on average[18]—reported that they would not discipline the child in the scenarios for having caused

[18] The percentages in the four questions were 84%, 94%, 90%, and 73%.

harm. And second, these respondents usually justified their decision not to sanction by *explicit reference* to the principle that *misbehavior must have occurred for harm to be sanctioned*.[19]

But what of the 15% minority of respondents who said that they would penalize children in the scenarios? Did these respondents take the occurrence of harm to be a sufficient basis for punishment despite the ostensibly accidental nature of the harms? That was not the case for many of the respondents. The reason is that they regarded the child's behavior in the scenarios as reflecting a measure of negligence. Fitting this description is the respondent who would have said to Sally to be careful when reaching for the pitcher of syrup, the respondent who felt that Rick should have held onto Buddy's leash, the respondent who thought that Sarah should have been more watchful when kicking the soccer ball, and the respondent who stated that Billy should have been thinking of the possibility of damaging property when batting. However, the respondent who said that Sally should have been penalized merely for breaking the glass of juice and several other respondents might have held the view that the doing of harm alone was a basis for discipline.

Taking into account the evidence provided by the respondents who stated that they would refrain from punishing the children in the four scenarios as well as the discussion of the preceding paragraph about the other respondents, I interpret the survey results of this section as supporting the claim that parents generally do not punish their children in the absence of wrongdoing.

B. Children Tend To Be Disciplined for Misbehavior When It Results in Harm

The assertion now is that children are often sanctioned for harm if they misbehaved.[20] To verify this, let us review a number of questions in which harm occurred, either as a result of negligent behavior or of intentionally harmful conduct.

> Question 5. *Your eight–year–old daughter Jill is having breakfast in the kitchen. She brings her battery–operated toy car to the table and turns it on—even though she's aware that such goofing around at the table can cause an accident. Her toy car moves forward and pushes her glass of juice off the table onto the floor, where it breaks. Would you or would you not discipline Jill?*,

In this case, 74% of respondents indicated that they would punish Jill, with the average punishment in those cases being 2.89 on the scale of 1 to 7.[21] The expected sanction was therefore 74%×2.89 or 2.15.[22] Some of the explanations offered for punishment were "Because

[19] For example, the quoted justifications for not punishing in the four scenarios included "There's no way it was on purpose and was merely an accident" in regard to Sally, "He didn't mean to lose the dog. It was an accident" in regard to Rick, "She did not know he was there nor hit him on purpose" in regard to Sarah, and "This was an accident and not malicious." In other words, the respondents stated that punishment was not justified because neither of the two forms of misbehavior—intention to cause harm or negligence—was involved.

[20] We just saw that some sanctioning for what was regarded as misbehavior occurred among the 15% of respondents who chose to discipline children in Questions 1–4. In this section, I wish to substantiate the hypothesis in scenarios where the behavior of children was felt to be wrongful by most of the respondents.

[21] To be clear, by average punishment I refer to the average over the subset of respondents who chose a positive punishment.

[22] The word expected means probability–discounted in decision theory and economics. Suppose, for example, that 40% is the probability of a sanction of 30 (and 60% is the probability of no sanction). Then the expected sanction would be 40%×30 = 12. A common interpretation of an expected amount is that of a long run average; for we know

she is aware that it shouldn't be done and that it was likely to cause an accident," "I would tell her that toys are not meant for the kitchen/dinning room or while eating as it can result in accidents…," and "she knows better and needs to be held accountable." Statements made by respondents who reported that they would not punish Jill included "I would verbally reprimand her, not allow her to bring her toy back to the table," "It was just an accident help me clean it up and remember in the future to not put your car on the table," and "I'd simply tell her to clean it up. Punishment isn't necessary. Having to clean it up herself would demonstrate the reasoning behind keeping those object away from the table."

Consider next

Question 6. *Your eight–year–old daughter Jill is eating breakfast. Something that you say to her makes her angry and, in a tantrum, she throws her glass of juice onto the floor. Would you or would you not discipline her?*

Here 92% of the respondents stated that they would discipline Jill, with the average punishment in these instances being 3.63; hence the expected sanction was 3.34. Representative reasons given for sanctioning her were "I would say being angry does not give anyone the right to destroy things," "she did it on purpose. I would explain to her how her actions could hurt someone," and "Even when we are angry, it is not ok to lash out." Comments made by respondents who said they would not punish Jill included "I would want to know more about what is bothering her, than discipline her for the juice which can easily be cleaned up" and "The discipline would cause further problems."

We can see that the reactions of respondents to Questions 5 and 6 contrasted greatly with those to Question 1, where the spilling of juice was viewed by 84% of respondents as primarily accidental and who stated that they would not discipline her. In Questions 5 and 6, the fraction of respondents who chose to discipline Jill was 83% on average; in Question 1, the fraction who elected to discipline her was 16%.[23]

Consider in addition

Question 7. *Your ten-year old boy Rick generally leashes the family dog Buddy and takes him for a walk in a nearby park in the afternoon. One day Rick returned home from his walk, but without Buddy. Rick said that he had wanted to play a little basketball in the park, so he'd wrapped Buddy's leash a few times around a post—yet neglected to tie it. Then Buddy saw another dog who frightened him, so Buddy pulled on the leash, which came undone and Buddy ran away. Would you or would you not discipline him?*

The fraction of the respondents to this question who said that they would penalize Rick was 53% and the average sanction when he would be sanctioned was 3.89; the expected sanction was thus

---

from statistics that the average amount in a series of independent iterations of a process (like one resulting in a sanction of 30 with probability 40% in each iteration) would tend toward the expected amount with high likelihood. The situation in Question 5 resembles one in which 74.4% of respondents would impose a sanction of 2.89, for which the expected sanction would be 74.4%×2.89 = 2.15. (In fact, the situation in Question 5 is slightly different because the respondents who would impose a sanction did not all choose a sanction of exactly 2.89; rather, 2.89 was the average of the sanctions that they chose.) The reader can usefully regard the expected sanction as a single–number indication of the willingness of respondents to penalize children for misbehavior that they observe.

[23] See Table 2 of the Appendix for a test of the significance of the difference in the expected sanction between Question 1 and Question 5 and also that between Question 1 and Question 6. Tables 2-7 of the Appendix report on pairs of questions for which the significance of differences in expected sanctions is tested.

2.06. The reasons respondents gave for imposing a sanction included "This involves the life of our pet. He was careless with our dog and we could potentially not get him back," "He did not take his responsibility serious, and the dog got away….," and "you didn't make sure he was properly tied at the park, which was very neglectful. Buddy could be hit by a car, or not be able to find his way back home." Examples of statements offered by the 47% of respondents who refrained from disciplining Rick were "He's already lost his dog. That's what happens when you're careless," "I think he has been punished enough by losing his dog," "It's a genuine mistake. I think losing the dog is enough incentive for him to learn his lesson…," and "This sounds like an honest mistake that even some adults make."

The responses to Question 7 are obviously different from those to Question 2; here 53% of respondents elected to discipline Rick, but in Question 2, where Buddy bolted and ran away in circumstances beyond Rick's control, only 6% of respondents decided to sanction Rick. Now consider

> Question 8. *Your ten–year–old girl Sarah loves sports and is constantly out in the backyard, practicing with her soccer ball. Her four–year–old brother Tim likes to participate even though he's a little young to do so.*
>
> *One day you observe Sarah and Tim in the yard having an argument about something. Sarah gets really angry, yells at Tim, and kicks the soccer ball in his direction. It hits him in the stomach and makes him cry. Would you or would you not discipline Sarah?*

In this scenario, 98% of respondents reported that they would discipline Sarah, imposing an average sanction of 4.17, meaning that the expected sanction was 4.09. Statements that they made included "She is older than he is, she should not have kicked the ball in anger," "You hurt your brother! We don't hurt other people. Go to your room and think about what you did," and "she was being a bully. . . I would tell her . . .to never injure people."

The contrast between the almost complete agreement among respondents to punish Sarah for her intentionally harmful conduct in this scenario with their similarly one-sided agreement, but not to punish Sarah, in the accidental situation involving Tim in Question 3 is stark.

Consider also

> Question 9. *Your nine–year old boy Billy likes to practice batting a baseball in your large back yard by throwing the ball up in the air and taking a swing at it. If he hits away from the house, there will be no risk of breaking any of its rear windows.*
>
> *Nevertheless, Billy decides to hit toward the house one afternoon to avoid the glare of the sun if he were to hit in the away direction. He takes a swing and drives a baseball through a rear window. Would you or would you not discipline Billy?*

Here, 82% of respondents said that they would punish Billy, the average level of their punishment was 3.67, and the expected sanction was accordingly 3.02. Representative examples of justifications for punishment were "If you are hitting a ball in the direction of a house, it will most likely hit the house. He should know better," "He made the choice to do what he knew he probably should not be doing and he damaged property because of it," and "I would tell him if he was having issues with the sun that he could have asked to go somewhere else." Of those who reported that they would not penalize Billy, most suggested that his degree of negligence was modest, making such statements as "this is likely an accident he will hopefully learn from" and "He did not use good judgement but it was an accident."

Finally, consider

Question 10. *Your nine–year old boy Billy likes to practice batting a baseball in your large back yard by throwing the ball up in the air and taking a swing at it. If he hits away from the house, there will be no risk of breaking any of its rear windows.*

One day Billy becomes angry at you for requiring him to do a chore he does not like. He storms out of the house, yelling "You'll be sorry," picks up his bat, turns toward the house, and drives a baseball through a window. Would you or would you not discipline Billy?

In this instance, 98% of the respondents stated that they would punish Billy, with the average sanction being 5.53, so the expected sanction was 5.42. Examples of justifications were "He purposely broke a window out of vengeance," "This is what damage anger can cause. You will need to pay for the window replacement," and "He intentionally destroyed property…what he did was incredibly wrong. . . ."

These responses to Questions 9 and 10 may be compared to those to Question 4, involving the ricochet of the baseball off a tree that led most respondents not to judge the batting as negligent and thus not deserving of sanctioning. In the last two questions here, 90% was the average fraction of respondents who said they would punish Billy; in Question 4 it was 27%.

Altogether, then, the responses to the questions posed in this section illustrate that when children behave either negligently or with an intention to do harm and harm comes about, they tend to be sanctioned, whereas in Questions 1–4 involving similar scenarious but facially no misbehavior, children were not usually sanctioned.

With regard to the minority of respondents, 17% on average, who stated that they would not sanction the child in Questions 5–10, several observations suggest that they might have chosen otherwise in different circumstances. First, some of these respondents did not view the child as having engaged in clear wrongdoing. This was the case, for example, with two respondents to Question 7 who thought that Rick made an excusable mistake in not tying Buddy's leash to the post and with a respondent to Question 9 who thought that Billy made only an error in judgment in batting toward his house. Second, many of the respondents to Question 7, in which Buddy ran away, commented that the loss of his dog constituted punishment in itself for Rick, so that punishment by his parent might not have been necessary.[24] Third, many of the respondents found that there might have been some misbehavior of the child in their scenarios but it was not sufficiently serious to merit outright punishment—that perhaps instruction on how to behave might be sanction enough. This was true of the respondents in Question 5 who chose not to sanction Jill but who said that "I would verbally reprimand her" and "remember in the future to not put your car on the table" as well as of a number of the respondents who did not penalize children in Questions 7 and 9. There is no reason to believe that if these respondents felt the degree of a child's wrongdoing was greater, they would have still decided against punishment. In sum, the foregoing observations about the respondents who chose not to discipline children in Questions 5–10 do not imply that the respondents would fail to endorse the principle that misbehavior should often result in harm, but rather that in the particular contexts of the questions, they did not feel that the principle applied.

[24] Two of the three respondents who I quoted and said they would not discipline Rick mentioned the loss of his dog as a punishment. When I examined the answers of all of the respondents who said they would not penalize Rick, I found that over half of them mentioned the loss of the dog as punishment in itself.

C. Children Also Tend To Be Disciplined for Misbehavior When It Does Not Result in Harm

What will be substantiated now is that children are usually penalized for misbehavior when it does not turn out to result in harm. That is, wrongdoing alone is frequently a sufficient condition for sanctioning a child. We therefore consider situations in which children act with intention to cause harm or negligently but do not in fact cause harm.

Question 11. *Your ten–year–old girl Sarah loves sports and is constantly out in the backyard, practicing with her soccer ball. Her four–year–old brother Tim likes to participate even though he's a little young to do so.*

One day you observe Sarah and Tim in the yard having an argument about something. Sarah gets really angry, yells at Tim, and kicks the soccer ball in his direction. It just misses him. Would you or would you not discipline Sarah?

Here 87.5% of respondents reported that they would punish Sarah, with an average sanction of 3.67, implying an expected sanction of 3.21. Reasons offered for penalizing Sarah included "You shouldn't do things that could potentially hurt other people," "You could have really hurt your brother," and "You cannot get angry lash out and try to hurt people." Examples of answers given by respondents who said they would not sanction Sarah were "No harm was done" but "Don't be so hotheaded," and "No harm, no foul" but "Calm down and don't yell at your brother like that."

Another scenario involving intention to cause harm is as follows.

Question 12. *Your nine–year old boy Billy likes to practice batting a baseball in your large back yard by throwing the ball up in the air and taking a swing at it. If he hits away from the house, there will be no risk of breaking any of its rear windows.*

One day Billy becomes angry at you for requiring him to do a chore he does not like. He storms out of the house, yelling "You'll be sorry," picks up his bat, and hits toward the house. But by chance the baseball misses the windows and bounces harmlessly off the rear side of the house. Would you or would you not discipline Billy?

In this case 89% of respondents stated that they would punish Billy even though harm did not occur, the average penalty was 4.32, and the expected penalty was 3.83. Justifications for punishment were, for example, that "Whether he broke a window or not, he still had malicious intent," "Even though he didn't break anything he was trying to," and "Tell him what might have happened and that it was not acceptable to take his anger out that way." For refraining from sanctioning, reason provided were that "no harm done. . . remember to hit away from the house" and "did not damage house."

Now consider negligent behavior.

Question 13. *Your eight–year–old daughter Jill is having breakfast in the kitchen. She brings her battery–operated toy car to the table and turns it on—even though she's aware that such goofing around can cause an accident. Her toy car moves forward and just misses hitting her glass of juice. Would you or would you not discipline her?*

The fraction of respondents who stated that they would punish in this scenario was 47%, the average sanction was then 2.16, the expected sanction was thus 1.02, and typical justifications for punishment included "She still did something bad that could have caused an accident," "Jill, you can't be so careless with these toys. While it didn't this time it could cause damage if you

did it again in the future," "She could have caused an accident and knew better. The fact that disaster was averted is irrelevant," and "She knows better than to do that and just because she got lucky this once doesn't mean she should not be disciplined." Some explanations for declining to discipline her were "I don't think this is a behavior that needs to be punished. . . At most, a friendly 'be more careful, please' would be enough to prevent any spilling of drinks" and "Because it is just a toy and did not cause an accident. . . I would point out what could have happened."

We also have

> Question 14. *Your nine–year old boy Billy likes to practice batting a baseball in your large back yard by throwing the ball up in the air and taking a swing at it. If he hits away from the house, there will be no risk of breaking any of its rear windows.*
>
> *Nevertheless, Billy decides to hit toward the house one afternoon to avoid the glare of the sun if he were to hit in the away direction. He takes a swing—but luckily the baseball misses all the windows and bounces harmlessly off the rear side of the house. Would you or would you not discipline Billy?*

In this scenario, the fraction who would punish was 69%, the average punishment was 2.61, and the expected sanction was thus 1.80. Reasons for punishing included "Because he needs to be taught not to do that to avoid any accidents in the future. . .You shouldn't hit the ball towards the house because you could break our windows" and "I would discipline him because at nine he knows better. . . He was only luck this time that it didint hit any windows," and representative reasons for refraining from penalizing were "No damage done but a stiff lecture is in order" and "He didn't break anything, but I would remind him sternly to not hit the ball towards the house."

The responses to Questions 11–14 confirm the assertion that sanctioning children for wrongful conduct frequently occurs even in the absence of harm. The common rationale for sanctioning offered by the respondents to these questions was that the actions of the children in the scenarios had the potential to cause harm. Thus, respondents made such statements as "You could have really hurt your brother" in regard to Sarah kicking the soccer ball toward Tim, "Tell him what might have happened" in regard to Billy angrily batting the baseball toward the house, and "She still did something bad that could have caused an accident" in regard to Jill's use of her toy car. Moreover, many of the respondents who said they would not punish children would still have made corrective statements to them, such as "Don't be so hot headed" to Sarah and "remember to hit away from the house" to Billy.

D. Sanctions For Misbehavior Tend To Be Higher When Harm Occurs Than When Not

Having shown that punishment for misbehavior may be imposed in the absence of harm, the issue arises whether the non–occurrence of harm results in lower expected sanctions, that is, in a lower likelihood and/or a lower magnitude of sanctions. Equivalently, does the occurrence of harm lead to higher expected sanctions? We can see from what has been reported above that the answer is yes.

Specifically, this was the case in Questions 9 and 14, concerning Billy's negligence in batting toward his house to avoid the glare of the sun. In these scenarios, when Billy's ball broke the rear window of the house, the expected sanction was 3.02, whereas when his ball did not

break the window, the expected sanction was lower, 1.80.[25] In Questions 10 and 12, where Billy batted a baseball toward his house with the intention of breaking a window, we observed a similar effect. Here, when Billy's ball broke a rear window, the expected sanction was 5.42, whereas when he missed hitting a window, the expected sanction was 3.83. In Questions 5 and 13, we saw an effect in the same direction. In these questions, Jill was negligent in operating her toy car at the breakfast table. When her car knocked over her juice glass, the expected sanction was 2.15, whereas when her car missed the glass, the expected sanction was 1.02. Likewise, in Questions 8 and 11, where Sarah intentionally kicked a soccer ball at her brother Tim, the expected sanction was 4.09 when she struck him but 3.21 when she missed him.

E. Sanctions for Intentionally Harmful Conduct Tend To Be Higher Than for Negligent Conduct

I first point out here that the expected punishment for intentionally harmful behavior is higher than that for negligent behavior in the questions that have been answered. I then examine two features of individuals' treatment of intentionally harmful conduct that may shed light on the tendency for it to be sanctioned more rigorously than negligent conduct.

We first saw that the sanctioning of intentionally harmful behavior was greater than for negligence in Questions 5 and 6. In Question 6, Jill had a tantrum and threw her juice glass onto the floor, resulting in an expected punishment of 3.34, whereas in Question 5, she negligently used her toy car at the breakfast table and knocked over her juice glass, leading to a lower expected punishment of 2.15. Similarly, in Question 10, Billy intentionally batted a ball toward a window and broke it, producing an expected sanction of 5.42, whereas in Question 9, he negligently batted a ball toward his house and broke a window, generating an expected sanction of 3.02.

The same pattern, that intention to do harm raised expected sanctions, was seen to hold in scenarios in which misbehavior did not result in harm. In Question 12, Billy intentionally batted the ball toward a window but missed, engendering an expected sanction of 3.83, whereas in Question 14, Billy negligently batted a ball toward his house but did not break a rear window, leading to an expected sanction of 1.80.

To better understand the proclivity to discipline intentionally harmful conduct more strongly than negligent behavior, consider the next question.

> Question 15. *Your nine–year–old boy Billy likes to practice batting a baseball in your back yard by throwing the ball up in the air and taking a swing at it. If he hits the ball away from the house, there will be no danger of breaking the large picture window at its rear. Nevertheless, Billy hits the ball toward the house—you caught a fleeting glimpse of him doing that and wonder how much danger of breaking the picture window it created.*
>
> *Consider two alternative scenarios explaining why Billy hit the ball toward the house:*
> *A. He wanted to avoid the glare of the sun if he had hit the ball away from the house.*

[25] The higher expected sanction when harm occurred was due to both a higher probability of sanctions—82% rather than 69%—and to a higher average sanction when the sanction was positive—3.67 rather than 2.61. In the other comparisons of this section and of Section I.E, the comparison of each of the two components of expected sanctions also runs in the same direction as that of the expected sanctions.

B. He was angry at you for requiring him to do a chore and had stormed outside, yelling "You'll be sorry."

Would the danger of breaking the window be the same or would it be different under the scenarios A and B? Explain why.

Here 50% of respondents stated that the danger of breaking the window would be greater under scenario B, in which Billy's behavior was intentionally harmful, than in scenario A, in which his behavior was negligent. The other 50% of respondents said that the danger would be equal in the two scenarios. Thus no respondents answered that the danger would be greater under scenario A. In other words, respondents either believed that intentionally harmful conduct connoted greater danger or equal danger with negligent conduct, but never the reverse.

Typical justifications offered by the respondents who thought the danger of breaking the window would be higher when Billy was trying to do harm were "if he was mad and intentionally aiming for the window in scenario B it's much more likely to be broken than if he was just randomly batting in the general direction of the house," "I feel like the danger would be more in scenario B because he was angry. He may be more apt to hit it toward the house aiming at a window," and "in scenario B he would be actively trying to break the window and aiming for it on purpose, but in scenario A he was just trying to be more comfortable playing. The danger would probably be greater for scenario B." Evidently, then, these respondents believed that an intentionally harmful act would lead to greater danger because a person like Billy whose motive was to cause harm would act in particular ways (notably, by aiming toward the window) so as to increase the likelihood of harm.

Of the respondents who stated that the danger would be equal in both scenarios, examples of reasons were "The danger of breaking the window is the same regardless of the reason why the action is happening," "The danger is the same regardless of the cause," and "I think that at nine years old the danger is likely the same. He likely doesn't have a ton of control over where the ball goes, so he should always face away from the house." Here the first two respondents apparently did not conceive of Billy being able to influence the probability of hitting the window. Given that assumption, their explanations of equal danger make sense. The third respondent did contemplate the possibility that Billy could alter the probability of hitting the window but did not believe that Billy possessed the motor skills to control the path of the ball.

Having now seen that intention to cause harm may lead to a belief that an act is more dangerous than an outwardly similar negligent act, let us ask whether intention to cause harm could lead to greater punishment even if it was *not* associated with greater danger. That will tell us whether there is a pure effect of intention to cause harm on the propensity to punish. The following question is designed to help resolve this issue.

Question 16. *Your nine–year–old boy Billy likes to practice batting a baseball in your back yard by throwing the ball up in the air and taking a swing at it. If he hits the ball away from the house, there will be no risk of breaking the large picture window at its rear.*

Consider two possible scenarios:

A. Billy decides to hit the ball toward the house to avoid the glare of the sun if he were to hit in the away direction.

B. Billy becomes angry at you for requiring him to do a chore he does not like. He storms out of the house, yelling "You'll be sorry,"picks up his bat, and hits the ball toward the house.

In both scenarios, assume that Billy creates the same risk, say 20%, of breaking the picture window.

Would you or would you not discipline Billy in scenario A—the glare of the sun? What about in scenario B—the angry reaction?

In this question, the assumption that the risk is the same under the two scenarios means that if there is a difference in the willingness of respondents to penalize Billy, it cannot be due to a difference in risk—it must be due to the fact of intention. In the negligence scenario A, respondents disciplined Billy 56% of the time, using an average sanction of 3.61, implying an expected sanction of 2.02, whereas in the intentionally harmful scenario B, respondents disciplined Billy 100% of the time, imposing an average and expected sanction of 5.30. Thus what I have labeled the pure effect of intention to cause harm on sanctioning was positive; the factor of intention raised both the likelihood and the magnitude of sanctions even though intention did not raise the danger of the act.

Representative explanations given by respondents for the differential treatment of intentionally harmful conduct included "In the second scenario, Billy is angry, and there is a premeditated and stated desire to cause damage. In the first, there is no intention to cause damage," "Hitting the ball because of the glare of the sun is done without intent to do damage where as in anger the ball was hit with intent to do damage," and "The first scenario I could try to understand, but using anger to break something is unacceptable." It should be noted that these statements are not really justifications for higher sanctions for intentional harm—they are rather declarations of the view that intention to cause harm per se merits more punishment.

The answers to Questions 15 and 16 suggest that the tendency to penalize intentionally harmful acts more than negligent acts may be ascribed in part to an inference that intentionally harmful acts are more dangerous and also to a pure effect of intention on the desire to punish.

F. Sanctions for Misbehavior Are Not Elevated When the Probability of Its Detection Is Low

We will now consider questions in which the probability that a parent would discover a child's wrongdoing varies. It will be found that a *low probability of discovery of bad conduct does not lead to an increase in expected sanctions*.[26]

This point will be of interest to us because it conflicts with the basic principle that deterrence of unwanted conduct will be undermined if expected sanctions are not raised appropriately when the probability of the discovery of the conduct was low. *In particular, expected sanctions given discovery of wrongdoing will need to be raised in proportion to decreases in the probability of discovery of the misconduct for deterrence to be preserved*. Suppose, for example, that when the probability of discovery of wrongdoing is 50%, the

[26] What has been called the expected sanction in prior sections of Part I has always been a conditional amount—it is the expected sanction *given* the assumption that a parent has observed misconduct. Here we will have a need to distinguish between the expected sanction given that a parent observed misconduct and the *unconditional* expected sanction, namely, the probability that a parent detected misconduct in the first place multiplied by the expected sanction given that misconduct was observed. For example, suppose that the probability of discovering misconduct is 50%, that given the discovery of misconduct, the probability of a sanction would be 80%, and that the magnitude of the sanction would be 4. Then the expected sanction conditional on discovery of misconduct would be 80%×4 = 3.2 and the unconditional expected sanction would be 50%×3.2 = 1.6.

expected sanction given discovery is 3, creating an unconditional expected sanction of 1.5. Then if the probability of discovery falls to 25%, the expected sanction given discovery would have to rise to 6 in order to maintain an unconditional expected sanction of 1.5 and deterrence.

To demonstrate the claim that respondents do not tend to raise expected sanctions when the probability of detecting bad behavior falls, let us first compare their answers to a question in which no information is given about the probability of discovery of misconduct with their answers to a modified question in which the probability of discovery of misconduct is low. In particular, consider first

> Question 17. *As you enter the kitchen, you observe your eight–year–old daughter Jill about to use her battery–operated toy car on the kitchen table, which you had set out with her breakfast. She's going to use her car even though she's aware that such goofing around can cause accidents—suppose the toy car knocks over a glass of juice. Would you or would you not discipline Jill?*

Here 60% of respondents said that they would discipline Jill, the average sanction was 2.93, so that the expected sanction given her conduct was 1.77.[27] Now let us turn to a variation of the scenario involving Jill.

> Question 18. *You have just made breakfast for your eight–year–old daughter Jill and set it out on the kitchen table. You tell Jill that you're going upstairs to make a phone call and will come down in ten minutes or so to chat. A minute later, however, you realize that you forgot your coffee in the kitchen, so you go back downstairs to get it.*
>
> *As you enter the kitchen, you observe Jill about to use her battery–operated toy car on the kitchen table. She's about to proceed with her car even though she's aware that such goofing around can cause accidents—suppose the car knocks over a glass of juice. Would you or would you not discipline Jill?*

In this situation, Jill would presumably regard the probability of her parent discovering her playing with the toy car as being lower than in Question 17 since here she expected her parent to be upstairs for "ten minutes or so," whereas in the prior question there is no suggestion made about the likelihood of discovery of her behavior. The assertion that we are aiming to validate is that the lower probability of discovery of misbehavior in Question 18 did *not* lead to a noticeably higher propensity to sanction. How much higher should the propensity to sanction have been if parents wished to maintain deterrence of bad behavior? If a respondent to Question 18 thought, for instance, that Jill's use of the toy car was half as likely to be discovered as a respondent to Question 17, then the expected sanction given discovery in Question 18 should have been twice that in Question 17, namely, $2\times1.77 = 3.54$. In fact, however, the expected sanction in Question 18 was *lower* than 1.77—it was 1.46, for the fraction of respondents who said they would penalize Jill was 59%, the average sanction was 2.48, and $59\%\times2.48 = 1.46$. Thus, the comparison of the results in Question 17 to those in Question 18 hardly support the hypothesis that parents raise expected sanctions when the probability of discovery falls.

Moreover, only two of the 56 respondents to Question 18 mentioned Jill's low probability of discovery in the verbal parts of their answers and neither of their comments supported the

[27] I will not offer examples of justifications for disciplining or not doing so in regard to this question or subsequent ones in this section because they are similar to those in prior questions.

notion that they would raise sanctions on account of the element of probability.[28] That the factor of low probability was not even noted by 54 of the respondents and that the answers given by the other two respondents did not suggest that they would elevate punishment on account of the low probability constitutes evidence for the view that parents do not view the probability of discovery as having importance.

To further test the assertion that low probability of detection of misbehavior does not lead to an increase in sanctioning, let us examine three more scenarios about Jill. In these scenarios the probability that Jill's use of her toy car would be seen by her parent is made explicit and varies in magnitude.[29] The first of these is

> Question 19. *Like most parents, you're generally monitoring the behavior of your children. You figure that you spot their misbehavior about a third of the time.*
>
> *As you enter the kitchen one morning, you observe your eight–year–old daughter Jill about to use her battery–operated toy car on the kitchen table, which you had set out with her breakfast. She's going to use her toy car even though she's aware that such goofing around can cause accidents—suppose the car knocks over a glass of juice. Would you or would you not discipline her?*

Question 20 was identical to this one except that the odds of spotting misbehavior were one–half; and Question 21 was likewise identical except that the odds were two–thirds. The following table summarizes the responses to the three questions.

Table 1: Results from Questions 19–21

Probability of discovery of misconduct	Probability of sanctions given discovery	Average sanction given sanctioning	Expected sanction given discovery	Unconditional expected sanction
1/3	70%	2.78	1.94	.65
1/2	60%	2.16	1.29	.64
2/3	62.5%	2.40	1.50	1.00

The first row refers to Question 19, for which 70% of respondents said that they would penalize Jill given discovery of her misbehavior and, if they did so, the average sanction would be 2.78. Therefore, conditional on being discovered, Jill would face an expected sanction of 70%×2.78 or 1.94. Because the probability of discovery by her parent is one–third, the unconditional expected sanction—what Jill would rationally calculate to be the average sanction she faces if she uses her

[28] One of the two respondents said "Just because Mama isn't in the room doesn't mean you don't have to follow [the rules]" but this respondent imposed the *lowest* possible level of sanctions, 1. The other respondent said that Jill would be told "Did you think you could disobey me when you can't see me?" but the respondent chose *not even to discipline her*.

[29] The attraction of explicit probabilities is, of course, that one can test in a direct manner the influence of probability. The disadvantage of explicit probabilities, however, is their artificiality in that, especially in the context of the household, parents will not in fact base their decisions on named objective probabilities. To some extent, the comparison between Questions 17 and 18 ameliorates this problem, for they do not mention specific probabilities but rather offer scenarios in which subjective probability assessments are likely to differ.

toy car—would be 1/3×1.94 or .65. The other two rows correspond to Questions 20 and 21 are similarly explained.

How does Table 1 bear on the issue whether or not parents raise sanctions when the probability of discovery of misbehavior is low? When the probability is highest, 2/3, the expected sanction given discovery is 1.50, implying an unconditional expected sanction of 1.00. When the probability drops to 1/2, the expected sanction given discovery should rise to 2.00 if the unconditional expected sanction of 1.00 is to be maintained. But as the table shows, the expected sanction falls to 1.29, leading to a lower expected sanction of .64. This supports the assertion that parents do not raise sanctions as the probability of discovery falls. When, however, the probability falls from 1/2 to 1/3, the expected sanction given discovery rises to 1.94, and the unconditional expected sanction hardly changes. This last observation is in tension with the assertion that parents do not augment sanctions as the probability falls.

The mixed evidence from Table 1 should also be viewed in light of the verbal comments of respondents regarding their reasons for sanctioning or not doing so and what they stated that they would say to Jill. Not a single one of the 153 respondents to Questions 19–21 mentioned the probability of discovery of bad conduct in his or her statement. This was of a piece with the omission of any reference to probability by 54 of the 56 respondents to Question 18. Again, therefore, we see that respondents do not appear to consider in a conscious way the probability of detecting misbehavior as a factor in punishment.[30]

Last, let us consider a series of questions about a different scenario. As will be seen, the character of the results resembles that concerning Jill and her toy car.

> Question 22. *One day you observe your nine and ten–year–old children playing catch with a tennis ball in the living room. They are doing this even though they are aware that the ball can easily go astray and break something, like a lamp or a vase. Would you or would you not discipline them?*

In this scenario 68% of respondents said that they would discipline the children, the average sanction was 2.03, and thus the expected sanction given discovery of their behavior was 1.38. Note that this question did not mention the element of probability that the children's bad conduct would be discovered. The next set of three questions states the probability. The first of these is

> Question 23. *Like most parents, you're generally monitoring the behavior of your children. You figure that you spot their misbehavior about a quarter of the time.*
>
> *One day you observe your nine and ten–year–old children playing catch with a tennis ball in the living room. They are doing this even though they are aware that the ball can easily go astray and break something, like a lamp or a vase. Would you or would you not discipline them?*

In Questions 24 and 25, the probability of detection of misbehavior was one–half and three–quarters. The findings were these:

[30] Respondents could have been asked directly to consider whether they would be inclined to penalize to a greater degree when the probability of discovery of Jill's misbehavior was low (for example, they might have been asked "Would you be more inclined to discipline Jill if the probability that you would have observed her bad conduct was low, say one third, rather than high, say two thirds?"). But such a question would not necessarily test whether respondents consider the factor of probability of discovery to be of relevance; rather the question would almost presuppose that and suggest that the researcher thought the probability might well matter.

Table 2: Results from Questions 23–25

Probability of discovery of misconduct	Probability of sanctions given discovery	Average sanction given sanctioning	Expected sanction given discovery	Unconditional expected sanction
1/4	72%	2.22	1.59	.40
1/2	70%	2.97	2.07	1.03
3/4	77%	2.94	2.27	1.70

Here we see that as the probability of discovery of wrongdoing falls from 3/4 to 1/2 to 1/4, the expected sanction given discovery does not rise at each step; rather it falls, the opposite of what should happen were parents increasing expected sanctions given discovery to compensate for lower probabilities of discovery.

Additionally, none of the 187 respondents to the four questions concerning the present scenario mentioned probability in their written statements about their decisions whether to discipline children or in what respondents said they would say to the children.

A final comment about Questions 23–25 is that it is hard to see how the expected sanctions for them relate to the expected sanction of 1.38 in Question 22, which made no reference to the probability that the children would be discovered playing catch.

Altogether, the responses to Questions 17–25 contradict the hypothesis that parents raise sanctions when they discover bad behavior with low likelihood. Indeed, the striking lack of attention paid to the element of probability in the statements of respondents suggests that probability does not factor in parental decisions about disciplining and that differences among the survey questions in the results reported in the statistics on the likelihood and magnitude of sanctions might have been the product of chance.[31]

G. Sanctions Are Generally Imposed for Cover–Up of Misbehavior

We now compare situations in which attempts to conceal misbehavior are observed by parents—which I will generally refer to as *cover–up*—with situations in which misbehavior is observed without cover–up. We will find that cover–up raises expected sanctions for misbehavior. Consider a scenario that does not involve cover–up.

> Question 26. *Your nine–year–old daughter Anne is aware that if she paints in her sketch book while sitting on the living room couch, she might stain its upholstery. As you pass by the living room, you notice that Anne is painting while sitting on the couch and has just dropped her paint brush, staining a couch cushion. Would you or would you not discipline Anne?*

Here 72% of respondents said that they would sanction Anne and the average punishment was 3.28; thus the expected sanction was 2.37. Reasons for penalizing her included "I would discipline Anne so that she knew in the future to be more careful and not to damage furniture," "She knew this was a possibility and did it anyway" and "I would talk to her again about the

[31] Tables 6 and 7 in the Appendix bear out this view; they show relatively few differences in means that are statistically significant (that reject the null hypothesis that the means are drawn from different distributions).

consequences of painting on the couch . . . .” Rationales for not sanctioning Anne were, for instance, “I would of course correct her and tell her that she needs to do that at the table, but punishment . . . seems too harsh to me” and “It was an accident. I would make sure she didn’t bring any paint to the couch again.”

Now consider another version of the scenario with Anne that does include cover–up.

Question 27. *Your nine–year–old daughter Anne is aware that if she paints in her sketch book while sitting on the living room couch, she might stain its upholstery. As you pass by the living room, you notice that Anne is painting while sitting on the couch and has just dropped her paint brush, staining a couch cushion. She then quickly flips the cushion over—it is reversible—in an apparent effort to conceal what happened. Would you or would you not discipline Anne?*

With cover–up, 89% of respondents stated that they would discipline Anne, with the average sanction being 3.71; the expected sanction given discovery was therefore 3.29. Examples of reasons offered for disciplining her were “Anne is trying to hide her poor choices,” “for trying to deceive me . . . we do not lie,” and “She turned the cushion to hide it instead of telling me the truth.” Explanations offered for not sanctioning Anne included “Dropping the paint brush was an accident and even though she tried to hide it, it was not an act of disobedience” and “it was an accident.”

Comparing the foregoing scenarios, we see that the expected sanction associated with cover-up was higher than that without cover-up, 3.29 rather than 2.37.

Next consider a similar pair of scenarios.

Question 28. *One day you happen to observe that your nine and ten–year–old children are playing catch with a tennis ball in the living room. They are doing this even though they are aware that the ball can easily go astray and break something.*

As you watch, the ball knocks over a small vase, which shatters on the floor. Would you or would you not discipline them?

In this case, 83% of respondents chose to penalize the children, employing an average sanction of 3.34; the expected sanction was thus 2.76. Explanations for punishment included “They knew that something could break,” “there would be a lot of yelling about how they know better than to play catch in the house,” “Children inherently know that playing with balls in the house could cause damage,” and “They should not have been throwing the ball around breakable objects.” Some of the reasons given for not punishing them were “I would explain to them that they shoudln’t play ball in the house. . . but it was an accident” and “Because I didn’t stop them while they were playing and only watched.”

Question 29. *One day you happen to observe that your nine and ten–year–old children are playing catch with a tennis ball in the living room. They are doing this even though they are aware that the ball can easily go astray and break something.*

As you watch, the ball knocks over a small vase, which shatters on the floor. The children then quickly push the pieces under the couch in an apparent effort to hide what occurred. Would you or would you not discipline them?

Here, with concealment, 98% of the respondents stated that they would discipline the children, with an average punishment of 3.84; the expected sanction was therefore 3.76. Typical justifications for sanctions were “They broke the rules and then attempted to hide what they had

done—same thing as lying," "it's wrong they were playing with a tennis ball in the living room . . . and especially wrong and dishonest that they tried to hide the broken vase," "For one they were throwing a ball in the house and for two they were covering it up," and "I would . . . tell them no more ball playing in the house. I would also explain to them why lying and covering things up will get them nowhere in life."

The comparison of the scenarios is similar to that involving Anne; here the expected sanction given cover–up was again higher, 3.76 rather than 2.76.

The explanations for higher expected sanctions given discovery of cover–up suggest that the act of cover–up is viewed as intrinsically problematic by parents. It is also true that cover–up lowers the probability of discovery of misconduct. However, that feature of cover–up might not be very important to parents, for as discussed above in Section I.F, punishment does not seem to be influenced by a lower probability of discovering misbehavior.

II. The Observed Principles of Discipline Maximize Parental Utility

Having presented evidence in the previous part on what appear to be the major principles employed by parents in disciplining their children, I now advance a theory that demonstrates that these rules tend to maximize a posited measure of parental utility. Such a theory might be regarded as explaining the rules—telling us why the observed rules are what they are. Namely, because parents are in control of the household, they would be expected to adopt rules of punishment that promote their utility. As a consequence, if we consider a parental utility function that captures the central elements of parental motives relevant to the household, and if the rules that we see actually used maximize this objective, it would seem that we will have rationalized those rules.[32]

A. Assumptions and the Framework of Analysis

We will informally examine a stylized model of the motivations and behavior of parents and children in order to develop in a clear manner the idea that the principles of punishment foster parental well–being. In the world of the model, parents and children are each generally assumed to seek to maximize their own utility, or more precisely, their own expected utility, that is, the sum of their probability–discounted utilities.[33] I now set out the main elements of the model.

1. The Utility of Parents and of Children. The utility of a parent is presumed to reflect three factors. The first is the occurrence of harm in the household.[34] By harm is meant such outcomes as a child spilling a glass of juice, breaking a window, or hurting a sibling. These

[32] However, as I mentioned in the Introduction, I will remark on qualifications to this view in Section III.A.

[33] If in some situation a parent would enjoy a utility of 20 with a probability of 60% and a utility of 50 with a probability of 40%, then the parent's expected utility would be 60%×20 + 40%×50 = 32. The expected utility can be interpreted as the average utility a parent would experience were the parent in a similar situation repeatedly. See note 22 on the use of the word expected.

[34] By the household, I will usually mean the domicile of the parents and children. Although my attention will be mainly on what transpires there (and the survey questions of Part I focused on the domicile), one can interpret what is said to apply often to the conduct of children outside of the domicile, especially when they are accompanied by a parent, such as at a playground or a store.

outcomes are taken to reduce parental welfare for obvious reasons; spilled juice is a waste and will need to be cleaned, a broken window will have to be replaced, and an unhappy sibling will create disutility for a parent, as I will shortly discuss.

The second factor entering into parental utility is the cost of administering the rules of punishment in the household. Here I refer to parental effort to monitor the behavior of children and the occurrence of harm[35] as well as parental effort to ensure that intended sanctions are actually imposed, for example, that a child who has been told that he will be denied the privilege of watching television will not in fact do so.

The third factor influencing parental utility is the well–being of their children. Here, the assumption is that parental utility incorporates a child's utility to some degree, and thus that parental utility rises when a child's utility increases and falls when a child's utility declines.[36] This assumption about interdependence of utilities has several implications. One is that parental utility will be reduced when parents sanction their children, for by definition imposing some form of punishment (see Section II.A.3) on children will make them unhappy.[37] Additionally, parents will consider the benefits that children obtain from their activities partly as benefits to themselves. Further, parents will treat the precautions that children take to avoid harm (see Section II.A.2) as involving some disutility to the children and thus as implying a measure of parental disutility.

Although the determinants of a parental utility have now been stated—harm in the household, the costs of administering the principles of punishment, and the utility of children—it should also be observed that these factors imply that parental utility will be raised when parents teach children about appropriate behavior.[38] Specifically, when a child learns what constitutes

---

[35] This effort will not usually be regarded as determining a single probability. Rather the probability of observing a child's act and the possible harm caused will depend on circumstances, such as whether the parent happens to be home when the act occurs and, if so, where in the house the child and the parent happen to be. Thus, monitoring effort should be interpreted as affecting the distribution of probabilities of discovering acts of children and of harm done.

[36] A simple formulation of a parent's utility is that it is the weighted sum of two components, $U_S + \lambda U_C$, where U_S is the selfish utility of a parent (that which does not depend on the well-being of other individuals), λ is a positive altruistic weight reflecting the parent's concern for a child, and U_C is the utility of the child as viewed by him or her. Both of the utility components can depend on many factors, but we will focus on a limited number (notably, in considering U_S, the emphasis will be on only the occurrence of harm and the costs of administering the rules of discipline). In some more general representations of a parent's objective, the parent's utility also depends on a paternalistic conception of the child's utility, U_P, as distinct from the child's own view of it, U_C; see, for example, Doepke et al. (2019), p. 4, and the assumption that will be made in Section II.A.2 that parents do not credit the utility children derive from intentionally harmful acts.

[37] If children are made unhappy by one unit of utility from a sanction, the parent's utility will fall by λ. Implicit in the simple formulation of interdependence of utility considered here is that the imposition of a sanction on a child could not raise parental utility by assuaging a parent's possible anger at a child—a parent's anger is omitted from the stylized model.

[38] Teaching will be regarded here mainly as conveying information to a child about risk (stating that use of an indelible marker to draw when sitting on the den couch could stain it). Teaching also undoubtedly involves emphasizing to a child that others experience disutility when they suffer harm (a parent might have trouble in removing a stain on the couch); in this way, a parent might hope to appeal to a child's capacity for empathy and to help enliven the child's other-regarding preferences. For simplicity, I will usually refer to the first aspect of teaching in what follows. This will not matter to the analytical conclusions I reach, for they will depend on the tutelary function having positive value, not on the degree to which that value flows from the provision of information about risk or on effects on a child's desire not to harm others.

proper conduct and why parents desire it, that will tend to reduce harms in the household—because it will permit more effective use of the threat of punishment (see Section II.A.4) and thus raise parental utility. Further, when the behavior of children improves, they will suffer punishment less frequently, leading to an increase in parental welfare through another avenue. Additionally, and significantly, when children absorb lessons about appropriate behavior from their parents, the children will be benefited after they are emancipated from the household, for well–socialized individuals usually fare better in life than others. This too is obviously desirable for parents owing to the dependence of their utility on that of their children. Because, then, of the importance to parents of teaching children correct behavior, it will be convenient to refer to that goal as the *tutelary objective* even though it is not in strict logic an independent component of parental utility but a derived one.

The utility of children is generally assumed to be simple in nature. It depends positively on their enjoyment of the ordinary pleasures of childhood and negatively on their efforts to reduce risk of harm and on the suffering of punishment.

2. The Acts of Children. The acts of children will be regarded as producing benefits for them and as potentially causing harm. The acts will be divided into two major categories, according to whether the occurrence of harm is or is not desired by a child. If the harm caused by an act is not desired by a child, the harm will be called *unintentional* because it will be only a byproduct of behavior with a different purpose. If, however, the harm caused by an act is desired by a child—if its occurrence would raise his or her utility—and if that motivation spurs an act that makes the harm more likely, the harm will be labeled *intentional*.

Let us consider first acts of children that could cause unintentional harm and ask which of these acts are desirable for parents and which undesirable. We will focus on settings in which children can take precautions to reduce the risks that their activities generate and will assume that the precautions involve effort of some type for them. Suppose that a child's activity is batting a baseball in the direction of his house, that the risk is that the baseball would break a rear window of the house, and that the precaution is batting away from the house, which would be inconvenient for him.[39] This precaution would be desired by a parent if the utility cost of the inconvenience to the child, as evaluated by the parent, is sufficiently low—less than the savings in the parent's utility that batting away from the house and thus lowering the risk to a window would generate.[40] One can readily imagine that the precaution would be desired by the parent—the cost of the precaution to the child might be modest in relation to the reduction in the risk to a window—or that the precaution would not be desired by the parent—the cost of the precaution

[39] In the scenario in Question 9 of Part I, the inconvenience to Billy associated with hitting away from the house was experiencing glare from the sun.

[40] To amplify using the assumptions discussed in note 36, suppose that the utility cost to the child is c and that the parent's altruistic weight λ is .5—a weight that I will use in other notes. Then the utility cost of the precaution to the parent will be .5c due to interdependence of utilities. Suppose also that if the child bats toward the house, the probability of a broken window would be 30%, whereas if he bats in the away direction, the probability of a broken window would be zero. (More generally, a precaution would only reduce the likelihood of an accident, not eliminate it.) Finally, suppose that the utility cost of a broken window (reflecting the costs of repair in time and money) to the parent would be 100, meaning that the parent's expected selfish utility loss due to the 30% risk would be 30. Hence, the parent's total expected utility (the probability-discounted value of $U_S + \lambda U_C$) would be promoted by the taking of the precaution if .5c—the decline in λU_C—is less than 30, the expected loss in U_S that would be avoided. In other words, the parent would want the precaution to be taken if c is less than 30/.5 or 60.

might be significant in comparison to the reduction in the risk to a window. If a child fails to take a precaution that a parent would have desired, the child will be said to be *negligent*.[41]

Another meaning of negligence should be mentioned. This concerns a child's decision whether to engage in an activity that presents a risk of harm. Suppose that a child is choosing whether to bat a baseball toward his house and, for simplicity, suppose that it is not feasible to take the precaution of hitting away from the house—so the child's choice is just to bat the baseball toward the house or not to do so.[42] In this situation, the parent would want the child to bat if the benefit to the child from that activity as viewed by the parent outweighs the reduction in parental utility due to the risk created by it.[43] If the benefit is not high enough to justify batting, the child could be considered negligent for having engaged in the risky activity.[44] Thus, in general, negligence can refer to either failure to take a desirable precaution or to engagement in an activity when not doing so would have been preferable, although my emphasis will be on negligence in the sense of failure to take an appropriate precaution.[45]

To the extent that children behave in a non-negligent manner, will that largely eliminate the occurrence of harm? It does not seem so. Non-negligent behavior means that risks are cabined where they can be at reasonable cost, but this does not imply the absence of risks. Accidents will still occur with a noticeable frequency.

Now let us turn to the second category of acts of children, those for which the occurrence of harm is a child's purpose and that has been characterized as intentional. For example, suppose that a child becomes angry with a sibling and kicks a ball at him to hurt him.[46] It will be assumed that parents find such intentionally harmful acts undesirable because parents do not credit in their

---

[41] The reader will notice that this definition is in qualitative alignment with the meaning of negligence in everyday life, for where a precaution would have been easy to take and would have substantially reduced danger, we would say that a person ought to take it, and that if the person did not do so, that he or she was at fault or negligent or irresponsible. In the law of torts, the same is true; see the Restatement (Third) of Torts, section 3 Negligence, comment e, Balancing risks and benefits. For explicitly economic interpretations of negligence in tort law, see Landes and Posner (1987) ch. 4 and pp. 85–107 and Shavell (1987b), ch. 2 and pp. 19–20.

[42] One could imagine that if the child bats away from the house, the ball would roll into a pond or disappear in thick brush, meaning that batting toward the house would be the only option.

[43] Suppose that the utility benefit to the child is b, so that the utility benefit to the parent is .5b. Then the parent would find batting desirable if .5b was greater than 30, the expected decline in utility due to the risk of a broken window (see note 40). Hence, the parent would find the activity desirable if b exceeded 60.

[44] Although it was assumed for convenience in the above example that there was only one choice, over whether to engage in the activity, it is straightforward to consider both the choice about participation in an activity and also the exercise of precautions when so doing. In that case, there would be three possible acts of a child: do not engage in the activity; engage in the activity and do not take a precaution; and engage in the activity and take the precaution. One of the three acts will be best for the parent, and if that act is not chosen, the child will be negligent either with regard to the choice of the precaution or with regard to participation in the activity. In particular, it is possible that if a child engages in the activity, it would be desirable for the precaution to be exercised, but that a residual risk still exists that is high enough to make the participation in the activity undesirable. If that is so, the child would be negligent for having engaged in the activity despite having taken the precaution. On the matter of activity choice, precaution choice, and negligence in tort law, see Shavell (1980) and Shavell (1987b), ch. 2.

[45] A qualification about the meaning of negligence concerns the knowledge of the child about risk. If the child's knowledge is imperfect, I will generally interpret negligence to mean not failure to take the action that a parent desires but rather failure to take the action that the parent would desire given the information that the child possesses.

[46] See Question 8 in Section I.B.

calculus the utility the child might enjoy from the doing of harm.[47] Hence, the acts will be undesirable for parents: they will produce no benefit in the parents' eyes and might cause harm, which would lower parental utility.

As I indicated in the introduction, I will refer to negligent acts and to intentionally harmful conduct, as wrongs, wrongful acts, bad acts, improper behavior, and the like. This terminology is of course consistent with our customary use of language and with the immoral connotation of words like wrongful and bad. But it should be stressed that in the world of the model under consideration, the reason that parents do not want wrongful acts to be committed is not that they are morally objectionable. Rather, the reason is that they lower parental utility—because they lead to harm and yield lesser or no parental benefits.

3. The Sanctions Imposed on Children. Sanctions—parental actions that are meant to be unpleasant for children and that parents take in order to enforce a disciplinary rule (see Section II.A.6)—will be measured by the disutility that they create for children. This disutility of punishment will be assumed to have an upper bound.[48] For the most part I will not discuss the form of punishment, which as has been noted can be variously interpreted. The form of punishment will not be significant for our purposes because what will matter in the analysis is the magnitude of the disutility that a sanction engenders in a child, not the particular source of the disutility (whether, for example, it is admonition or instead denial of a privilege).

4. The Deterrent Effect of Sanctions. When a child consciously considers whether to act in a manner that might result in punishment, it will be assumed that he or she compares the benefit that would be obtained from the act to the expected disutility of the possible punishment—the probability of punishment multiplied by its disutility. If this expected sanction exceeds the benefit from the act (which could be avoiding the burden of a precaution), the child will be deterred from committing it. Otherwise, the child will not be deterred, an outcome that will occur if the probability or the magnitude of the sanction is sufficiently low. Moreover, since the magnitude of sanctions has been assumed to be bounded, there will be a probability of sanctions below which deterrence of an act will be impossible.[49]

It will also be presumed that a child might not engage in deliberation about his or her behavior owing to a lapse in attention or to an impulsive reaction to circumstances. For simplicity, I will capture this view by supposing that there is a positive probability that a child will ignore the expected sanction that he or she would otherwise take into account. In this event too, the child will not be deterred from an act that could result in punishment.

To the degree that a child would actively weigh the benefit from an act against the expected sanction resulting from it, parents can influence deterrence of an act through the control

[47] The motivation for this assumption is that it appears to me to represent the views of many parents. It can be accommodated in the framework of note 36 through the use of an appropriate paternalistic utility function for the child U_P.

[48] The existence of an upper bound of a child's disutility guarantees that a parent could not always induce a hypothetically rational child to desist from unwanted behavior by choosing a sufficiently high sanction. Although I have stated the existence of an upper bound to be an assumption, it is also actually a conclusion drawn from the axioms of expected utility theory; see Arrow (1971), pp. 64–65.

[49] Let b be the utility benefit to the child from an act, p be the probability of a sanction if a child commits the act, and s the disutility of the sanction. Then the child will be deterred when $b < ps$. If s_m is the maximum possible sanction, then deterrence will be impossible when $b > ps_m$, which is to say, when $b/s_m > p$; thus b/s_m is the critical probability below which p cannot fall if deterrence is to be possible.

of the two components of the expected sanction: the probability of the sanction, which they determine in part through their general monitoring effort; and the magnitude of the sanction that they choose to impose.

5. Tutelary Effort Associated with the Disciplining of Children. The tutelary objective of parents that I stressed in Section II.A.1 could be well served if parents accompany punishment of a child with an attempt to convey some form of lesson.[50] The reasons are twofold. First, the use of punishment by parents will be likely to signal to a child that the parents consider the events that occurred important. Second, because punishment usually occurs closely after the occurrence of wrongdoing or harm, parents will be able to illustrate and make more effective their teaching through reference to what they observed had transpired.[51]

6. The Principles Governing the Disciplining of Children. It may be useful for organizing thought to view the rules of discipline that parents may employ in a general manner as functions of two variables: the observed *act* of a child, including whether it is negligent or intentionally harmful, along with its many particular aspects; and the observed *outcome* of the act, including the harm it produces, if any, and its character. The function specifies whether there will be a *sanction* and, if so, what its magnitude will be, given the observed act and the observed outcome. Thus, a wrong–based rule is a function that will not result in a positive sanction unless the act variable was a wrong (a negligent or intentionally harmful act); a harm–based rule is a function for which the act is irrelevant and the occurrence of harm is a necessary condition for a positive sanction; and, for example, a rule under which a wrongful act that results in harm is punished more than one that does not result in harm is a function such that for any particular wrongful act, the sanction will be higher if a positive level of harm occurs than if no harm occurs.

Although we will usually be considering situations in which the observed act and the observed outcome are the actual ones, the observed acts and/or the observed outcomes might be imperfectly viewed by parents. In that case, the overall framework just described continues to apply; but the function will specify a sanction based on whatever are the imperfectly observed acts and outcomes.

The framework under discussion can also accommodate tutelary considerations, for we can assume that the function determines not only the sanction, but also the instruction given by a parent to a child.

7. The Method Under Which the Principles Will Be Evaluated and Compared. The way in which the principles will be evaluated is by reference to the objective of parents, their utility. Thus, for any rule, the approach will be to ask first about the consequences of its use. That is, how would we expect a rule to influence the behavior of children through deterrence and the tutelary avenue, the amount of harm that would occur, the benefits that children would obtain from participation in their activities, and the sanctions that would turn out to be imposed on them? Given the prediction of the consequences of the use of a rule of discipline, we can then

[50] For ease of exposition, I will generally treat tutelary effort as distinct from punishment, even though in reality the two are often overlapping, as when a parent admonishes a child for having acted negligently.

[51] Although the concern of this paragraph has been with fostering the tutelary objective after punishment occurs, the tutelary objective can also be advanced in other circumstances. Notably, parents can praise children for good behavior and can discuss with them the good or the bad behavior of individuals outside of the family.

evaluate its effect on the expected utility of parents, for we will have a forecast of harm and of the well-being of their children.

In gauging the consequences of the use of a rule, the probability of parental observation of children's acts and of harmful outcomes must be taken into account, for deterrence and the tutelary effect depend on it. This probability is governed by chance elements and by a parent's monitoring effort. Hence, the problem of designing a disciplinary system confronting a parent is in principle a dual one involving both the choice of monitoring effort and the selection of a rule of discipline to be applied when a child's behavior is observed.

B. The Superiority of Wrong–Based Discipline Over Harm–Based Discipline

I now consider the choice between the two fundamental principles of punishment. Should sanctioning be premised on the wrongful behavior of children? Or should it be grounded on their having caused harm? That is, which of the two principles would tend to result in higher utility for parents? I will explain here that wrong–based discipline holds advantages over harm–based discipline for parents, but it also suffers from a disadvantage. My judgment about the likely importance of the advantages over the disadvantage will lead to the conclusion that wrong–based discipline is superior for parents.

Some readers may wonder why the question addressed in this section is posed. After all, it does not appear that parents, or any of us, actively consider harm–based sanctioning of children in reality. We know from our life experience that misconduct is a sine qua non for the punishment of children, as was confirmed by the survey results discussed in Part I, especially in Sections I.A and I.B. And because a central objective of parents is for their children not to misbehave, the direct approach of sanctioning children when their behavior is bad seems natural for parents to employ.

Yet, as was stressed in the Introduction, harm–based discipline provides an *indirect* means of discouraging children from wrongdoing, for the character of wrongdoing is that it tends to result in harm and thus would lead to punishment. Additionally, as was also noted in the Introduction, society makes use of harm–based liability in its law of tort and sometimes requires parties to pay taxes and fines reflecting expected harm. Moreover, economists generally champion harm–based sanctioning because it does not require a law enforcer to determine what constitutes good or bad behavior or to observe actual behavior.[52]

[52] The reasoning of economists is represented by their argument favoring corrective taxation over regulation, on which see, for example, Mankiw (2009), pp. 210–14, and Pindyck and Rubinfeld (2009), pp. 651–60. Suppose that an actor can exercise a precaution that will eliminate a harm—and thus the precaution should be taken if and only if its cost is less than the harm that would otherwise occur (assuming a utilitarian definition of social welfare). Then if the actor must pay a tax equal to the harm he causes, the actor will be induced to adopt the precaution if and only if he should do so, when its cost is less than the harm it would avert. For the state to implement this corrective tax regime, all that the state need do is measure the harm caused by an actor; the state has no need to understand the character of precautions (their cost, the harm that would occur in their absence) nor does the state need to ascertain whether precautions were in fact taken. In contrast, to regulate the taking of precautions, the state would have to know a great deal about their nature and whether they were actually exercised. Parallel arguments suggest the desirability of strict liability over the negligence rule in tort law, on which see Shavell (1980) and, for example, Landes and Posner (1987), ch. 4, and Shavell (1987), ch. 2.

These observations call for a comparison of the functioning of harm–based and wrong–based principles of discipline in the venue of the household. Through this inquiry, we may be able to make explicit the virtues of the wrong–based principle that are to a degree only latent in its use by parents.

1. Wrong–Based Discipline. By the principle of wrong–based discipline, I refer here to the rule under which parents will punish a child if and only if they learn that the child acted improperly, that is, either negligently or with the intention to do harm. By definition of this rule, such misconduct is both necessary and sufficient for punishment to be employed.[53]

A primary effect of the rule is obviously that it can deter children's misbehavior. Under the rule, children will have a general appreciation that undesirable conduct would often lead to punishment. A child who might bat a baseball toward his house but realizes that this irresponsibly risky act could lead to sanctioning might check himself as a result.

If deterrence of undesirable conduct were perfect, then parental utility would be high. For parents would have induced proper behavior of their children; and for that very reason, parents would not turn out to witness and therefore to punish bad behavior and to suffer disutility. This outcome, the achievement of good behavior without having had to sanction children, is the ambition of a system of deterrence and provides a standard for evaluating the performance of wrong–based discipline.

Of course, deterrence will not in fact be perfect. As was observed in Section II.A.4, children will sometimes not face a sufficiently high probability of sanctions to be deterred, such as when a parent is upstairs at the time that a child acts in a negligent manner at the kitchen table. And children will sometimes not actively consider the threat of sanctions, notably when they are caught up in play or are acting out of emotion.

When deterrence fails, parents will often notice children's bad conduct and find themselves sanctioning their children and experiencing disutility. How frequently this occurs will depend on the context, but a point to be borne in mind for the argument that will be made in this section is that to the extent that bad behavior is successfully deterred, parents will not bear disutility from punishing their children.

Now let us turn to the tutelary objective of parents. The occasion of the punishment of a child under the wrong–based principle should provide a natural opportunity to parents to address the bad conduct of the child—for the parent's use of the principle is premised on the parent's having knowledge of wrongdoing. Therefore, the parent will be able to refer to the particular behavior of the child that occurred and to explain why that conduct tends to cause harm and is therefore undesirable. Furthermore, the parent will be motivated to communicate this message because of the parent's tutelary objective.

As we would expect, the foregoing view is generally confirmed in Part I by many survey respondents' answers to requests for them to state what they would say to children who misbehaved.[54] For example, in Question 5, Jill used her battery–operated toy car at the breakfast

[53] I am considering this stylized rule here for simplicity and not, for example, a rule under which punishment would not be imposed unless wrongdoing exceeded a threshold of seriousness or a rule under which the occurrence of harm would also be required for punishment. The latter rule will, however, be considered in Section II.C.1, as I have mentioned.

[54] See the full version of Question 1 in the Appendix and the query "What would you say to her?" As noted there, this query was made in all but Questions 15 and 16 of the survey.

table and the car knocked over her glass of juice. One of the respondents who chose to discipline her said "I would tell her that toys are not meant for the kitchen/dinning room or while eating as it can result in accidents. . . ." Similarly, in Question 6, Jill had a tantrum and threw her juice glass onto the floor, and a respondent who punished her stated "I would say being angry does not give anyone the right to destroy things" and "I would explain to her how her actions could hurt someone." Likewise, in Question 7, Rick neglected to tie his dog Buddy's leash securely to a post in the park and Buddy ran away. Here one of the respondents who elected to discipline Rick said "you didn't make sure he was properly tied at the park, which was very neglectful. Buddy could be hit by a car, or not be able to find his way back home." In each of these statements reacting to a child's misbehavior, respondents emphasized the danger of harm that the child caused.[55]

2. Harm–Based Discipline. Under harm–based discipline, it is the doing of harm that leads to sanctioning. If a child has caused harm and the parent discovers that, the child will be punished; and if a child does not cause harm, he or she will not be punished. Thus, whether a child's conduct was or was not wrongful will not exert a direct effect on punishment. In particular, if the behavior was bad yet did not cause harm, the child will escape punishment; and if the conduct was proper but eventuated in harm, the child will be punished.

Even though discipline under the harm–based rule does not depend in a direct manner on misconduct, use of the rule will tend to deter such conduct. The essential reason is that the nature of bad conduct is that it is relatively likely to cause harm and therefore would be relatively likely to result in punishment. If a child were to angrily bat a baseball toward his house in order to break a window and the probability of that outcome were thus high, so too would be the probability of punishment. Hence, the child might stop short of carrying out his act. Likewise, if a child were to carelessly play with her toy car at the breakfast table, she might generate a significant risk of spilling juice and thus of sanctioning, inducing her to refrain from that misconduct.

In the ideal, harm–based discipline would deter all bad conduct. We know, however, that that outcome will not occur in reality for the two general reasons that have been discussed already in relation to wrong-based discipline and in Section II.A.4. In this regard, it is important to observe that the first of the reasons for failure to deter—a low probability of punishment—arises now from considerations different from a parent's inability to observe wrongdoing. In particular, when punishment is harm–based, the probability of punishment will be low only if the likelihood of a parent detecting harm is low. When would this be an issue? Often it would not be, for a broken window or spilled juice would usually be noticed by a parent. Still, in some circumstances the child could escape punishment if he or she could claim that another person was responsible for a harm (that a sibling broke the window) or by concealing a harm (cleaning up spilled juice).[56]

[55] The reader can see ample further evidence of the tendency of respondents to teach a child a lesson about the danger of harm caused by the child's witnessed misbehavior by reviewing the discussions of other questions in Part I.

[56] An additional reason that the probability of punishment of misconduct could be low applies in contexts in which the probability of harm (as opposed to its detection if it occurs) is small. For example, if a child plays with matches in the back yard, the probability of that resulting in a destructive fire might be very low, meaning that this misconduct could not be deterred in the harm–based regime.

Let me now comment on a central feature of harm–based discipline—that it will tend to result in the punishment of good conduct when it causes harm. As was indicated in Section II.A.2, this observation is significant even though good conduct connotes limited risks. For even limited risks will produce a real toll of mishaps when aggregated over the plethora of activities in which children participate. Spills will happen, household items will be damaged, and siblings will be hurt with some regularity. These adverse events will be especially likely for younger children because of their lack of appreciation of danger and their only developing coordination. In other words, a fairly steady incidence of unintentional harms is consistent with appropriate, non–negligent behavior of children. And under a harm–based disciplinary regime, that will lead to substantial punishment of proper conduct.

Furthermore, this utility cost that parents would be led to bear from punishing harm caused by acceptable conduct would not be associated with any useful deterrent effect. That is because punishing appropriate behavior for an accidental harm (such as the broken window due to the ricochet of a baseball in Question 4) plainly cannot discourage bad behavior (such as the broken window resulting from an angrily hit baseball in Question 10). Bad behavior can be deterred only by associating punishment with that category of behavior.[57]

Let us next consider the tutelary effect of punishment under the harm–based disciplinary rule. In doing so, I will find it convenient to distinguish between different types of situations in which parents and children can find themselves.

Suppose first that a parent observes the occurrence of harm and knows that it was not due to a child's wrongdoing, such as when a parent sees a child accidentally spill her juice. In this case, the parent must sanction the child to conform with the hypothesis that the harm–based rule is applied by parents. Yet the parent would not want to punish the child because the parent would realize that doing so would not be teaching a lesson about proper and improper conduct. Indeed, punishment in this circumstance is hard to contemplate because it could easily confuse the child to be punished when the child and the parent are mutually aware that the harm that occurred was accidental.

Second, suppose that a parent observes misconduct but that it does not result in harm. For example, the parent sees a child negligently playing with her toy car at the breakfast table but the car does not knock over her glass of juice. Here, the parent would in theory be barred from penalizing the child because of the requirement that harm must occur for punishment to be imposed. Yet the parent would wish to address the child's bad behavior because of the parent's tutelary objective. Hence, we might expect the parent to discuss the unwanted conduct with the child—even though the parent would have to refrain from doing so in a manner that would constitute punishment. This constraint on the behavior of the parent would matter to the parent when an authentic sanction could have taught the child a more meaningful lesson. Furthermore, we could imagine that the failure of the parent to punish the child even though the child and the parent both knew that the child's behavior was bad could lead the child to experience cognitive

[57] The reader might wonder whether the punishment of harm caused by good behavior might lead to an undesirable chilling effect on that behavior. The answer is that it could if the level of the sanction were substantial. If the level of the sanction were commensurate with the harm, however, an unwanted reduction in desirable conduct would not occur. The analogue of this point is that the imposition of strict liability for harm in the tort context does not lead to a socially undesirable reduction in levels of activity; see generally Shavell (1980) and Shavell (2018), pp. 26–27.

dissonance. Thus, the degree to which the child would learn a salutary lesson from her interaction with her parent is questionable.

Third, suppose that a parent witnesses misconduct that results in harm, such as when the parent sees the child's toy car topple her juice glass. In this event, the parent would punish the child under the harm–based rule and would also be able to promote the tutelary objective. In particular, the parent could tell the child that playing with a toy car at the breakfast table is bad because it can easily lead to the spilling of juice, which is what happened. Thus the opportunity of the parent to teach a lesson to the child about the nature of wrongdoing in this situation is essentially the same as it would be if punishment were based on wrongdoing.

The foregoing observations can be summarized as follows. Under a harm–based disciplinary regime, the tutelary effect will be nonexistent or possibly undesirable in two circumstances: when harm occurs but the parent and child know that the child's conduct was good; and when harm does not occur but the parent and child know that the child's behavior was bad. Only when harm occurs and the parent and child know that the child's conduct was bad will the tutelary effect be positive (and in that event will be like that under the wrong–based rule).

These points also bear on situations in which a parent observes harm but does not know whether the child's behavior was good or bad. Then the tutelary effect will be a probability–weighted reflection of each possibility. Here we would expect that the greater is the probability that the child's behavior was good, the less willing a parent would be to take the risk of teaching the child a lesson about misbehavior.

Overall, then, it seems that the tutelary effect of harm–based punishment will be subpar unless a parent observes both misconduct and harm.

3. Comparison of Wrong–Based Discipline to Harm–Based Discipline. We now compare wrong–based and harm–based regimes of discipline. Three advantages of a wrong-based regime can be identified from the discussion in Sections II.B.1 and II.B.2. One advantage of a wrong-based regime is that it will not result in the punishment of children whose behavior is proper when that behavior happens to cause harm—whereas a harm–based regime will often lead to the punishment of children whose behavior is proper when it causes harm. I also emphasized that sanctioning of proper behavior under a harm–based regime would constitute a meaningful detriment for parents, for it is not unusual for proper behavior to result in harm. Finally, I observed that this detriment for parents would not be offset by any deterrence of bad conduct; the detriment would thus represent a pure negative for parents in the assessment of a harm–based regime.

A second advantage of a wrong–based regime is that when parents discover misconduct, they can correct their children for that behavior regardless of the occurrence of harm. In contrast, under a harm–based regime, parents must forgo the opportunity to punish misconduct when it does not lead to harm. Moreover, this opportunity would be relinquished frequently, because even though bad conduct generates high probabilities of harm, it hardly leads to the certainty of harm. If a child negligently bats a baseball toward his house, he might not break one of its windows. Hence, that under a harm-based regime parents cannot discipline a child for his irresponsible batting when he does no damage can significantly reduce their ability to deter his misconduct.

A third advantage of wrong–based disciplining of children concerns the tutelary objective. I stressed above that wrong–based disciplining strongly fosters achievement of the tutelary objective. The reason was that because misconduct is the prerequisite for punishment under a wrong–based regime, parents will be able to and will wish to discuss the misconduct that they observed with their children. In contrast, we saw that harm–based disciplining of children stands in the way of advancement of the tutelary objective in two significant types of situation. One is when parents know that their children's behavior was proper yet happened to cause harm. Here parents would sanction their children under the harm–based rule, but parents could hardly lecture their children about misconduct when there was none. The other situation is when parents know that their children's behavior was bad but did not cause harm. Then parents would have to refrain from punishing the misbehavior, undermining their ability to teach children a lesson about the misconduct of which they were aware.

Last, let us consider an advantage of a harm–based disciplinary regime over a wrong–based regime. Namely, under a harm–based regime, parents have no need to observe misbehavior, whereas they must do so to employ a wrong–based regime. This difference will favor a harm–based regime if the effort parents devote to monitor misbehavior exceeds the effort they would make to detect harm. Is this the case?

It would seem so. In particular, to observe misbehavior of a child generally would require a parent to be close enough to the child to witness the unwanted conduct when it occurs. To detect harm, however, would usually not require a parent to have seen the act that caused the harm. That is for the simple reason that harm usually results in a physical manifestation of some durability—a broken window will normally be evident to a parent and spilled juice will be noticeable to a parent for some period of time (unless the child cleans up the juice or blames a sibling for the spill). These remarks suggest that the harm–based regime enjoys an underlying implementation cost advantage over the wrong–based regime.

However, the foregoing cost advantage of the harm-based regime is limited by two broad considerations. The first is that parents will often observe misconduct of children as a consequence of carrying out their normal activities in the household, from going to the kitchen, to answering the doorbell, to doing laundry. Moreover, parents will be interacting with their children in a host of ways unrelated to policing of their conduct but that will coincidentally result in parents witnessing misconduct. Thus a parent might seek out a child to read a book and when looking for the child discover that he or she is misbehaving. In other words, there appear to be many ways in which parents will become adventitiously aware of misconduct; when this is so, parental observation of misconduct can be viewed as costless. The second moderating consideration is that the extent of effort that parents need to expend to increase the likelihood of detecting misbehavior beyond that due to chance discovery may not be substantial. It should not be time–consuming for parents to check occasionally on their children's activity. Moreover, parents will know their children's habits and proclivities and thus can be strategic about when to monitor them (such as when siblings who have a fractious relationship are playing).

How does the monitoring cost advantage of a harm–based disciplinary regime compare to the several advantages of a wrong–based regime? It is clear in principle that the cost advantage of a harm–based regime *could* outweigh the advantages of a wrong–based regime. Suppose that circumstances are such that it is very difficult for parents to catch children misbehaving, whereas

the occurrence of harm and who was responsible for it would be obvious to parents. Then the potential advantages of a wrong–based regime would be irrelevant as it would be impractical to employ, but the harm–based regime could be almost effortlessly used. Conditions resembling these, though, do not seem to characterize the usual ones applying in the household. The adventitious observation of bad behavior by parents combined with their ability to purposefully monitor children's conduct through relatively inexpensive directed effort seem to me to generate a reasonably effective wrong–based regime for the regulation of a broad swath of conduct in the household. If so, the advantages of that regime in conserving on the need to punish children and in advancing the tutelary objective should make it functionally superior for parents to the harm–based regime. This opinion of mine is admittedly conjectural, based on a number of empirical judgments about which some readers may be skeptical. But I hope at least to have provided readers with a way of organizing their thought about the functionality of the two competing systems for the disciplining of children.

C. The Desirability of the Particular Rules of Wrong–Based Discipline

Here I will discuss the main rules followed by parents in disciplining their children for wrongdoing, as described in Part I. These rules address four issues, namely, how the use of sanctions depends on the occurrence of harm, on whether the form of wrongdoing was negligence or intention to do harm, on the probability that wrongdoing would be discovered, and on concealment of wrongdoing. I will suggest that the rules that parents are observed to use are likely to foster parental expected utility, but subject to one exception. The exception, which was noted in Section I.F, concerns the probability that wrongdoing would be discovered.

Before proceeding, however, it will be useful to comment on the determination of the magnitude of punishment that parents would wish to impose for undesirable conduct. When parents consider what the level of punishment ought to be, they can be viewed as facing a basic tradeoff. On one hand, raising the punishment by some contemplated amount should lead to greater deterrence of undesirable conduct, which would be a benefit for parents. On the other hand, raising the punishment would also mean that children who are *not* deterred and are found out will suffer more punishment, which would constitute a cost for parents because punishment creates disutility for them.[58] The optimal level of punishment for parents can be conceived as that which effects the best compromise between the benefit and the cost of raising punishment.

With this in mind, we can identify two claims about the optimal deterrence-related degree of punishment. The first is that *the more dangerous a bad act is, the greater the optimal level of punishment will be*. The argument behind this assertion flows from the observation that the deterrence benefit from increasing punishment rises when the conduct is more dangerous.[59] The

[58] That this cost of raising the level of punishment exists follows from the assumption that perfect deterrence cannot generally be achieved, as was initially discussed in Section II.A.4. If perfect deterrence could be achieved by some level of punishment, then raising punishment even more would not result in the imposition of more punishment—because all bad behavior of children would already have been discouraged.

[59] Suppose that at an initially contemplated level of danger, the optimal sanction is s. That would mean that the deterrence benefit from raising the sanction above s would be in equipoise with the punishment cost to parents of doing so. If, however, the level of danger increases, then so would the deterrence benefit of raising the sanction. Therefore the deterrence benefit of raising the sanction above s would no longer be in equipoise with its punishment cost. Rather, the deterrence benefit would outweigh the punishment cost, making it desirable for the sanction to be

other claim is that *the greater the utility a child derives from a bad act, the greater the optimal level of punishment will tend to be*. This claim holds essentially because a higher punishment will be needed to deter a child who would obtain higher utility from a bad act.[60] I will refer to these two claims in what follows.

1. Misbehavior Tends to Be Punished Whether or Not Harm Occurs—But More Seriously If It Does Occur Than If Not. We assumed in Section II.B that under wrong–based discipline, a child would be sanctioned regardless of the occurrence of harm. But the question naturally arises whether it would be sufficient for parental purposes to punish children only when their wrongdoing leads to harm.[61] We saw in the survey results from Sections I.B and I.C that parents do not restrict punishment in that way; parents usually penalize wrongdoing whether or not it is accompanied by harm.

This observed rule of punishment makes sense from the perspective of fostering the utility of parents. The reason is that parents would squander valuable opportunities to advance deterrence and the tutelary objective if the disciplinary regime did not permit them to sanction misconduct that they had noticed unless it eventuated in harm.[62]

The argument that parents should prefer to be able to penalize misconduct regardless of the occurrence of harm does not address the question whether the magnitude of the sanction should be independent of the occurrence of harm. In this regard, we saw in Section I.D that parents display a propensity to penalize children more when harm occurred than when it did not.

Does this rule make sense from the perspective of promoting deterrence? The answer is yes. The essence of the logic leading to this conclusion is as follows. On one hand, if a parent were to possess perfect information about the risk generated by a child's act, then whether the act did or did not result in harm in some instance could not alter the parent's view of the risk—because the assumption is that the parent knows the exact risk. In this case, there would be no reason for the parent to alter the level of punishment if the act led to harm. On the other hand, in actuality a parent will not know the precise risk attending a child's act. In that case, the occurrence of harm will raise the parent's rational evaluation of the danger of the act. This

---

raised above s. This claim that increased danger leads to the optimality of a higher sanction is demonstrated in the essentially similar and standard model of deterrence of individuals by the state using nonmonetary sanctions in Shavell (1987), p. 588; see also Shavell (1985), p. 1244.

[60] Suppose that the utility benefit that a child would derive from a bad act is b, that p is the probability the child's bad act would be discovered, and s is the sanction. Then to accomplish deterrence, the expected sanction ps must be high enough to offset b. Hence, s must be at least the level satisfying ps = b, implying that s must be at least b/p. Thus the minimum sanction needed to deter will rise with the benefit b, and this sanction will be optimal if it is feasible to impose (which is to say, if b/p is less than the maximum possible s_m—see note 49). To apply this formula, the parent would have to know b. Realistically, however, the parent's information about b would be imperfect, represented by a probability distribution of b. Hence, the optimal sanction would be a function of the probability distribution of b rather than of the actual b. This case is complicated, as discussed in Shavell (1987b), pp. 588–589. I will maintain here the assumption that the greater the central tendency of the distribution of b, the greater will be the optimal sanction, which is natural to suppose because it is consistent with the case where b is observable.

[61] This question is similar to the question whether in criminal law it makes functional sense to punish bad acts only when they lead to harm or also when bad acts do not lead to harm—attempts. Of course, criminal law punishes attempts as well as bad acts that cause harm. For an economic analysis of the possible functional virtues of the punishment of attempts, see generally Shavell (1990).

[62] The reader may recognize that essentially this point was made in Section II.B.3 in comparing wrong–based discipline to harm–based.

increase in assessed danger will in turn make it desirable for the parent to augment the level of punishment when harm occurs—for according to the first claim in the paragraph before this section, greater danger elevates the optimal degree of punishment.

To amplify and illustrate, let us consider again the child who negligently uses her battery–powered toy car at the breakfast table and imagine that there are two ways in which she might operate it—at its low speed setting or at its high speed setting. At the low speed setting, the risk of the car toppling her glass of juice will be 10%, whereas at the high speed setting the risk will be 75% (the momentum of the car will be greater, so that even slight contact with the glass could knock it over).

Suppose initially that a parent will know the risk due to the child's use of the toy car—assume that the parent happens to observe her just as she selects the speed setting and releases the car. Then if the parent sees that she chooses, say, the low setting, the parent will know that the risk of spilling the juice is 10% and the parent would not alter his or her assessment of risk from 10% on the basis of the occurrence of a spill; the parent would regard a spill as the result of pure fortuity.[63] And because the optimal deterrence–related level of the sanction would involve a tradeoff reflecting the 10% danger of a spill, the sanction the parent would choose would not be influenced by the occurrence or non–occurrence of a spill.[64]

Now suppose that the parent does not witness the child's choice of the speed setting—the parent does not know whether the risk of a spill is 10% or 75%—and knowledge of risk is thus imperfect. For concreteness, assume that the parent believes that the child is equally likely to have chosen the low speed setting and the high one. In this case, observing whether juice spills would provide a parent with implicit information about the child's act: the occurrence of harm would lead to an inference that the child was more likely to have chosen the high speed setting than the parent would otherwise have thought. In particular, the occurrence of harm would raise the parent's probability assessment that the child chose the high speed from 50% to 88%[65] and the non–occurrence of harm would lower that probability to 22%.[66] This implies that the overall probability of harm would be 78% if harm occurred and 24% if it did not. In other words, the

[63] Just as a person who is assumed to believe that a coin is fair would regard the observation of a toss coming up heads as the result of fortuity. After the observation of heads, the person would still regard the coin as fair.

[64] Likewise, if the parent saw that the child operated the car in the 75% risk manner, the parent would choose a sanction reflecting that risk, and again there would be no reason for the sanction to depend on whether harm occurred.

[65] To determine the probability that the speed of the car was high given that a spill occurs, we first calculate the total probability of a spill. This is 50%×10% + 50%×75% = 42.5%, since the initial beliefs are that both low and high speed settings of the car were equally likely. The probability that a spill was caused by a high speed setting is 50%×75% = 37.5%. Hence, conditional on the knowledge that a spill occurred, the probability that it was due to the high speed setting must be 37.5%/42.5% = 88.2%. Likewise, the conditional probability that the spill was caused by a car at the low speed setting is 5%/42.5% = 11.8%. It is readily shown algebraically that the conclusion drawn in this footnote is generally true: Suppose that there are two acts, A and B, with different probabilities p_A and p_B of causing harm, where $p_A > p_B$ and an initial probability q of act A having been chosen and 1 – q of act B having been chosen. Then conditional on the observation of harm, the probability of act A will exceed q and that of act B will be below 1 – q.

[66] Following the logic of the previous note, we first determine the probability that a spill does *not* occur, which is 50%×90% + 50%×25% = 57.5%. Therefore, conditional on the knowledge that a spill did not occur, the probability that that happened even though the car was set at the high speed would be 12.5%/57.5% = 21.7%. Moreover, the conditional probability that harm did not occur on account of use of the low speed would be 45%/57.5% = 78.3%.

parent's evaluation of the expected harm due to the use of the car would be over three times greater if harm occurred than if it did not.[67] That difference in expected harm will be reflected in the desirable level of punishment for the parent to impose.

The foregoing example demonstrates why the best punishment to employ for purposes of deterrence could be significantly higher if harm occurred than if not—because of the strength of inference about risk drawn from the outcome of the act. In general, the strength of the inference will vary and might not be great, but as long as there is any uncertainty about the risk, the occurrence of harm will add to the assessment of its degree and thus to the optimal level of punishment.

Finally, let us consider the question whether raising the punishment when harm occurs will promote the tutelary objective. To be clear, this question is not whether the level of *tutelary effort* that a parent exerts should rise when harm occurs. Rather, the question is whether the level of *punishment* should be raised when harm occurs for the specific reason that doing so would somehow serve the tutelary objective. This is a fairly refined question and I see no obvious answer to it. Notably, the opinion of a parent could be that the occurrence of harm primes a child to learn a lesson about danger, and as a result that lesson can be enhanced through a higher punishment. On the other hand, the view of a parent could be that a child will learn a natural lesson about the danger flowing from bad conduct from having seen that it resulted in harm. If so, the need for enhanced punishment to reinforce the lesson is not apparent.

2. Intentionally Harmful Conduct Is Punished More Seriously Than Negligent Conduct. We saw in Section I.E that wrongful conduct motivated by the intention to do harm tends to be punished more seriously than negligent wrongful conduct. For example, it was noted that when Billy angrily batted a baseball toward his house intending to break a window and did so, the level of his expected punishment was much higher than when he negligently batted in the direction of his house to avoid the glare of the sun and broke a window.[68]

The use of higher punishment for intentionally harmful acts than for similar negligent acts can be attributed to the optimal use of sanctions by parents to achieve deterrence of wrongful behavior.[69] In particular, two different arguments supporting this claim will be proposed.

The first argument rests on the assertion that *intentionally harmful acts tend to be more dangerous than merely negligent acts*. The logic supporting this contention is that a child who is *trying* to cause harm—because doing so will yield him utility—is more likely to cause harm, and perhaps in greater degree, than a child whose object is different, one for whom the risk he creates is only a *byproduct* of his desired behavior. If Billy angrily bats a baseball toward his house with the goal of breaking one of its rear windows, he would be likely to aim for a window. In contrast, if Billy bats toward his house because he does not want to be bothered by the glare of the sun were

[67] If harm occurred, we know from note 65 that the probability of a high speed setting would be 88.2% and that of a low speed setting 11.8%. Hence, the expected probability of spilling the juice would be 88.2%×75% + 11.8%×10% = 77.9%. In contrast, if harm did not occur, we know from note 66 that the probability of a high speed setting would be 21.7% and that of a low speed setting would be 78.3%. Accordingly, the expected probability of spilling the juice would be 21.7%×75% + 78.3%×10% = 24.10%.

[68] In Question 10 when Billy intended to break a window and did so, the expected sanction was 5.42, whereas in Question 9 when Billy negligently batted toward the house and broke a window, the expected sanction was 3.02; see Section I.E.

[69] I will address the tutelary objective at the end of this section.

he to bat in the opposite direction, he would have no reason to aim for a window (indeed, he would presumably want to aim away from a window).

This claim was supported by the answers to Question 15, where many of the respondents stated that the danger would be greater if Billy angrily hit the baseball toward his house with the intention of breaking a window than if he negligently batted in that direction. Moreover, the reasons that these respondents offered were essentially those stated in the preceding paragraph. For instance, one respondent said "if he was mad and intentionally aiming for the window . . . it's much more likely to be broken than if he was just randomly batting in the general direction of the house."[70]

The foregoing argument that intention to cause harm permits us to infer that an act is more dangerous should be clarified in an important respect: it holds only if the act is not perfectly described.[71] Suppose that Billy's intentionally harmful act of hitting a baseball were delineated in truly complete detail—including exactly how he positioned himself, whether he drew a bead on the window, the arc of his swing and follow through, and so forth. Then the danger flowing from the act would be fully determined by its description. Our knowledge of intention would thus not permit us to infer anything about the danger the act created.[72] In reality, however, we do not observe acts in complete detail and thus it is that our knowledge of intention to do harm does allow us to infer more about them and to deduce greater danger from them than if we had no awareness of intention.

Given that intention to do harm signals greater danger, it becomes rational to punish a child to a greater extent. That follows from the first italicized claim in the beginning of Section II.C.

Let us now turn to the second argument connecting intention to cause harm to the desirability for parents of a greater level of punishment than what would be appropriate for negligent behavior. This argument is based on the view that *individuals who intend to cause harm are likely to derive greater utility from their misconduct than individuals whose behavior is negligent*. If that is the case, then the individuals who intend to cause harm would be more difficult to deter, and that would imply the desirability of raising the level of punishment for them. This latter point, note, is the second italicized claim made in the beginning of this section.

Why would it be thought that individuals whose intention is to cause harm would enjoy greater utility from their acts than those who are negligent? Consider a child like Billy who is angry at a parent because he believes he was unfairly required to do a chore and wants to retaliate

[70] It will also be recalled from the discussion of Question 15 that all of the respondents who did not state that the danger would be greater when Billy angrily hit the baseball thought that that the danger would be the same as when Billy negligently hit the baseball in the direction of the house. Respondents provided two reasons for this opinion. One was that the act determined the danger, not the motive behind it. In essence, then, these responders were not considering the argument made here, and I have no reason to believe that they would disagree with it. The other reason for the opinion was represented by this answer: "I think that at nine years old the danger is likely the same. He likely doesn't have a ton of control over where the ball goes. . . ." That response supports the argument given in the text in the sense that the respondent is suggesting that if Billy had control over the path of the baseball, the respondent would have concluded that Billy's anger would have raised the danger relative to his negligence.

[71] The distinction to be made resembles that noted in Section II.C.1 on the point that misbehavior is sanctioned to a greater degree if harm occurs than if not.

[72] In Billy's case, for example, it could be asked whether knowledge that Billy wanted to break a window would permit us to infer that the danger of breaking a window would be greater than otherwise. The answer is no, and the specific reason is that all the aspects of his act of batting that would increase danger, such as drawing a bead on the window, would already be known by the parent given the hypothesis that act of batting was perfectly described.

by batting a baseball through a window of his house; or contemplate a child who is upset by a sibling's remarks and wishes to strike back by hitting her with a soccer ball. In such instances, the child's urge to placate his ire by causing harm or even by just engaging in his intentionally harmful act seems significant in comparison to the benefit a child would obtain from negligent conduct. The latter benefit would be avoiding the inconvenience of having to take reasonable care when engaging in an activity, like having to countenance the glare of the sun when batting or having to watch out for a young sibling when kicking a soccer ball in the back yard. To the extent, then, that utility benefit to the child from carrying out his intentionally harmful act exceeds the utility cost of exercising reasonable care,[73] deterring intentionally harmful conduct would call for a greater sanction than would discouraging negligent behavior.

Indirect support for the foregoing hypothesis is provided by the survey responses to Question 16. In this question, respondents were asked about the punishment that they would impose on Billy if he batted a baseball toward his house with the intention of breaking one of its windows versus if he batted in that direction negligently. It was stated in the question that the risk of breaking a window was the same (20%) under either hypothesis. Therefore, the finding that respondents chose a higher level of punishment under the hypothesis that Billy was intending to break a window could not be due to an inference that his act led to a greater likelihood of that outcome. But there was still a pronounced difference in the level of punishment; the expected punishment for the intentional act was 5.30, whereas it was only 2.02 for the negligent act. Because this difference cannot be ascribed to greater danger, it must be attributable to another aspect of intention to cause harm, and a candidate for that aspect is the need for a larger punishment to counter the greater utility that Billy would obtain from carrying out the intentionally harmful act.

Finally, let us consider the tutelary objective of parents. This goal seems more important for parents to promote for intentionally harmful conduct than for negligent conduct. One reason is that, as was discussed, intentionally harmful acts tend to generate greater danger than negligent acts, because the purpose of the former is to cause harm. A second reason concerns the assumption we made that parents do not credit in their own calculus the utility that a child derives from causing harm. Under this assumption, parents would want to suppress that source of utility in their children or to extirpate it.[74] A third reason concerns the special significance of intentionally harmful conduct to parents when their children become adults. At that stage in their children's lives, intentionally harmful conduct can lead to substantial difficulties, ranging from serious problems in social and workplace relationships to domestic violence and to other criminal behavior. Parents will greatly want to reduce the potential for such outcomes given that their happiness depends on the welfare of their children throughout their lives.

These observations about the importance of the tutelary objective in relation to intentionally harmful conduct suggest that parents will want to devote greater attention to teaching children that such conduct is undesirable than that negligent behavior is undesirable. That parental wish might in turn be served by imposing greater punishment on children for intentionally harmful

[73] In considering this comparison, it should be noted that the utility cost of reasonable care is naturally bounded—for care is reasonable only if less than the savings in expected harm that it accomplishes. See Section II.A.2 and notes 40 and 41 on the concept of negligence.

[74] In contrast, parents would have no evident reason to demote the importance of the disutility children experience in exercising care.

conduct than for negligence under the view that the greater the punishment, the more attention children would pay to the lesson their parents are seeking to teach.[75]

3. Punishment of Bad Conduct Is Not Raised When the Probability of Its Discovery Is Low. The likelihood that a parent would discover a child's bad conduct will depend on circumstances. Consider a child like Jill in Question 17 who is negligently playing with her toy car at the breakfast table and creating a risk of upsetting a glass of juice. If a parent would be likely to come into the kitchen around the time Jill is doing this, the odds of discovery of her misconduct would be high; if her parent is working in an upstairs office, however, and would only occasionally go downstairs, say for a cup of coffee, the probability of discovery of her misbehavior would be modest; and if her parent is away from the house on an errand, the chance of discovery of her bad behavior would be low.

Such variations in the probability of detection of wrongful conduct do not appear to influence the level of sanctions that parents would impose if they observe a child's misbehavior. This was the essence of the findings reported in Section I.F. As I described there, I could not discern a relationship between the probability of discovery of bad conduct and the expected sanction parents would choose to employ from the answers of respondents to eight survey questions about two different scenarios. Consistent with this absence of evidence of a relationship in the statistical data was the almost complete omission of reference to the probability of discovery of bad conduct in respondents' written remarks about punishment: of the 401 respondents who answered the eight questions, only two respondents mentioned the element of probability as relevant.[76]

As I emphasized in Section I.F, the absence of a relationship between the probability of discovering bad conduct and the magnitude of sanctions conflicts with the theory of deterrence. According to that theory, if the probability of detecting bad conduct falls, the sanction ought to rise. In particular, suppose that p is the probability of detecting bad conduct and s is the appropriate sanction—because the expected sanction ps generates the optimal level of deterrence of the conduct.[77] Then if p falls to, say, p′, s must change to a higher level s′ in order that p′s′ equals ps and thus preserves the level of deterrence that was assumed to be optimal. Hence, for example, as I noted earlier, if p falls to half its value, s should double in order to maintain the level of deterrence of bad conduct.[78]

---

[75] This view might have more appeal in the present context than in the context of acts that result in harm discussed at the end of Section II.C.2.

[76] And even these two individuals did not view the low probability as calling for a higher sanction—see note 28. Thus it would be correct to say that there is no support in any of the 401 written remarks for raising the sanction when the probability of discovery of bad behavior was low.

[77] To amplify, the problem faced by the parent is to choose the sanction s that maximizes parental expected utility given p, which the parent is assumed to observe. (The specific p is determined by random factors and also by parental decisions about general monitoring effort; see the note on monitoring effort in Section II.A.1.) For any p, let s(p) denote the optimal s. It can be shown that ps(p) will be equal to a constant, say k, in a region of p. The reasons are closely-related to those developed in Shavell (1991) and the proof of Proposition 5, p. 1105 (from which it is clear that satisfaction of the first–order condition (A17) depends only on pz in the notation of that article, and thus that if pz satisfies (A17), so will any other pair p′z′ such that pz = p′z′); see also Polinsky and Shavell (2000), pp. 62–63.

[78] An observation that may help to explain this conclusion relates to a concern that a reader might have about it. Namely, if a parent must raise the sanction substantially to maintain deterrence—say the parent must double the

Because parents do not raise sanctions when the probability of discovering bad conduct falls, deterrence will be compromised and parents will therefore ostensibly be acting against their own interests. For if some level of deterrence, reflected in an expected sanction, is best for parents, they should wish to preserve that level if the probability falls.

What can explain the tendency of parents to ignore the probability of discovery of bad conduct in deciding on punishment? One possibility is that it would be difficult for parents to implement the probability–dependent rule because of problems in gauging the appropriate probability—which would be the likelihood that the child anticipated being found out.[79] Still, parents face all manner of hurdles in assessing subjective factors in disciplining their children and it is not apparent that this one relating to probability stands out as exceptional.

Another possibility concerns a child's willingness to accept as reasonable a rule under which parents would elevate sanctions to reflect low probabilities of detection of misconduct. If a child has little appreciation of the deterrence rationale for this practice, then the child could resist or resent its use, which would undermine the institution of parental discipline in the household. In particular, children might wonder why the degree of their punishment should vary significantly in the absence of any change in the character of their wrongdoing. For the very same misbehavior, the punishment could easily be doubled due to extraneous circumstances (that a parent happens to go out on a shopping trip, halving the usual probability of discovery). Would this not result in cognitive dissonance in the child? Moreover, the explanation of the deterrence–related need to raise punishment when the probability of discovery was low might be beyond the intellectual ability of many children to absorb. Indeed, because the survey respondents themselves generally did not mention probability of discovery as a factor of relevance to punishment, one might wonder whether parents could comfortably explain to their children the deterrence rationale for higher sanctions when the probability was low.

Altogether, I find the foregoing explanation helpful, but it does not seem entirely satisfying and I thus continue to wonder about the reasons for the observed phenomenon.

4. Cover–Up of Misconduct Is Punished. By the concealment of wrongdoing, I refer to acts that are meant to hide conduct for which punishment would be imposed if the conduct were discovered. We saw in Section I.G that parents penalized such cover–up of bad acts. For example, we considered Question 26 in which Anne attempted to conceal the stain she negligently made on a couch cushion by reversing it. For this, she was penalized more than in a scenario in which she negligently caused the stain but did not attempt to conceal it.

The contrast between the parental practice of raising the level of punishment for the concealment of bad acts and the parental practice just discussed of leaving punishment unaltered

---

sanction because the probability falls by half—would the parent thereby lower his or her welfare? The parent's well-being depends, of course, on that of the child, and the child who is punished will experience twice as much disutility under the sanctioning practice that I have described to be desirable. But this increase in punishment does not hurt parents on average—for what parents should care about is the expected punishment that their children experience, and the expected punishment does not rise when the sanction is doubled because it is suffered by a child only half as often as before.

[79] If, as in Question 18, a child was having breakfast in the kitchen and her parent went upstairs saying that he or she would be on the phone for ten minutes or so, but then the parent came back downstairs a minute later and discovered that the child was misbehaving, what would be the probability that the child believed her parent would discover her misconduct?

when discovery of misconduct falls due to extraneous circumstances should be noted. When a child turns a cushion over to hide a stain, she lowers the probability of its discovery and is penalized for so doing if found out. But when the probability of discovery that the child caused the stain falls by the same amount because of the fortuity that her parent was occupied in some activity making monitoring of children difficult, then the child will not be penalized more if discovered despite the equivalence in the probabilities of detection in the two situations.

To explain why concealment is punished, we need to state why it is undesirable for parents. The essential reason is that concealment is behavior that reduces the likelihood of punishment for misconduct and thereby weakens deterrence of bad conduct as well as the achievement of tutelary objectives. Concealment is also undesirable for parents because it may involve some effort of children, and any such effort is intrinsically sterile; it does not produce utility in itself for children or for parents.

Because, then, concealment lowers parental well–being, parents will wish to impose punishment on account of it. The degree of punishment that is apt for concealment will reflect not only how much it lowers the probability of detecting the underlying undesirable conduct—like staining the cushion—but also the probability of discovering the separate bad act of concealment—the turning over of the cushion. If concealment is difficult to observe, that factor should in principle raise the punishment for it as well as the harm to which it leads.

With regard to the tutelary objective, a surmise is that children would be likely to understand the basic rationale for a higher penalty for concealment. They would probably recognize that concealment represents a knowing subversion of the system of discipline that parents want to employ and as such is a significant wrong.

III. Concluding Remarks

Although the main objective of this article has been to identify the general principles that parents employ in disciplining their children and to advance the theory that these principles may be seen as promoting parental welfare, it seems worthwhile to comment critically on the explanatory theory and also on several other issues relating to our subject.

A. The Limited Sense in Which the Functional Virtues of the Principles of Discipline Explain Their Use

It was suggested in the beginning of Part II that the theory demonstrating the functional attributes of the rules that parents employ in disciplining their children would account for the presence of these rules. The logic was that because parents are largely able to choose the rules of discipline in the household, they would be expected to adopt a regime of rules that fosters their utility. From this it was said to follow that if we study a measure of parental utility that reflects parental desires, and if the rules that parents utilize maximize that rendering of parental utility, we will have rationalized the rules.

This reasoning presumes that parents *actively consider the functional virtues of the disciplinary rules* that they could employ and choose the best ones. Yet in reality one may be skeptical about the degree to which parents consciously evaluate the effects of the use of different possible disciplinary rules.

First, I can say that I have never heard a person discuss the notion that it might be desirable for parents to penalize children for doing harm whether or not it was accidental—the idea of disciplining children on a basis other than their wrongdoing seems beyond our contemplation. The survey responses reflect this view; there is no evidence from the responses that parents consider the relative merits of harm–based versus wrong–based discipline.[80] Second, parents in the survey tended to justify their use of wrong–based discipline in mainly conclusory ways and by reference to the dangers flowing from misconduct.[81] Third, parents seem disinclined to directly discuss deterrence. Indeed, in their responses to a set of survey questions on intention to do harm, I found that only 13.5% of respondents made statements relating to deterrence and none made a truly explicit statement about the concept.[82] Against this background, the hypothesis that parents engage in mindful, deliberate decision making to fashion their rules of discipline on the basis of their functional virtues is not appealing.

At the same time, I suspect that parents would not disagree with the articulation of the functional virtues of the rules found in this article. And closely related, my conjecture is that the functional attributes of the principles discussed here provide an explanation for their use in the following implicit sense: If parents were, improbably, to rely on different principles instead, outcomes would become undesirable for them, they would soon recognize that, and they would then be inclined to shift to the desirable principles. Notably, if parents were generally to employ the harm–based principle rather than the wrong–based principle, they would find themselves punishing their children for harms sometimes caused by reasonable behavior. Parents would then want to end harm–based punishment because it would be obvious to them that sanctioning proper conduct cannot deter bad conduct and that the disutility that they and their children experience

[80] Consider, for example, the survey questions in Section I.A, concerning four scenarios in which a child caused harm in an accidental manner. None of the respondents' written comments on why they would not punish the children in the scenarios raised the possibility that there could be a functional advantage of punishing merely for doing harm.

[81] In Section I.B, concerning scenarios in which a child caused harm owing to negligence or intention, typical justifications for sanctioning the child included these: In regard to Question 6, in which Jill had a tantrum and threw down her glass of juice, respondents said "I would say being angry does not give anyone the right to destroy things" and "Even when we are angry, it is not ok to lash out," which are conclusory, and "I would explain to her how her actions could hurt someone," which refers to danger. Similarly in Question 7, in which Rick did not securely tie his dog Buddy's leash to a post, respondents said "He was careless with our dog…" and "you didn't make sure he was properly tied at the park, which was very neglectful," which were conclusory and "Buddy could be hit by a car, or not be able to find his way back home," which points out danger.

[82] Questions 6, 8, and 10 in Section I.B involve scenarios in which intentionally harmful acts result in harm. In these questions, 148 out of 154 respondents said that they would punish the child. Of these 148, 128 or 86.5% of the respondents made no reference to deterrence—their responses were either conclusory or referred to the danger of the child's act (see the previous note). The remaining 20 respondents made statements suggesting that they might view punishment as a deterrent. For example, in Question 10, in which Billy angrily hit a baseball toward his house and broke a window, one respondent reported that he would say to Billy "You need to learn to control your temper." This statement can be interpreted as referring to deterrence because the message to Billy is that the parent hopes that punishment will address his problem of managing his anger. Another respondent to the question said that the reason he punished Billy was "What he did was wrong and calls for consequences." This statement could be seen as bearing on deterrence if "calls for" means that punishment is needed to discourage Billy from batting; but if "calls for" means that punishment is needed on grounds of desert, then the statement would not relate to deterrence. In any event, none of the 148 respondents who said that they would punish children made an explicit statement about deterrence, such as "I am punishing you so that won't angrily hit a baseball toward the house again," or "Billy is being punished to discourage him from angrily hitting a baseball toward the house."

from such sanctioning would be for no salutary reason. Similarly, if parents were to penalize wrongful behavior only if it resulted in harm, they would see that they were wasting useful opportunities to discipline their children when the children were discovered to be engaging in bad conduct that by luck did not result in harm. And so forth for the other rules of punishment that were identified here as desirable.

B. The Possibility That Childhood Experience Leads Individuals To Place Intrinsic Importance on the Principle of Wrong–Based Sanctioning

A consequence of the use of wrong–based punishment of children in the household could be that children will come to regard that principle as having a measure of importance in itself—an importance that might be viewed as moral and is independent of any functional value the principle might possess. The plausibility of this conjecture lies in the significance of childhood experience in molding a person's attitudes and in the primacy of parents to children. To the extent that the principle of punishment based on wrongdoing thus acquires weight in its own right during childhood, the adult population will have effectively inherited a weight favoring the wrong–based rule of sanctioning.[83] Two implications follow from this view.

First, when adults in their role as parents confront the issue of the disciplining of their children, they will be attracted to the wrong–based rule because of its own valence as well as because of their appreciation of its functional virtues as adduced in Section II.B.[84]

Second, when adults in their role as citizens consider wrong–based legal rules as opposed to harm–based legal rules, they will display an intrinsic preference for the former. Thus, the predominance of the negligence rule over strict liability in tort law, despite strong economic arguments favoring the latter rule in many domains,[85] may in part be a product of a taste for wrong–based rules; and so too may be the prevalence of regulation relative to corrective taxation and other harm–based payments even though the case for the latter policy instruments on

[83] I am imagining that the overall advantage of the wrong–based sanctioning rule would be the sum of the inherited weight and the functional advantage of wrong–based sanctioning. Thus, if the inherited weight favoring wrong–based sanctioning were 2 and its functional advantage were 4, the adult would view wrong–based sanctioning as having an overall advantage of 6.

[84] A reader might be led to ask whether the mechanism of inheritance noted in the previous paragraph combined with the desire of parents to teach children to favor the disciplinary rule that they had learned when they were children could lead to the conclusion that all generations of individuals would favor the harm–based rule. In particular, if, somehow, one generation of parents found itself using the harm–based rule, would that set in motion an unending sequence of generations of individuals who would favor the harm–based rule? The answer is no, as long as the functional advantage of the wrong-based rule exceeds the magnitude of the intrinsic weight the harm-based rule could acquire. To illustrate with the figures in the preceding note, assume that for some reason generation N of parents employs the harm–based sanctioning rule in their households. Then their children would inherit a weight of 2 favoring harm–based sanctioning. But when these children became parents—making up generation N + 1 of adults—they would *not* employ harm–based sanctioning in their households. Specifically, members of generation N + 1 would find that wrong–based sanctioning would hold an advantage of 4 – 2 = 2 over harm-based sanctioning. Thus the aberrational use of harm–based sanctioning by generation N would be stamped out in the next generation and from then on, each generation would continue to use wrong–based sanctioning and view it as holding an advantage of 6.

[85] That the negligence rule is the predominant basis of liability in tort law is evident from the limitation of strict liability to activities that are both unusual and highly dangerous; see Restatement of Torts (Third): Physical & Emotional Harm § 20 (2010). On economic arguments favoring strict liability over the negligence rule, see the references cited in note 52 and Shavell (2018), pp. 9–20.

functional grounds is intellectually compelling in broad contexts.[86] This surmised influence of a preference for wrong–based rules per se should be viewed as problematic if we as adults do not weigh our intrinsic preferences properly against functional considerations.[87]

C. The Close Relationship Between the Rules of the Disciplining of Children and Those of Criminal Law

The principles under which parents discipline their children resemble those of criminal law. In particular, under criminal law the major requirement for liability is wrongful conduct: a person must have acted in an intentionally harmful or unduly dangerous manner to be held criminally liable. Furthermore, a person may be sanctioned for wrongful conduct even if he did not cause harm—namely, he can be punished for an attempt; moreover, bad acts that do result in harm are punished more stringently than attempts; and the greater the degree of intent, the higher tends to be the punishment.[88] Thus, the prerequisites for criminal liability and its important supplementary rules are qualitatively identical to those used by parents in governing their children in the household.

The reasons for the similarity between the rules of criminal law and the parental principles for the disciplining of children may be ascribed to the parallel nature of the problems faced by society and by parents in controlling unwanted behavior. For both society and parents, deterrence of bad conduct through the threat of sanctions is a chief instrument for its regulation. And for both, the actual imposition of sanctions is attended by significant cost: the operation of the prison system is extremely expensive for the state and imprisonment of criminals generates great disutility for them; and the punishment of children involves substantial disutility for parents. That the imposition of sanctions is costly for society and also for parents means that they both should wish to fashion regimes of deterrence so as to conserve on the actual use of sanctions—and that is also what wrong-based systems accomplish.[89] This fundamental implication of the costliness of the application of sanctions may be said to account for the likeness between the rules of criminal law and those of parental discipline in the household.

[86] That the use of regulation dominates corrective taxation to control social harm is patent from the omnipresence of the former and the limited nature of the latter—corrective taxation is employed mainly to control certain forms of pollution, on which see Stavins (2003). On economic arguments for corrective taxation over regulation, see again the references given in note 52.

[87] In other words, when adults in their role as citizens apply what they believe is a social welfare function, they should not accord excessive weight to a taste for a conception of fairness. On the point that social welfare functions should reflect principles of fairness only to the extent that individuals derive utility from their satisfaction, see generally Kaplow and Shavell (2002).

[88] On the major requirement for liability under criminal law, the role of intent, attempt, and the occurrence of harm, see, for example, the treatise LaFave (2000), pp. 229–257.

[89] I have developed the theme that wrong-based liability possesses functional advantages over harm-based liability when the imposition of sanctions is costly in economically-oriented analyis in Shavell (1985), Shavell (1987a), and Shavell (2004), pp. 493–502.

By contrast, in domains where sanctions are not very costly to impose—the view often taken about monetary sanctions like fines, taxes, and damage payments under civil law—harm-based sanctions may become desirable.[90]

[90] Economists often make the simplifying assumption that the imposition of a monetary sanction is socially costless. The reason is that the payment of a monetary sanction can be treated as a transfer of command over resources (to the state or to a plaintiff in a suit) but not as an event that itself consumes resources. This assumption underlies the standard economic arguments favoring corrective taxes over regulation and strict liability over negligence, as summarized in note 52.

References

Amuwo, Shaffdeen, Robert Fabian, George Tolley, Ardith Spence, and Jacqueline Hill. 2004. Child Discipline and Family Decision-Making. *Journal of Socio–Economics* 33: 153–173.

Andreoni, James, Brian Erard, and Jonathan Feinstein. 1998. Tax Compliance. *Journal of Economic Literature* 36: 818–860.

Arrow, Kenneth J. 1971. *Essays in the Theory of Risk–Bearing*. Chicago: Markham Publishing.

Baumrind, Diana. 1967. Child Care Practices Anteceding Three Patterns of Preschool Behavior. *Genetic Psychology Monographs* 75: 43–88.

Baumrind, Diana. 1973. The Development of Instrumental Competence Through Socialization. In A. D. Pick (Ed.) *Minnesota Symposium on Child Psychology*. 7: 3–46. Minneapolis: University of Minnesota Press.

Becker, Gary S. 1968. Crime and Punishment: An Economic Approach. *Journal of Political Economy* 76: 169–217.

Becker, Gary S. 1981. *A Treatise on the Family*. Cambridge: Harvard University Press.

Becker, Gary S. 1991. *A Treatise on the Family*. Enlarged edition. Cambridge: Harvard University Press.

Bentham, Jeremy. 1789. *An Introduction to the Principles of Morals and Legislation*. In *The Utilitarians*. Garden City, New York: Anchor Press/Doubleday. 1973.

Browning, Martin, Pierre–André Chiappori, and Yoram Weiss. 2014. *Economics of the Family*. Cambridge: Cambridge University Press.

Dobbs, Dan B. 2000. *The Law of Torts*. St. Paul, Minn.: West Group.

Doepke, Matthias, Giuseppi Sorrenti, and Fabrizio Zilibotti. 2019. The Economics of Parenting. NBER Working Paper 25533.

Doepke, Matthias, and Fabrizio Zilibotti. 2019. *Love, Money, and Parenting: How Economics Explains the Way We Raise Our Kids*. Princeton: Princeton University Press.

Ellickson, Robert C. 2008. *The Household: Informal Order Around the Hearth*. Princeton: Princeton University Press.

Gershoff, Elizabeth Thompson. 2002. Corporal Punishment by Parents and Associated Child Behaviors and Experiences: A Meta–Analytic and Theoretical Review. *Psychological Bulletin* 128: 539–579.

Gershoff, E. T. 2018. Discipline. In M. H. Bornstein, M. Arterberry, K. Fingerman, & J. Lansford (Eds.), *The Sage Encyclopedia of Lifespan Human Development*. Thousand Oaks: Sage.

Grusec, Joan E. and Goodnow J. J.. 1994. Impact of Parental Discipline Methods on the Child's Internalization of Values: A Reconceptualization of Current Points of View. *Developmental Psychology* 30: 4–19.

Grusec, Joan E. and Paul D. Hastings. Editors. 2015. *Handbook of Socialization: Theory and Research.* Second ed. New York, NY: Guilford.

LaFave, Wayne R. 2000. *Criminal Law*. Third ed. St. Paul, Minn.: West Group.

Landes, William M., and Richard A. Posner. 1987. *The Economic Structure of Tort Law*. Cambridge: Harvard University Press.

Larzelere, Robert E. 2000. Child outcomes of nonabusive and customary physical punishment by parents: An updated literature review. *Clinical Child and Family Psychology Review* 3: 199–221.

Lundberg, Shelly, and Robert A. Pollak. 2007. The American Family and Family Economics. *Journal of Economic Perspectives* 21: 3–26.

Maccoby, Eleanor E. and John A. Martin. 1983. Socialization in the Context of the Family: Parent-Child Interaction. In Paul H. Mussen (Series ed.) & E. Mavis Hetherington (Vol. ed.) *Handbook of Child Psychology. Vol. 4. Socialization, Personality, and Social Development.* 4th. pp. 1–101. New York, NY: Wiley.

Maccoby, Eleanor E. 2015. Historical Overview of Socialization Research and Theory. In J. E. Grusec and P. D. Hastings (Eds.) *Handbook of Socialization: Theory and Research.* 3–32. New York, NY: Guilford.

Mankiw, N. Gregory. 2009. *Principles of Microeconomics*. 5th ed. Mason, Ohio: South-Western Cengage Learning.

Pindyck, Robert S., and Daniel L. Rubinfeld. 2009. *Microeconomics*. 7th ed. Saddle River, N.J.: Prentice-Hall.

Polinsky, A. Mitchell, and Steven Shavell. 2000. The Economic Theory of Public Enforcement of Law. *Journal of Economic Literature* 38: 45–76.

Shavell, Steven. 1980. Strict Liability versus Negligence. *Journal of Legal Studies* 9: 1–25.

Shavell, Steven. 1985. Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent. *Columbia Law Review* 85: 1232–1262.

Shavell, Steven. 1987a. The Optimal Use of Non-Monetary Sanctions as a Deterrent. *American Economic Review* 77: 584–592.

Shavell, Steven. 1987b. *Economic Analysis of Accident Law*. Cambridge: Harvard University Press.

Shavell, Steven. 1990. Deterrence and the Punishment of Attempts. *Journal of Legal Studies* 19: 435–466.

Shavell, Steven. 2004. *Foundations of Economic Analysis of Law*. Cambridge: Harvard University Press.

Shavell, Steven. 2018. The Mistaken Restriction of Strict Liability to Uncommon Activities. *Journal of Legal Analysis* 10: 1–45.

Siegler, Robert, Jenny R. Saffran, Elizabeth T. Gershoff, Nancy Eisenberg, and Campbell Leaper. 2020. *How Children Develop* (6th Edition). New York: Macmillan Learning.

Stavins, Robert N. 2003. Experience with Market-Based Environmental Policy Instruments. Pp. 355–435 in vol. 1 of *Handbook of Environmental Economics,* edited by Karl–Goran Maler and Jeffrey R. Vincent. Amsterdam: Elsevier.

Wittman, Donald. 2005. The Internal Organization of the Family: Economic Analysis and Psychological Advice. *Kyklos* 58: 121–144.

Appendix:
Survey On The Principles Used By Parents In Disciplining Their Children

The survey on the principles that parents employ in disciplining their children discussed in Part I of this article was authored by me in consultation with Arevik Avedian, Director of Empirical Research Services at Harvard Law School. Arevik Avedian administered the survey. The survey was conducted online on July 7, 2020, and January 25, 2021, using the Amazon Mechanical Turk website (mturk.com); 481 individuals participated in the 2020 part of the survey and 97 individuals participated in the 2021 part, so that the total number of participants was 578. I will refer to these participants here as respondents, as I did in the article. I now briefly describe the survey.

1. Characteristics of survey respondents. The respondents were required to be parents. Selected demographic characteristics of the respondents, all of whom resided in the United States, were as follows.

Gender: female 55.5%; male 45.5%
Age: < 30, 11.6%; 30–49, 62.5%; 50+, 25.9%
Race: white, 83.7%; African American, 7.3%; Asian, 3.5%; other, 5.5%
Marital status: married, 76.7%; divorced, 10.7%; other, 12.6%,
Number of children: 1, 36.3%; 2, 41%; 3+, 22.7%
Household income: < $30,000, 11.8%; $30,000–$59,999, 31.1%; $60,000–$89,999, 27%; $90,000 or more, 30.1%
Educational attainment: high school or less, 8.5%; some college, 15%; college degree, 56.9%; further education, 19.6%

2. Instructions to survey respondents. The mturk consent form included the following instructions and information:

> "This survey is only open to parents. Please do not click on the survey link if you are not a parent.
>
> Participation is voluntary. It is your choice whether or not to participate in this research. If you choose to participate, you must complete the entire survey.
>
> What is the purpose of this research? To use the survey to determine when individuals believe that the punishment of children (notably, scolding or denial of privileges) is appropriate or inappropriate.
>
> How long will I take part in this research? Your participation will involve answering 4 questions about your opinion on a hypothetical scenario and 9 demographic questions, which will take about 15 minutes in total.[91]

[91] The number of questions and the number of minutes were different in the 2020 survey part from the 2021 part.

> What can I expect if I take part in this research? As a participant, you will give your reaction to a short hypothetical scenario involving possible punishment of children. There are no foreseeable risks or benefits of participation in this study."

In addition, in the 2021 part of the survey, the following instructions were added:

> "In this survey, you will be given a hypothetical scenario about the behavior of a child. You will be asked about your attitude about the child's behavior were you the child's parent. Your action might be to punish the child—or it might not be to punish the child. By "punish" is meant any action that the child would not like—including frowning, scolding, or denying the child something (dessert, TV, playing with friends).
>
> There are no correct answers—we are seeking your opinions."

3. Survey questions. The number of questions in the survey was 30, of which 29 were reported in the article.[92] Each question began with a scenario—those provided in the text of Part I. After each scenario, respondents were asked to answer several inquiries.

Two examples of complete questions will enable readers to understand what the complete questions were for all the questions in the survey. The first example is that of Question 1:

> *Your seven–year–old daughter Sally is eating pancakes for breakfast. As she reaches for a pitcher of syrup to pour on them, her elbow accidentally brushes against her glass of juice. The juice glass topples onto the floor and breaks.*

Would you or would you not discipline Sally?

- ○ *Yes, I would discipline her.*
- ○ *No, I would not discipline her.*

Very briefly, why or why not?

If you would punish her, how seriously—on a scale of 1 to 7? (Recall that 1 is least serious, such as a mild reprimand, and 7 is most serious, whatever that might be for you as a parent.)

Least serious *Most serious*

1 2 3 4 5 6 7

Level of punishment

What would you say to her?

* * *

[92] In the omitted question, Sarah negligently kicks a soccer ball in the direction of her young brother Tim and the ball hits him in the stomach. I did not use this question because it was not needed—the responses to it were similar to those of many other questions involving scenarios in which a child is negligent.

In answering the first of these four inquiries, respondents were required to select either the Yes or the No circle. In answering the second inquiry, respondents were presented with a box in which they could type an answer of any length. In answering the third question—which was posed only to respondents who said Yes to the first question—respondents were required to select one of the numbers from 1 to 7. In answering the fourth question, respondents were again presented with a box in which they could type an answer of any length.

The four inquiries following the scenario just presented for Question 1 were made in all of the other questions of the survey except for Question 15 and for Question 16. Question 15 was already provided in its entirety in Section I.E. Question 16 is given here:

Your nine–year–old boy Billy likes to practice batting a baseball in your back yard by throwing the ball up in the air and taking a swing at it. If he hits the ball away from the house, there will be no risk of breaking the large picture window at its rear.

Consider two possible scenarios:

A. Billy decides to hit the ball toward the house to avoid the glare of the sun if he were to hit in the away direction.

B. Billy becomes angry at you for requiring him to do a chore he does not like. He storms out of the house, yelling "You'll be sorry," picks up his bat, and hits the ball toward the house.

In both scenarios, assume that Billy creates the same risk, say 20%, of breaking the picture window.

Would you or would you not discipline Billy in scenario A—the glare of the sun? What about in scenario B—the angry reaction?

	Yes, I would discipline him	*No, I would not discipline him*
Scenario A—the Glare of the sun	○	○
	Yes, I would discipline him	*No, I would not discipline him*
Scenario B—the angry reaction	○	○

Very briefly, explain why, and if there is any difference in your answers, why that is so.

If you would punish Billy, how seriously—on a scale of 1 to 7 in each scenario? (Recall that 1 is least serious, such as a mild reprimand, and 7 is most serious, whatever that might be for you as a parent.)

	Least serious						*Most serious*
Scenario A—the glare of the sun	1	2	3	4	5	6	7
Scenario B—the Angry reaction	1	2	3	4	5	6	7

Very briefly, explain why, and if there is any difference in your levels of punishment, say why that is so.

* * *

Here a respondent was first required to select either the Yes or the No circle for each of the two scenarios and second was asked to explain his or her choices. Third, the respondent was asked to indicate the level of the sanction, one of the numbers from 1 to 7, for any scenario for which the respondent elected to discipline Billy.[93]

4. Number and selection of questions posed to respondents. As I have noted, the survey was conducted at two dates, July 7, 2020, and January 25, 2021.

At the July 2020 date, 481 respondents participated, answering 27 of the 29 questions in the survey. Each of these respondents was required to answer three survey questions (from the set of 27), each of which was randomly drawn from three different groups of questions. Group 1 consisted of all questions concerning Sally and Jill;[94] Group 2 consisted of all questions about Rick and Billy;[95] and Group 3 was made up of all questions involving the children playing catch with a tennis ball and also about Anne, plus a question involving Sarah.[96] To be clear, each respondent was assigned one question from Group 1, one question from Group 2, and one question from Group 3. This method of selection of questions guaranteed that no respondent answered multiple questions involving the same scenario. That prevented the problem that one question could have influenced the respondent's interpretation of another. Suppose, for instance, that in one question Jill had a tantrum and threw her juice glass on the floor and in another, she was portrayed as having only been careless in using her toy car at the breakfast table. Would her intentionally bad behavior in the first question have influenced the view about her degree of carelessness in the second?

[93] If a respondent chose to discipline Billy under both scenarios, the respondent would see the two rows shown above, one for each scenario. Otherwise the respondent would see just one row for the scenario for which the respondent chose to discipline Billy.

[94] Questions 1, 5, 6, 13, 17–21.

[95] Questions 2, 4, 7, 9, 10, 12, 14–16.

[96] Questions 8, 22–29.

At the January 2021 survey date, 97 respondents participated, answering two questions: 48 of them answered Question 3 alone and 49 answered Question 11 alone.

5. Table of statistics for each survey question. The table below displays the main statistics of interest for each of the 29 survey questions discussed in Section 2.

Table 1

Question number	Valid responses	Respondents who would punish	Respondents who would not punish	Conditional mean punishment*	Mean punishment**	Invalid responses
1	57	9	48	4.30	.68	0
2	51	3	48	.49	.29	4
3	39	4	35	3.98	.41	9
4	49	13	36	2.45	.65	6
5	47	35	12	2.89	2.15	1
6	51	47	4	3.63	3.34	4
7	51	27	24	3.89	2.06	3
8	50	49	1	4.18	4.10	1
9	51	42	9	3.67	3.02	3
10	53	52	1	5.53	5.42	2
11	48	42	6	3.67	3.21	1
12	53	47	6	4.32	3.83	0
13	53	25	28	2.16	1.02	1
14	45	31	14	2.61	1.80	5
15	30	***			***	16
16A[t]	50	28	22	3.61	2.02	5
16B[tt]	50	50	0	5.30	5.30	5
17	53	32	21	2.93	1.77	0
18	56	33	23	2.48	1.46	0
19	53	37	16	2.78	1.94	1
20	52	31	21	2.16	1.29	0
21	48	30	18	2.40	1.50	4
22	47	32	15	2.03	1.38	0
23	46	33	13	2.22	1.59	0
24	46	32	14	2.97	2.07	2
25	48	37	11	2.94	2.27	2
26	47	34	13	3.28	2.37	0
27	44	39	5	3.71	3.29	2
28	46	38	8	3.34	2.76	0
29	45	44	1	3.84	3.76	6

* The conditional mean punishment is the mean over respondents who would punish.
** The mean punishment is the percentage of respondents who would punish multiplied by the conditional mean punishment.
*** In Question 15 there was no option to punish.
t Question 16A involves a negligent act.
tt Question 16B involves an intentional act.

I considered a respondent invalid when that person's responses indicated lack of cooperation or a failure to comprehend a question. A few illustrations of these problematic responses are as follows. In Question 2, Rick lost his grip on his dog Buddy's leash when another dog charged them. One respondent who said that he would punish Rick offered as a reason "He is small boy or good boy." In Question 4, Billy batted a ball that improbably ricocheted off a tree and broke a small garage window. One respondent who chose to punish Billy gave as a justification "yes" and said that what he would say to Billy was "sleeping." In Question 6, Jill had a tantrum and threw her juice glass onto the floor. One respondent who decided not to discipline Jill stated that the reason was "all so good to why to why."

The total number of valid responses was 1,409 and the total number of invalid responses was 78. The total number of responses was thus 1,487 and the deletion rate was 78/1,487 or 5.2%.

It should be noted that the inquiries made in the questions about the reason for a decision about disciplining a child and what a respondent would say to a child enabled me to detect problematic responses. (If all I knew was whether or not a respondent would discipline a child and the level of the sanction the respondent would impose for a child who the respondent would punish, there would have been no way to detect respondents who did not consider a survey question seriously or who failed to understand it.)

6. Tables showing selected pairwise statistical comparisons of expected punishments. In the following tables, comparisons are made between mean punishments—expected punishments—in various pairs of questions that were natural to consider, as discussed in Section 2. For instance, in Table 2, comparisons are made between mean punishments when accidents occurred and mean punishments when harm resulted from negligence or intentionally harmful acts. In the latter group, mean sanctions were generally greater. For example, in Question 1, Sally accidentally knocked over her glass of juice, resulting in a mean sanction of .68, whereas in Question 5, Jill negligently spilled her juice, leading to a mean sanction of 2.15. The shaded cell for the comparison of Questions 1 and 5 has 1.47 because the difference in means is 2.15 - .68 = 1.47. The number .00 in parentheses below 1.47 is the p-value for the t-test for the difference in means; the p-value is the probability that the difference in means would be as large as was observed under the null hypothesis that the two sample means were drawn from the same distribution. P-values of .05 are less are generally described as significant because they indicate that the likelihood of the difference in means was as great as was observed was 5% or less under the null hypothesis.

Table 2
Accident versus Negligence or Intention To Do Harm

	Negligence/Intention to do harm						
Accident	Question number		5	6	7	8	9
		Mean sanction	2.15	3.34	2.06	4.10	3.02
	1	.68	1.47 (.00)	2.65 (.00)			
	2	.29			1.77 (.00)		
	3	.41				3.69 (.00)	
	4	.65					2.37 (.00)

Table 3
Negligence versus Intention To Do Harm

	Intention To Do Harm					
Negligence	Question number		6	10	12	16B
		Mean sanction	3.34	5.42	3.83	5.30
	5	2.15	1.19 (.00)			
	9	3.02		2.40 (.00)		
	14	1.80			2.03 (.00)	
	16A	2.02				3.28 (.00)

Table 4
Bad Behavior without Harm versus with Harm

	Bad Behavior with Harm					
without harm	Question number		8	10	5	9
		Mean sanction	4.10	5.42	2.15	3.02
	11	3.21	.89 (.02)			
	12	3.83		1.59 (.00)		
	13	1.02			1.13 (.00)	
	14	1.80				1.22 (.00)

Table 5

Bad Behavior without Cover-Up versus with Cover-Up

		Bad Behavior with Cover-Up			
No	Cover-Up	Question number		27	29
			Mean sanction	3.29	3.76
		26	2.37	.92 (.02)	
		28	2.76		1.00 (.00)

Table 6

Probability of Discovery (Jill)

Question number		17	18	19	20	21
	Mean sanction	1.77	1.46	1.94	1.29	1.50
17	1.77		-.31 (.39)	.17 (.64)	-.48 (.16)	-.27 (.47)
18	1.46			.48 (.15)	-.17 (.57)	.04 (.92)
19	1.94				-.65 (.03)	-.44 (.20)
20	1.29					-.21 (.58)
21	1.50					

Table 7
Probability of Discovery (children)

Question number		22	23	24	25
	Mean sanction	1.38	1.59	2.07	2.27
22	1.38		.21 (.50)	.69 (.04)	.89 (.00)
23	1.59			.48 (.19)	.68 (.04)
24	2.07				-.20 (.58)
25	2.27				