

CHILDREN'S MORAL JUDGMENTS OF ACTION AND OMISSION

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Abstract

This study examined whether Subjects (ages 4-5, 7-8, and 18-22) saw a moral difference between harm caused by action and harm caused by omission of action. Subjects were presented with pairs of stories in which one character caused harm by action and the other by omission of action. Subjects were then asked whether they saw (1) a moral difference between the behavior of the actor and the behavior of the ommitter, and (2) a difference in the intentions of the actor and the ommitter. Subjects were asked to justify their responses for both questions. The study found a positive trend with age to view harm caused by action as worse than harm caused by failure to act. Subjects' ability to provide sufficient justifications is also discussed.

Introduction

Philosophers and psychologists have long debated the source of our moral judgments. Moral judgment is a process we hold as uniquely human. It is a process at once lofty and venerable, from uplifting speeches to Supreme Court decisions, to transient and even petty, such as gossip. The view that moral psychology is a lofty, rational, and conscious, however, has emerged only fairly recently in history.

Moral judgments have classically been seen as having two sources, conscious reasoning and intuitive emotions. On the conscious side, reason involves a weighing of different sides of a moral dilemma; the benefits and losses or victims involved, the moral principles one invokes in moral decision making. Emotional reactions, also, may drive our moral judgments as well as our behavior. Anger drives transgressions, love leads to altruism, and shame urges individuals to rectify past misdeeds. Siding with conscious judgment, eighteenth century rationalists attributed moral judgment to human reason (Kant 1785/1997), and empiricists to emotion (Hume 1758/1880).

Ancient philosophers from the time of Plato, on the other hand, attributed the basis of our sense of right and wrong to the unconscious. Moral judgment depended on realizing the essence of what Plato called the Good, and moral motivation arose from “psychic harmony” with that Good. In more recent history, Freud believed the superego produced moral judgment. The superego, along with the impulsive id which it curtailed, was completely inaccessible to conscious awareness.

Early studies of moral psychology also focused on the role of conscious reasoning. The research of developmental psychologists Lawrence Kohlberg and Jean Piaget, which I will discuss later, examined conscious reasoning. More recently,

psychologists and philosophers have turned their attention to the role of unconscious cognitive processes in producing moral judgments. Our moral convictions may be an immediate intuitive response to a moral situation. Thus, while some of our moral convictions are (or appear) easily justifiable and rational, others are more difficult to explain. In the everyday world of social interaction, moral discourse requires justification for one's convictions. If moral judgment is a conscious process, justification would present little challenge, as conscious reasoning produced the original judgment. If moral judgment is indeed an unconscious process, then justifying our judgments would present more of a challenge.

An example of the type of judgment that individuals readily justify is the "Heinz dilemma" proposed by the developmental psychologist Lawrence Kohlberg. To paraphrase Kohlberg's dilemma, a woman in Europe is dying of an illness. A new type of medicine is available on the market which will cure her, and only one pharmacy in the area carries this medicine. The pharmacist is charging \$2000, far more than the woman and her husband, Heinz, can afford. Her husband searches for a loan, but cannot raise the full \$2000. He pleads with the pharmacist to sell him the medicine, but the pharmacist will not sell it to him for less than \$2000. Desperate, Heinz breaks into the pharmacy one night and steals the medicine for his wife. Should Heinz have stolen the medicine?

Whether they agree with Heinz or not, most adults are able to respond to this question and easily articulate a justification. When pressed, those who side with Heinz may make a range of arguments, such as a human life is worth more than the price of the drug, or that the pharmacist was unjust to charge such a high price. Those who disagree with Heinz's actions might cite arguments such as no member of society is above the law,

that the pharmacy is a business and is justified in seeking profit, that private property should not be violated. Generating arguments for either side of the dilemma appears to be a very rational, deliberative process.

Not all moral judgments are equally easy to justify. Haidt (2001) gives an example of a brother and a sister who commit incest. The reader is told that the siblings are consenting adults, used two forms of birth control, and that both enjoyed the experience, though they decided not to repeat it.

Upon hearing this dilemma, most adults condemn the siblings' action. Common justifications of this judgment include effects to an inbred child or emotional damage to the siblings. When reminded that the siblings used birth control and suffered no immediate or long-term psychological damage, respondents find it more difficult to justify this judgment. With continued questioning, many individuals give up and finally say they are not able to justify their judgment, they just "know" the incest is wrong. (Haidt 2001) This is an example, as explained by Haidt, of "moral dumbfounding": the respondent experiences a strong moral conviction, yet cannot justify it verbally. In this case, the respondent has an intuition of disgust toward the story of incest. Haidt claims that the disgust is the basis of the moral judgment. When faced with the social pressure to provide a verbal justification, the respondent then searches for any potentially relevant facts, such as potential birth defects or psychological harm, with which to justify the judgment.

Where does this conviction arise from? The debate over the conscious or unconscious origin of our moral judgments is far from settled, though recent research of

moral cognition, which I will discuss later, is shedding light on aspects of the moral decision-making processes.

I turn next to a historical overview of the debate between proponents of the view that the source of our moral judgments is a rational and conscious process as opposed to being an unconscious, intuitive, and emotional process. I will then summarize some of the issues in the modern conscious versus unconscious debate and finally turn to the present study, which examines the development of moral judgments and justifications in young children.

Rationalism

To what extent is our moral reasoning conscious and rational?

Rationalists have classically viewed moral judgment as the product of conscious, deliberate reasoning (e.g. Kant 1785). As such, moral judgments could and should be reached by conscious reasoning. When faced with a moral dilemma, the individual first deliberates the issues involved in the situation to arrive at a judgment. Though emotion can enter into the moral calculation, reason ultimately decides emotion's relevance to the moral question. Reason, not emotion, was a sound basis for judgment.

The most influential thinker in the rationalist tradition was 18th century philosopher Immanuel Kant, whose work influenced both later philosophers and psychologists. Kant placed reason as the commander of moral principles. He wrote, "...all moral concepts have their seat and origin completely a priori in reason..." (Kant 1785/1997). Reason allowed the individual to be his own master, to both set and voluntarily adhere to universal moral laws. He called the duty to form and act on these universal laws the "categorical imperative".

Echoes of Kantian reasoning can be found in later psychological research on developmental moral cognition. Piaget outlined a system of moral development that progressed in stages from an egocentric, heteronomous (conditional) method of reasoning toward an autonomous one. Kohlberg set out a six-stage theory of moral development, progressing from egocentric to universal law-based reasoning. Both Piaget's and Kohlberg's stage theories had in common a view that progression from one stage to the next was determined by experience. Neither model provided for any innate maturational constraints on the child; all progression was determined by the child's learning from experience, especially from reward and punishment. The child was assessed on his appeal toward certain principles, such as intention and consequences, in his reasoning, rather than the content of his answer. The first two of Kohlberg's stages, where most young children fell, were termed "Pre-Conventional" and consisted of egocentric reasoning about reward and punishment. Stages three and four, "Conventional," consisted of reasoning based on the good of society. Kohlberg claimed that most adults reached, but did not leave, the Conventional stage. The final two stages, "Post-Conventional" reasoning, included adherence to universal moral laws, much like Kant's categorical imperative. Kohlberg claimed that while many adults could reach stage five, the sixth stage was reserved for those with the highest level of reasoning. As in Piaget's model, the criteria for each stage gradually progressed from consequence-based reasoning to intention-based reasoning.

Under Kohlberg's system, the basis for determining the child's moral maturity was the child's articulation of explanations. Thus, a "Pre-conventional" stage child might say Heinz was wrong to steal because he would be punished, or right to steal because he

would be sad if his wife did not survive. A “Post-conventional” stage child would say Heinz was wrong to steal because no one is above the law, or right to steal because human life has more moral weight than material things. Kohlberg followed a deontological model that placed justifications citing intention at a higher level of maturity than justifications citing consequences.

One criticism of Kohlberg is that he was not speaking to the origins of moral reasoning, in that he did not explain how individuals develop different methods of moral reasoning, such as the deontological and consequentialist perspectives. Instead, he presupposed deontology as the moral ideal and rated all individuals by their responses within that framework (Macnamara 1991). Macnamara (1991) also argued that Kohlberg’s stage theory was unjustified in that an individual’s moral action can be motivated by factors at multiple stages. It is difficult to place a person at a particular stage of development - say, stage 4 - if his behavior is motivated by concerns of stages 2, 4, and 6. Even the factors that formed the rubric for each stage, he argued, were open to interpretation.

Subsequent developmental moral research followed in Piaget’s and Kohlberg’s footsteps, rating a child’s moral maturity by the justifications he put forth for his moral judgments. Much research, such as studies which examined the moral versus conventional distinction, assessed children’s moral maturity in terms of their valuing of intention over consequence and ability to verbally justify their reasoning (Helwig, Tisak, and Turiel 1990, Yau and Smetana 2003, Smetana 2000, Smetana 1981). Some recent psychologists have questioned the weight placed on children’s valuing of intention over consequence. It is possible that children do not make judgments based on principles of

intention and consequences as such. Grueneich (1982) found an order effect of intention and consequence for third graders which calls into question the importance researchers placed on intention and consequence. Children were presented with several stories in which a boy threw a baseball which hit a friend, where the stories varied in the boy's intent (accidental, mischievous, and malicious) and the harm to the friend (no damage, bruised leg, bloody nose). When presented with the consequences of a harmful action first and then the intention of the harmful action, three quarters of third graders made intention-based judgments. They were next asked which character should be punished more. When the order of intention and consequence was reversed, about the same percentage made consequence-based judgments.

All of these studies assessed the child's moral judgment on the basis of his or her justifications. Recent cognitive development has challenged the view that moral cognition is based on conscious reasoning. More recent studies of children's moral development have not required children to explicitly state moral principles and have tested children as early as infancy.

Intuition

What role do the emotions play in moral judgment?

Philosophers from classical times to the British empiricists have ascribed our moral judgments to sources of emotion and intuition. Plato wrote that our bodies, driven by sentiment, guided our higher cognition. David Hume saw emotions as the source of moral reasoning, and argued that the reason is, and should be, subordinate to sentiment (Hume 1758/1880). Though Hume did not deny the role of reasoning in moral

judgments, it was human sentiment which was the source of our moral judgments (Hume 1758/1880).

In psychology, attributing unconscious motivation to behavior dates back to Freud. Moral reasoning arose from the superego, the voice of conscience which combated the forbidden impulses of the id, much like the proverbial angel and devil on one's shoulders. Much of the battle between superego and id occurred beyond conscious awareness, and if it was made aware to the ego, it was often disguised through defense mechanisms.

More recently, psychologists have added intuitionism to the picture. Intuition, according to Haidt (2001), is "akin to perception." He writes, "[m]oral intuition is a kind of cognition, but it is not a kind of reasoning" (Haidt 2001, 814). Two examples of intuitionist theories are the Social Intuitionist model and an offshoot of intuitionism, the Moral Grammar model. In Haidt's social intuitionist model, emotions are the primary cause of moral judgments. In the moral grammar model, however, emotions are only epiphenomenal to moral judgments; emotions follow from moral judgments. I will discuss both models and recent research examining the conscious application of moral rules.

Social Intuitionist Model

The social intuitionist model argues that an emotional reaction occurs immediately upon encountering a moral situation, and is then followed by slower, post-hoc rationalization of those judgments if necessary. To examine this reasoning process, I return again to Haidt (2001)'s case of sibling incest. One explanation of the incest example is that a disgust reaction produces a negative evaluation. Most adults condemn

the action as wrong. However, when faced with challenges to their justifications, they experience “moral dumbfounding”. They often give up and say they don’t know *why* the action was wrong, they just know it *is* wrong.

Brain imaging research is providing new insight into the neurology of the moral judgments process. Antonio Damasio studied the moral judgments of patients with early childhood damage to the prefrontal cortex. Despite having normal cognitive abilities, these individuals showed severe deficits in reasoning on moral tasks, as well as a lack of morally-appropriate emotions such as remorse (Anderson et al 1999). These individuals also had histories of inappropriate, risky, and criminal behavior. The authors attribute the reasoning deficit to damage of the systems that perceive and store emotionally related knowledge of social situations. These individuals’ families, as well as state correctional institutions, had provided instruction in moral and social rules to correct their behavior to no avail. The authors attribute the failure to the individuals’ inability to process socially relevant information. They suggest that one aspect of this deficit may be the inability to process relevant reward and punishment information (Anderson et al 1999).

Another area of investigation in moral neurobiology is the role of emotion in personal versus impersonal dilemmas. Greene sees emotions coming into play more for personal moral dilemmas than abstract ones, which he argues use more consequentialist reasoning (Greene et al 2001). In this study, individuals thinking about personal dilemmas, such as throwing someone off a sinking lifeboat, showed activation in the limbic system. Individuals thinking about impersonal dilemmas, such as voting for a policy that will lead to more deaths than its alternatives, showed less activation in the emotional centers of the brain. Subjects in the personal condition were also slower to

make judgments which caused harm, such as killing one to save five. In the impersonal dilemmas, the one versus five calculation was made more rapidly (Greene et al 2001). It is possible that the abstractness of the dilemma allows for stricter utilitarian calculation.

As an example of such dilemmas, Greene uses Peter Unger's moral dilemma cases to illustrate the role of emotion in personal versus impersonal distinction. In the first case, the subject is told to imagine she is driving when she hears a cry for help from the side of the road. She pulls over to see a man lying in the bushes, bleeding severely from a leg wound. He begs the subject to take him to the hospital, and he will lose his leg if he does not receive immediate medical attention. The subject is told that she wants to help the man, but that by driving the victim to the hospital, his blood will ruin the upholstery in her car. Is it morally permissible to deny the man a ride? In the second case, the subject is told she arrives home one day and receives a fundraising letter from a reputable charity organization, asking for money to give medical attention to people in an underdeveloped country. Is not sending money morally permissible? Greene argues that people's tendency to say "no" in the first case and "yes" in the second arises from the personal nature of the car upholstery case and the impersonal nature of the charity letter case. The intuition is that the victim in the car case has a direct claim on one's help while the victim(s) in the charity case do not have as direct a claim. Greene argues that this distinction might have an evolutionary basis; our ancestors did not have contact with individuals across the globe, but had daily contact with kin members who might face life-threatening dangers. The brain's hardwiring for emotion prevents us from aiding those who are not "up close and personal". We have emotional reactions toward people we encounter in our daily lives far more than we do toward people with whom we do not

interact (Greene 2003). Seeing people on the other side of the world in more abstract, less emotional terms, we are more likely to make a less emotional utilitarian calculus.

A Moral Grammar

Emotion has been suggested as one mechanism of unconscious reasoning guiding our moral judgments. What other mechanism might be responsible for our moral judgments? Philosopher John Rawls made an analogy that moral judgments may occur immediately and unconsciously, much like grammar judgments (Rawls 1971). In *A Theory of Justice* (1971), Rawls wrote:

A conception of justice characterizes our moral sensibility when the everyday judgments we do make are in accordance with its principles... We do not understand our sense of justice until we know in some systematic way covering a wide range of cases what these principles are. A useful comparison here is with the problem of describing the sense of grammaticalness that we have for the sentences of our native language... A similar situation presumably holds in moral theory.

There is no reason to assume that our sense of justice can be adequately characterized by familiar common sense precepts, or derived from the more obvious learning principles. (Rawls 1971, 41)

Generative grammarians hold the view that linguistic grammar is part of our innate endowment. We are equipped to acquire any human language, based on which languages we experience of our environment. This generative grammar is operative, and exists beyond our conscious awareness. Though most adults have learned explicit grammar rules in school, these are not the rules of our unconscious grammar. Thus it is difficult to justify why a particular statement is grammatical or ungrammatical.

Languages share certain patterns cross-culturally, suggesting some universal grammar constraints are common to all individuals. For example, there are some patterns which all languages exhibit, such as rules about word order and a distinction between nouns and verbs. There are also certain grammatical structures which no language exhibits.

Additionally, the brain's hardware may impose these constraints. For example, one's memory cannot hold an infinite string of embedded phrases without soon losing track of the object of those phrases. Thus the brain's hardware may drive the inherent features and limitations common to human languages cross-culturally.

One way which moral judgments may parallel language in their combination of discrete elements into meaningful principles. Actions may have no meaning alone, but when combined, can form moral or immoral events (Hauser et al) A moral grammar organizes these actions into meaningful events, much as a linguistic grammar organizes phonemes into meaningful speech.

A universal grammar suggests a source of cultural variation in moral judgments (Hauser et al). A finite set of parameters in linguistic grammar can be combined to form the world's languages. According to this analogy, if there are "moral parameters", cultural differences in moral beliefs may be explained by unique combinations of those parameters.

Moral Parameters

I turn next to the search for principles which account for individual differences in judgment. Philosophers have long examined the principles which produce consistent differences in judgments across situations. Thomas Aquinas, for example, cited the Doctrine of the Double Effect, the view that an agent is not responsible for unintended, but foreseen harm which arises from good intentions. The first question, then, is of the nature of such moral parameters. The second question is whether these principles are consciously applied. In some dilemmas, such as the incest case, adults have trouble

justifying their judgments, suggesting that they base them on unconscious “gut” reactions. In other cases, adults easily justify their judgments, citing conscious rules.

To address the first question, philosophers and psychologists have used several methods to uncover the principles which account for differences in moral judgments. To uncover moral parameters which may underlie our judgments, philosopher Frances Kamm (1998) uses a method of controlling cases so that the cases are identical in every way except the variable in question. Kamm employs the example of James Rachels’ case of one uncle actively drowning his nephew versus another uncle allowing the child to drown in the bathtub as an example of “harming versus not aiding” (Rachels 1975, as cited in Kamm 1998). Kamm argues that pairs of dilemmas must be identical in every way except the parameter in question to uncover how that parameter may shape our judgment.

Recent research through the Moral Sense Test (MST) conducted by the Cognitive Evolution Lab at Harvard has examined adults’ responses to such tightly-controlled scenarios. The MST has investigated three possible principles. The first, action versus inaction, refers to a view that harmful actions are morally worse than harmful inactions, even when the consequences are held constant. For example, a person who actively pushes a person in front of a train is contrasted with a person who observes a train about to hit a person and does nothing. The second, contact versus no contact, refers to a view that harm caused by physical contact between individuals is worse than harm caused without that contact. For example, a person who pushes a person onto train tracks is contrasted with a person who flips a switch from afar, causing the person to fall onto the train tracks. The third, intended versus foreseen (the Doctrine of the Double Effect),

refers to the view that using a person as an intended means to an end is morally worse than foreseeing unintended consequences. For example, in one case a person desires to save five drowning people, and accelerates in a speedboat to intentionally knock one passenger into the water, thereby lightening the load of the boat and allowing the boat to accelerate. This scenario is contrasted with one in which a person desiring to save five people accelerates, and knows it will knock one of his passengers into the water, but does not need the passenger to fall into the water for the boat to accelerate. Participants' justifications for the MST dilemmas were coded as sufficient if the participants cited any difference between the dilemmas, including differences which were not the independent variable. Based on this criteria, the dilemmas of action versus inaction had the highest percentage of subjects providing sufficient justification. Intended versus foreseen had the lowest rate of sufficient justifications.

To address the second question, data from the MST, including hundreds of participants across English-speaking cultures shows that adults are more likely to confabulate or fail to provide justifications for some moral principles than others. This suggests that some moral principles are consciously applied, while others may be more unconsciously applied, leading to these uncertainties and fabrications (Hauser et al, in press).

Precursors to Moral Reasoning in Infancy

Further evidence of an internal “hardware” shaping moral cognition comes from work with infants. There is evidence that the core mechanisms needed for moral cognition may be present very early in life, possibly as early as infancy. This research follows an abundant literature that shows infants to be sensitive to goal-directed behavior.

Woodward has found that infants can understand goal directed action, especially when the agent is clearly human (2004), they can understand sequential actions toward overarching goals (2000), and focus on the goal of a behavior even when the behavior is incomplete (1999). Phillips et al (2002) found that infants connect human gaze and goal-directed behavior.

Recent research has shown that infants are sensitive to the moral status of goal-directed action. Nurock, Jacob, Margules, and Dupoux (in press) found that young children are more sensitive to the harm of a human being than to harm of an inanimate object. Both nonverbal infants and verbal toddlers focused greater attention toward an actor who had shoved a girl than an actor who had shoved a backpack. Additionally, verbal toddlers made more spontaneous comments about the act of pushing the girl than any other action, suggesting that the physical harm was highly salient to them. When questioned about their opinions of the two actors after the video, verbal toddlers were able to identify the "bad" agent.

This early understanding of goal-directed action and harm toward others lays a foundation for later understanding of intention. I turn next to research of young children's early understanding of intention and discuss its implications for moral judgment.

Theory of Mind and Moral Judgment

One hallmark of early cognitive development is the development of theory of mind. Theory of mind refers to the understanding that others have minds, as well as an understanding of the content of others' mental states. This understanding of other's minds comes into play in moral dilemmas involving intention. One can imagine that a

child who does not fully grasp the concept that others have minds would have difficulty making moral decisions based on intention.

Theory of mind develops, in most children, between the ages of 3 and 5, and later, if at all, in autistic children. In studies of the moral domain with young children, Siegal and Peterson (1998) found that 3- to 5-year-olds correctly used theory of mind in judgments of lies and innocent mistakes, though the younger children had less of an understanding of the distinction.

Daniel Dennett proposed a thought experiment in which children lacking a theory of mind might consider the consequences of an agent's actions rather than the agent's intentions in making a moral judgment. It is a moral version of the classic theory of mind diagnostic scenario, where a child is given information which another person lacks about the contents of a box, and is then asked to predict what the actor will assume is in the box. Children lacking a theory of mind assume that others will know what they know – that the box is empty. In the Dennett scenario, children would be told a story about an actor who intended to push a box containing his victim off a stage. The victim, however, escaped without his knowledge. He predicts that children who do not use theory of mind in their moral assessments might focus on consequences alone – an empty box was pushed off the stage - and not attribute blame to the actor (Cushman et al, in press).

Children with autism develop theory of mind later in life, if at all. Several studies have investigated moral development in children with autism (Steele et al 2003, Grant et al 2005, Blair 1995). Blair (1995) found that theory of mind was not necessary to make the moral versus conventional distinction. Though children with autism may perform

equally to their non-autistic peers on moral judgment tasks, they often exhibit some deficits, such as justifying their responses verbally (Grant et al 2005).

Aims of the Present Study

The present study examines children's moral judgments on one moral parameter, action versus omission of action. The study aims to examine the developmental pathway of children's reasoning about this parameter in comparison to adults. Our research examines, but does not rely upon, children's explicit, verbal justifications to study moral judgment. Children's use of intention information in their judgments of action and omission is also examined.

THE PRESENT STUDY

The Action Principle

The Action Principle refers to the tendency to judge harms caused by direct action more blameworthy than harm caused by failure to act. The Action Principle is also referred to as "Omission bias" (Baron 1993). In bioethics, the action versus omission distinction arises in the debate over active and passive euthanasia. Philosophers have debated whether the act versus omission distinction should hold normative moral value.

The Action Principle in Philosophy and Ethics

Examples of action principle are abundant in bioethics and law. The active versus passive euthanasia debate illustrates the action principle. Active euthanasia, the ending of a terminally ill's patient's life by means such as injection, is illegal, and condemned by the American Medical Association. Passive euthanasia, not taking actions such as inserting a feeding tube needed to for a terminally ill patient to survive, is legal, and approved by the American Medical Association.

Some philosophers see the action versus omission distinction as holding no normative value (Bennett, Tooley, in Fischer and Ravizza 1992). That is, they believe that, all else being equal, cases of actions should not be given different moral consideration than cases of omissions. It is possible that the immediacy of the action may be driving the action versus omission distinction, as if during the time period of omission, an intervention (divine or otherwise) may prevent the consequences from occurring (Bennett). Michael Tooley also argues that the action versus omission distinction should be irrelevant to moral decision-making. He suggests that by making the intention of an actor appear the same as the attention of an ommitter, adults will view the act versus omission distinction as morally irrelevant. For example, he gives the case of two sons who want to poison their father. One poisons the father, while the other arrives late, and, wanting the father to die, does nothing and watches the poisoning occur. Tooley argues that the sons are equally to blame, presumably because intention is the same.

Other philosophers believe the action versus omission distinction should have normative moral influence (Quinn 1989, Foot). In one argument, the act versus omission distinction may represent a distinction between positive rights, the individual's claim on others' help, and negative rights, freedom from harm (negative rights) (Quinn 1989). Omission, then, prevents intrusion into others' negative rights. Omitting action allows the individual autonomy in his own personal and moral decisions by not controlling or constraining those actions.

The Action Principle in Psychology

Several empirical studies have examined adults' tendency to apply the action principle in their moral judgments. The Moral Sense Test (MST) has shown that the

majority of participants (English-speaking adults) applied the action principle (preliminary data from the MST). When asked to explain their reasoning for rating harmful actions as worse than harmful omissions, most adults who exhibited the action principle were able to articulate the distinction. This clear articulation suggests that the parameter may be based on explicit, easily accessible rules, or at least easily accessible post-hoc reasoning (Cushman et al, in press, 1). Reasoning about other principles, such as intended means versus unintended, but foreseen, consequences appears more implicit (Cushman et al, in press, 1). Adults appear to exhibit more confusion and equivocation in explaining their reasoning in those pairs of scenarios, lending further support that the intended/foreseen parameter is implicit and not always readily accessible (Cushman et al in press, 1). Additionally, Baron (1993, 2004) has found that the majority of adults exhibit the action principle.

What is driving the Action Principle?

One possible explanation for the action principle is the salience of the agent's action over omission. The intention of an action is much clearer than the intention of an omission. For example, if agent A punches someone, his intention to harm the person is clear. In contrast, if agent B walks by a person in need of help and does nothing, his intention is less clear. The "omission bias", according to Baron (1993, 2004), is an over-application of this heuristic, discussed below.

Baron and Ritov (2004) argue that the action principle arises from the distinction between direct and indirect causation. They argue that it is not the same as a bias toward a "status quo", as either an action or an omission can interrupt a status quo.

It is possible that moral judgments fall prey to the same logical errors that guide judgments in other domains. According to Baron et al (1993), such logical errors are the result of over-generalizing certain heuristics. For example, the sunk cost heuristic is the overgeneralization of the principle to not waste (Baron et al 1993). Though the principle to avoid waste is a valuable one, it can be over-applied to the point of being counterproductive. He sees the action principle as another such heuristic.

Developmental Research on the Action Principle

Baron et al (1993) examined the developmental pathway of omission bias. In the Baron et al (1993) study, second and seventh graders were given pairs of stories in which one character caused harm through action and one caused harm through inaction. The intention of the characters and the consequence of their actions were identical. Seventh graders applied the action principle 40% of the time, while second-graders applied the action principle 77% of the time. This increase was correlated with “an increase in the tendency to justify such judgments in terms of the equality of intention” (42). This decreased tendency toward using the action principle is interesting, considering that a majority of adults use the action principle. It is possible that use of the action principle follows a U-shaped trend. Baron cites evidence that it is possible that younger children are sensitive to both intention and consequence information, but that consequence cues overwhelm intention cues. Perhaps intention cues similarly overwhelm the older children.

In the instances in the Baron study when children judged act and omission equally, older children cited the fact that both characters had the same intention in 37%, and younger children in 8%, of the cases (43). Additionally, 41% of the younger children

and 12% of older children justified in terms of consequences. This pattern suggests that between the second and seventh grade levels, children experience an increased shift to justify in terms of intention and decreased tendency to justify in terms of consequences. In instances where children judged the act as worse than the omission, 27% of the older children and 25% of the younger children justified their judgment in terms of intention. (Consequence justification data in these instances was not reported.) The higher percentage of younger children citing intention in omission bias (25%) over equal ratings (8%) is contrasted with the opposite pattern in older children: 37% in equal ratings and only 27% in omission bias. These trends raise further questions about role of intention in children's moral judgments of act and omission.

By the early elementary school years, children have the cognitive mechanisms in place to reason about action and omission. Children as young as three are able to engage in counterfactual thinking, that is, reasoning about whether a negative outcome would occur if a causal force had or had not occurred. This question takes the form, "What if A had not occurred, then B or Not B?" (Harris, German, and Mills 1996). Children are less likely to use this reasoning for positive outcomes, however (German 1999). This "what if" reasoning allows children to consider what would happen if an action had not occurred, which is relevant, if not necessary, to comparing paired dilemmas which differ only on the parameter of action or omission of action. Whether they engage in this thinking on the more abstract level of agents' intentions is unclear, however.

The Present Study

The present study examines the presence of omission bias and the relationship between children's reasoning about intention in moral judgments. Agents' intentions

may be more clear in cases of action and less clear in cases of omission. For example, if Agent A punches someone, his intention is clear, but if Agent B fails to aid an injured victim lying by the side of the road, his intention is less clear. If the salience of intention in actions, but not omissions, is driving the action principle, then those who do not see intention information as relevant to their moral judgments would be less likely to exhibit the action principle. Young children, who have been shown to have less of a grasp of intention, are likely candidates to see intention information as less relevant to their moral judgments. If children are given pairs of action versus omission scenarios where intention and consequences are held constant, then we can isolate whether they are forming a judgment using the action principle itself.

The present study was exploratory. Its design was similar to the Baron et al (1993) study in that it presents participants with pairs of dilemmas identical in all aspects except whether the harm is caused by action or omission. This is a similar method to the Moral Sense Test. Unlike both the Baron and MST studies, however, both characters were explicitly given bad intentions. The equality in intentions attributed to each resolved any ambiguity in the omitting character's intentions. In each session of the study, we presented children with pairs of stories. The two stories in each pair were identical, except that one story featured a protagonist who performed an action and the other an omission. The child was then asked a series of questions to determine whether he or she evaluates the action as worse than the omission. For example, in one pair of stories, one character broke his sister's vase while the second character failed to catch his sister's vase as it fell. The low cost of the omitted action was emphasized; the character need only have reached out his hand to catch it. Both characters thought it would be

"funny" for the vase to break. The happy emotion of the protagonist was chosen because there is evidence that children believe in a "happy victimizer" phenomenon, that an aggressive person will feel happy after harming his or her victim (Smetana et al, 1999, Smetana, Campione-Barr, and Yell, 2003). In both stories, the vase breaks, and the child was told that the sister is sad that her vase broke. It should be noted that children were not asked to evaluate how the victimizer felt after each scenario.

The methodology of paired scenarios has been used by many philosophers, such as Kamm (1998), the MST, as well as Baron and Piaget (Baron 1993, Piaget 1965). This methodology may allow the child to focus on the action versus omission distinction by eliminating distracting variables, such as particular characteristics of the agent or the intended harm. These variables should be tested in future studies.

There are three roles intention might play in children's views of the action principle: In the first, a concept of intention is negatively correlated with the action principle. Children who have a clear understanding of intention would be more likely to judge the scenarios as equally bad, presumably because the equality in intention would overshadow the content of their behavior. Evidence for this view comes from Baron et al (1993) study, in which older children showed less omission bias and more often mentioned intention as the reason that characters were bad. To be sure that they are focusing on intention rather than consequences, their explanations for their judgments are examined, to see whether they focus on the equal intentions, the equal consequences, or a combination of the two.

In the second, using a concept of intention in moral judgments is positively correlated with the action principle. If this is the case, children may see actions as having

clearer intentions than omissions, and see a moral difference between action and omission. Using intention information in moral judgments may be a prerequisite for the action principle. Again, children's appeal to intention in their justifications is analyzed.

The third possibility is that intention is orthogonal to the question of action and omission and that children are using clues other than intention to make their decisions. There would be no correlation between omission bias and children's appeal to intention in the justifications.

METHODS

Participants

Participants were children ages four through eight. Participants were recruited on the Harvard campus and at a suburban, middle class, predominantly European-American public elementary school and a suburban, predominantly European-American private elementary school. Data were collected from 46 children, mean age for the older cohort=7.56 years, SD=0.32 years, younger cohort M=4.75 years, SD=0.49, overall M=6.40 years, SD=1.46. Of this, 34 participants were included in the analysis for all four stories, older cohort M=7.59, SD=0.32, mean age for the younger cohort=4.66, SD=0.49, overall M=6.34 years, SD=1.53. Participants included in analysis for individual stories varied. The five experimental stories given to all subjects were called Vase, Blocks, Bike, Dog, and Teacups. N(vase)=42, N(blocks)=41, N(bike)=41, N(dog)=42, N(teacups)=44. The same study was given to adults at a university in the northeastern U.S., M=20.58 years, SD=1.33.

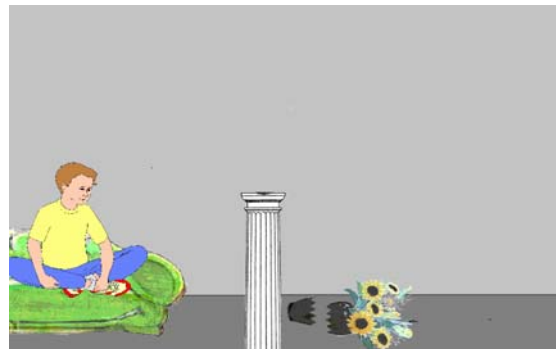
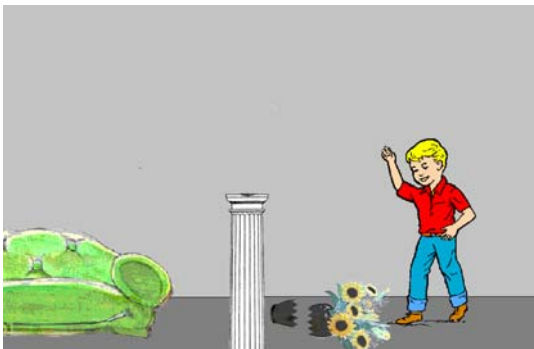
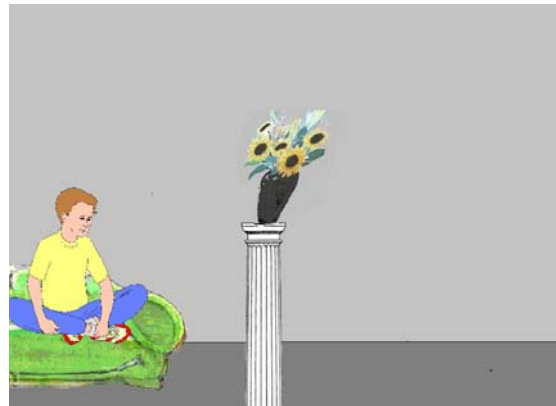
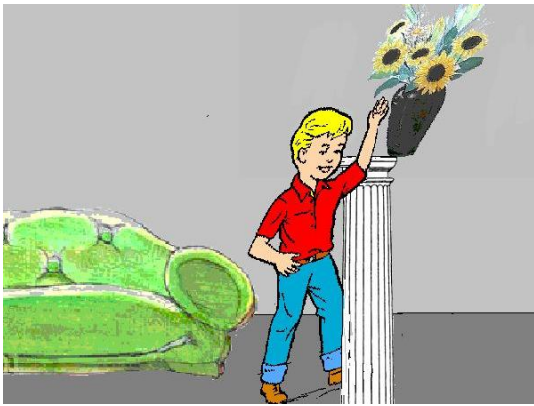
Each session consisted of six pairs of stories, each pair accompanied by illustrations. The experimenter placed two identical template pictures side by side and

placed laminated clip art on each template picture to illustrate the story. Each experimental story pair involved two stories that differed along one dimension, but were otherwise identical in content. The first of six stories, a practice story, was also given to familiarize the child with the task, and did not count toward the analysis. However, if a subject consistently failed the first story, he or she would have been eliminated from the data analysis. No subjects were eliminated for failing the first story. Four act-omission story pairs followed the practice story. The final story was a story very similar to Piaget's accident versus intent story (Piaget 1965).

Figure 3.1 Picture stimuli for vase story

ACTOR

OMITTER



Several steps were taken to eliminate confounds. Characters were gender-matched to child. Order of presentation of stories was counterbalanced, so that half the children received (Vase-Blocks-Bike-Dog) and the other half received (Dog-Bike-Blocks-Vase). The accident versus intent story was given at the completion of the four act-omission stories. Whether the action or omission was presented first was counterbalanced within each story.

Table 3.1

FORMAT OF QUESTIONS	
Act/Omit stories	
<u>Question</u>	<u>Principle</u>
Was ACTOR/OMITTER's behavior bad?	Moral issue
How do you know?	
Did one behave worse than the other, or were they both the same?	Action
principle	
How do you know?	
Did one of the kids want x to happen more than the other?	Intentionality
How do you know?	
Intent/Accident story	
<u>Question</u>	<u>Principle</u>
Was ACTOR/OMITTER's behavior bad?	Moral issue
How do you know?	
Did one behave worse than the other, or were they both the same?	Intentionality
How do you know?	

After each pair of stories, children were asked a series of fact checks. The fact checks asked the child to point to the actor and the ommitter, and asked whether the actor and ommitter wanted the story's outcome to occur. Data was excluded from the analysis for any story where the subject failed two or more fact checks. Failing a fact check was defined as failing to provide a correct response to an initial question and subsequently failing after an experimenter prompt of "Are you sure?". Parallel to the MST method of eliminating subjects who fail obvious scenarios, subjects were eliminated from the

analysis if they failed two or more fact checks in the practice story. Twelve subjects were eliminated for failing fact checks. Subjects were then asked the dependent measures questions about the characters. [See Table 1] Children were presented with choices of the actor, the ommitter, both, or neither to eliminate experimenter bias in suggesting the correct answer.

Open-ended questions are coded according to whether the child referred to intention, consequence, or both. A final category, “none of the above”, which included the child’s personal anecdotes that are unrelated to the story, or refusal to answer the question. These responses are only marked as the fourth category if they were the child’s sole response.

In the final accidental action versus intentional action pair of stories, children were told a story about a child who breaks five cups by accident versus a child who breaks one cup purposefully. Children who used intentional information in their judgments would presumably view the agent who broke one cup worse. Children lacking intent may focus on the consequences of the agents’ actions and rate the agent who broke five cups, though by accident, as worse. Alternatively, children may use neither intent nor consequence information in their judgments.

Children’s responses on the forced-choice questions were coded numerically. On yes or no questions, yes=1 and no=0. For questions to which the answer was action, omission, both, or neither, action=1, omission=-1, both=0, neither=not counted in analyses.

To analyze the results, a ANOVA was used to compare the means for all four act/omission stories of each cohort for developmental differences. A t-Test was used to

compare subjects' responses in the accident/intent dilemma to responses on the four experimental stories, to examine the relation of children's understanding of intention to their judgments. Regressions examined any correlation between subjects' perception of difference in moral behavior and difference in intention, to examine the relation of children's use of intention in their judgments to their actual responses. That is, the subjects' responses to the questions "Did one behave worse than the other" and "Did one want it more than the other" were examined.

To analyze the open-ended justifications, we coded justifications for any mention of (1) the consequences of the character's behavior (2) the characters' intentions (3) explicit mention of the action versus omission principle. Again, following the MST, mentioning the action would be sufficient, as it can be assumed that in mentioning the action, the participant is differentiating it from the omission. A fourth category included any other responses which did not fit the first three categories.

RESULTS

Omission Bias

Prevalence of omission bias across cohorts

We had hypothesized that there would be a positive correlation between omission bias and age, based on previous MST work showing that adults exhibited omission bias.

Our measure of omission bias was the question "Did one behave worse than the other, or were they both the same?". A response that the actor behaved worse than the ommitter was counted as omission bias. We averaged the responses to this question across stories for each participant. A subject was only included in the analysis for a story if he passed fact checks for that story. Each cohort showed omission bias at greater than

chance level. For adults, $t(13)=4.692$, $p<0.01$, 7-8 year olds, $t(29)=7.071$, $p<0.01$, 4-5 year olds, $t(15)=2.334$, $p<0.05$. We also found a trend for omission bias to increase with age, as divided up by the three cohorts, $p<0.001$.

Next, we examined whether there were differences between cohorts for omission bias and found that there were significant differences, $F(54)=7.747$, $p=0.001$. Finally, we looked at where these differences lie. A Tukey post-hoc contrast revealed that the 4-5 year old cohort showed less omission bias than adults, $p=0.001$. We found a trend toward the 4-5 year old cohort showing less omission bias than the 7-8 year old cohort ($p=0.071$), and a trend toward the 7-8 cohort showing less omission bias than the adults ($p=0.053$).

Figure 4.2 Means for “Did one behave worse?” by Cohort



Intention

Comparison of actor’s and ommitter’s intentions

We split the analyses into two cohorts, those who exhibit omission bias and those who do not, and examined whether those subjects showed any differences for the question “Who wanted it more”. There were significant differences both for those without omission bias, $F(35)=35.56, p<0.01$, and with an omission bias, $F(23)=11.28, p<0.01$.

*Correlation between thinking the actor both behaved worse **and** wanted the outcome more than the ommitter*

A regression examining all participants revealed that responses to the question “Did one want it more” (M=0.32, SD=0.37 , N=60) was significantly correlated with response to the question “Did one behave worse than the other” (M=0.45, SD=0.43, N=60), $r(60)=0.329$, $p=0.01$. The 7-8 cohort was significant, $r(30)=0.446$, $p<0.05$. The 4-5 cohort was nonsignificant, $r(16)=.343$, $p=0.183$. The adult cohort was also nonsignificant, $r(14)=0.084$, $p=0.775$.

Participants were asked whether each character wanted the outcome to happen. Responses could include saying that both characters wanted the outcome to occur, that neither wanted the outcome to occur, or that one character wanted the outcome to occur while the other did not. We examined trends across cohorts for these responses, to see if any age group was more likely to view one character as intending the outcome but not the other. A difference score for each of the four stories (vase, blocks, bike, dog) was taken between the questions “Did the actor want x to happen” and “Did the ommitter want x to happen”. A positive score indicates the subject thought the actor, but not the ommitter, wanted the outcome. A score of 0 means either the subject thought both the actor and the ommitter wanted the outcome, or both did not want the outcome. A negative score shows that the subject thought the ommitter wanted the outcome while the actor did not. These scores were averaged.

Using the raw averages, we found several significant findings. The 7-8 year old cohort (mean=2.552) saw a difference between the actor and ommitter’s intention significantly more than the 4-5 year old cohort (m=0.0917) saw any difference,

$t(44)=2.136$, $p=0.038$. The 4-5 cohort also saw a difference more than the adults ($m=0.00$), $t(25)=3.063$, $p<0.01$. Finally, the 7-8 cohort also saw a difference more than the adults, $t(39)=-1.300$, $p<0.05$. These averages were also compared to the subject's responses for the question "Did one want x more than the other, or both the same?" As expected, the correlation was significant, $r(57)=0.301$, $p<0.05$.

Accident versus Intent

There were no significant correlations between the accident versus intent story and the act versus omission stories, and it is not discussed further. The vase story lost its significant result χ^2 ($N=52$), $p=0.035$ after a Bonferonni correction.

Justifications

Participants were asked to justify their responses to the question "Did one behave worse than the other". Justifications were coded for whether they mentioned intention, consequences, action versus omission, and any other responses which did not fit these categories.

We predicted that younger children, relative to older children and adults, would use intention with less frequency in their moral judgments. Correspondingly, we predicted that they would mention intention in their justifications less often than the older participants.

Following data from the MST, we predicted that participants exhibiting omission bias would, on the whole, provide justifications that cited the act versus omission principle.

Justifications for responses to "Did one behave worse than the other"

We next examined whether the content of justifications differed across age cohorts. The youngest cohort (4-5) mentioned intention in only one instance, 3.1% of total responses for all four stories. This was significantly different the 7-8 year old group (19.8% instances of intention $t(37)=-2.799, p<0.01$) and the adult group (29.6% instances of intention $t(25)=-2.701, p<0.01$, as well as overall, $t(51)=2.510 p<0.05$).

Table 4.1 Percentage of Total Responses in Each Justification Category

Cohort	Consequences	Intention	Action vs. Omission	Other
4-5 years old	93.75	3.1*	57.6	18.75
7-8 years old	88.4	19.8	66.3	2.3
18-22 years old	79.6	29.6	68.5	16.7

Note: A participant could have scores in any combination of the categories; thus rows do not add up to 100.

* Significantly different from the other two cohorts, $p<0.01$

When asked whether one character behaved worse than the other, the most common response for all age cohorts was to cite the actor’s behavior alone, for example, “He was worse because he pushed the vase” or “She was worse because she fed the cake to the dog.” Overall, participants cited solely the actor’s behavior in 57.8% of the instances. Following the precedent of the MST, citing the actor’s behavior was coded as citing the action versus omission difference. It is assumed that if the participant mentions the actor’s behavior in response to the question of whose behavior is worse, the participant has perceived a difference in behavior between the actor and ommitter.

Justifications for omission bias versus non-omission bias judgments

We split participants according to whether they showed omission bias. We first split the participants conservatively, so that having “no omission bias” was defined as having an average score of exactly 0. Anything greater than 0 was considered to have some omission bias. Second, we split the participants more leniently so that omission bias was a score of greater than or equal to 0.5, an average that indicates the participant exhibited omission bias in at least two of the four judgments.

We had three possible hypotheses for the relationship between intention and omission bias. To examine this question we then analyzed whether the justifications for omission bias responses and non-omission bias responses differed in mentioning consequences, intentions, and the action principle.

The only significant overall difference in justifications between omission bias versus non-omission bias participants was explicit mention of the action versus omission principle. Those with omission bias had a higher tendency to cite the act versus omission distinction explicitly. For the strict criteria outlined above, $t(49)=-2.963$, $p<0.01$, Cohen’s $d=1.024$. For the more lenient criteria, $t(49)=-3.087$, $p<0.01$, Cohen’s $d=0.872$. Differences between those showing omission bias and not showing omission bias for mentioning intention and consequences in their judgments was non-significant.

We next checked for differences in justifications across age trends. We looked at those who did not exhibit omission bias in the youngest cohort versus the older cohorts. For the lenient criteria, there was a significant trend for adults who do not exhibit omission bias to view intention as equal more than young children who do not exhibit omission bias $t(13)=-2.496$, $p<0.05$.

It appears that justifying one's judgments with intention and exhibiting omission bias may be orthogonal to one another.

Young children did not connect wanting and bad outcomes

One unexpected finding was that many of the youngest children did not make a connection between intent and harmful behavior. Several children would judge a character as behaving badly, but then would say the same character did not want the outcome to occur. Seven of the 16 children in the youngest cohort said, at least once, that neither character wanted the outcome to occur while at the same time judging both characters as behaving badly. With the exception of one adult instance, this pattern was not seen in any of the other age cohorts.

DISCUSSION

The study showed a linear trend toward increasing omission bias with age. Additionally, there was a significant differences between the youngest cohort and other participants on omission bias.

Relationship of Intention to Omission Bias

We had two hypotheses about the relationship of omission bias and use of intention in moral judgments. Our first hypothesis was an inverse relationship between intention and omission bias. In this model, if a tendency to use intention in making moral judgments increases, omission bias decreases. Our data for seeing a difference in intention do not support this conclusion, as the question "Who wanted it more" correlated significantly with the question of omission bias, "Did one behave worse than the other?" The second hypothesis was a positive relationship between intention and omission bias. In this model, if a tendency to use intention in making one's moral judgments increases,

omission bias increases. Our data for seeing a difference in intention provide some support for this conclusion, as “Who wanted it more” and “Did one behave worse than the other” correlated. However, four to five- year-olds saw a greater difference between the actor and the ommitter’s intention than seven to eight- year-olds, but did not show greater omission bias. This suggests that while inferences about intention based on action vs. omission emerge before age four, these inferences do not produce different moral judgments until after age five. This result confirms Piaget’s observation of an increasing role for intent in moral judgment between the ages of six and twelve (Piaget 1965).

Justifications of Action versus Omission

Whether the action principle is conscious or unconscious, it appears to be easily supported by explicit rules. We found very few cases of moral dumbfounding in our study, defined as stating “I don’t know” for a justification. Additionally, most individuals who made omission bias judgments justified those judgments in terms of the action principle. This parallels the MST finding that subjects more frequently provided sufficient justifications for the act versus omission distinction than for other principles. There are many explicit rules in our society concerning action versus omission, such as “do no harm”. These everyday rules make the action principle easy to justify verbally.

Additionally, we found that those who exhibited omission bias and those who did not exhibit omission bias did not differ significantly in the tendency to cite intention and consequences in their justifications. This may suggest that the action principle cannot be explained by appeal to intention and consequences individually.

Connection between intention and behavior

Our study produced the unexpected result that almost half of the youngest children failed, at least once, to make a connection between intention and behavior. These children said that both the actor and ommitter behaved badly, but at the same time, neither wanted the outcome to occur. This finding may be explained by Yuill et al (1996)'s research, which found that children under five years old did not attribute positive feelings to characters who produce negative consequences. Very young children would only attribute negative feelings to those characters. Thus it is possible that the youngest children in our study ignored or were confused by the information that the characters "thought it would be funny" for a negative outcome to occur. It is possible that this is the phenomenon we observed when participants said neither character wanted the outcome to occur.

Discrepancy with Baron et al (1993)'s findings

It should be noted that our study found an age trend opposite to that found in the Baron et al (1993) study. Baron et al (1993) found that omission bias decreased with age. Our study, however, found that omission bias increased with age.

This finding is puzzling. One possible explanation may lie in a difference in between the Baron et al (1993) scenarios and the scenarios we used in our present study in equating the intentions and plans of the actor and ommitter. Baron et al (1993) emphasized that the ommitter would have behaved exactly as the actor, had circumstances outside his own agency not produced the desired outcome. We do not make a similar statement in our scenarios. Participants in our study were simply told that the ommitter wanted the outcome to occur. It is possible that participants viewed the ommitter as less malicious in our study, because whether he would have taken action on his desires is left

open. An increased ability to engage in counterfactual thinking with age may explain the decrease in omission bias with age in Baron et al (1993)'s findings. Reasoning about Baron et al (1993)'s study may require a greater degree of counterfactual thinking (if X did not occur, the ommitter would have acted anyway), so that older children in that study saw more similarities in the actor's and ommitter's behavior than did the younger children.

Limitations and Future Directions

One limitation of the study is its small sample size. Power for various analyses ranged from 0.479 to 0.655. We may have failed to find significant effects due to low power. Future studies should aim for a greater N in each cohort.

Another limitation is the range of ages tested. We tested children ages 4-5, 7-8, and adults 18-22. Our study produced a significant finding that children ages 4-5 do not Testing children in this gap between age 6 and 7 might illuminate the age trends we found for omission bias. Specifically, we found that the 4-5 cohort, which exhibited the least omission bias, exhibited a failure to connect intention and behavior. We also found that the 7-8 year old cohort, which exhibited greater though nonsignificant omission bias, showed a trend to cite intention in their justifications more than the other groups. Including 6 year olds would provide a more complete picture of the development of omission bias and the ability to justify it.

Possible relationships between intention and omission bias for future study

We found a significant correlation between thinking the actor wanted the outcome more than the ommitter, and thinking the actor behaved worse than the ommitter. It is unclear what underlies this correlation. The explanation may be a "Knobe effect". Knobe (2003) found that attribution of intent to a protagonist occurred after, rather than

before moral judgment of the protagonist. Additionally, the inverse relationship may be true. Participants may use a heuristic that intention is more salient for actions than omissions. The relationship between intention and action as opposed to inaction is an interesting topic for further research. For example, to test for the Knobe effect, future studies could include a condition where the question “Does one want it more than the other” appears before “Did one behave worse than the other”.

Conclusion

Our study provided evidence that omission bias increases with age. Additionally, we found a correlation between omission bias and believing the actor desired the outcome more than the ommitter. Finally, individuals showing omission bias are able to explicitly cite the action principle.

The action versus omission distinction is a phenomenon with implications for public policy as well as everyday ethical decisions. Philosophers and psychologists have debated whether making a moral distinction between action and omission amounts to a cognitive error, or whether action and inaction carry different moral weights. We hope this study provides insight into the developmental pathway of our moral intuitions about action and inaction.

Appendix 1. Story script

Action/Omission - Boys

Paired dilemmas

Counterbalance Order 1 (AO – OA – AO – OA)

Order A (Vase – Blocks – Bike – Cake)

Today I'm going to tell you some stories about some kids. Then I'm going to ask you some questions about the kids in the stories. Does that sound good? Great! First we're going to do a practice story with some easy questions. It's a story about kids on a beach. Do you like to go to the beach?

Here's the story:

Warm-up Story

Sandcastle LEFT, Sandwich RIGHT

This is John (point to sandcastle kid) and this is Jack (point to sandwich kid). John and Jack are on the beach. See? John (point) is making a sandcastle and Jack (point) is eating a sandwich. Now I have some questions about these kids. I want you to point to the answer, OK?

Who is building a sandcastle? Is it John (point), Jack (point), both (point), or neither?

Who is eating a sandwich? Is it John (point), Jack (point), both (point), or neither?

Who is riding a bicycle? Is it John (point), Jack (point), both (point), or neither?

Who is on the beach? Is it John (point), Jack (point), both (point), or neither?

Good job! That was pretty easy, huh? Now I have some more stories for you. Here's the next story.

Vase

Ricky [point] and Steve [point] are playing. Both of their sisters just came home from dance recitals with brand new vases of flowers. See? Ricky's sister has his vase [point] and Steve's sister has his vase [point]. At Ricky's house, Ricky [point] is alone with his sister's brand new vase [point]. At Steve's house, Steve [point] is alone with his sister's brand new vase [point].

Action LEFT

Ricky [point] thinks it will be funny if his sister's vase breaks. It is easy for him to push it. He pushes his vase over and it breaks on the floor [switch vase with broken vase]. His sister is very upset that his new vase broke.

Omission RIGHT

Steve [point] thinks it would be funny if his sister's vase breaks. At Steve's house [point], a big gust of wind makes the whole house shake, and his sister's vase [point] is about to fall! It is easy for him to put out his hand to catch it; if he doesn't, the vase will fall [point] and it will break! Steve [point] sits on the couch and doesn't do anything. His sister's vase falls and breaks on the floor [switch vase with broken vase]. His sister is very upset that his new vase broke.

Now I have some questions about these kids.

- 1) Who pushed his sister's vase? R, S, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 2) If still incorrect after "Are you sure", say "I think this one [point] pushed his sister's vase and this one [point] didn't put his hand out."
- 3) Why did he push the vase over?
- 4) Who didn't put his hand out to catch his sister's vase? R, S, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 5) If still incorrect after "Are you sure", say "I think this one [point] pushed his sister's vase and this one [point] didn't put his hand out."

6) Why didn't he put his hand out?

- 7) Was Ricky's [point] behavior bad? If yes: How do you know his behavior was bad? If no: go to next question.
- 8) Was Steve's [point] behavior bad? If yes: How do you know his behavior was bad? If no: go to next question.
- 9) Did one of the kids behave worse than the other - R, S, or both the same?
- 10) How do you know he behaved worse?/ OR How do you know they behaved the same?
- 11) Did R [point] want the vase to break? Are you sure? Good job! (If incorrect, repeat correct info from story)

12) Did S [point] want the vase to break? Are you sure? Good job! (If incorrect, repeat correct info from story)

- 13) Did one of the kids want the vase to fall over more than the other, or were they both the same?
If different: Which one? How do you know he wanted the vase to fall over more? If same: How do you know they wanted the vase to fall over both the same?

Blocks

Good job! Now I'm going to tell you a story about some kids playing with blocks. Do you ever play with blocks?

Harry [point] and Ian [point] are playing with blocks. Their friends just made houses with the blocks. See? Ian's friend made this house [point] and Harry's friend made this house [point].

Omission LEFT

Harry [point] thinks it would be funny for his friend's house to get ruined. He sees his friend's house [point] is about to fall over. It is easy for him to go over and put out his hand to catch his friend's house; if he doesn't, it will fall over. He stands and watches his friend's house fall over [switch block tower with scattered blocks]. The house falls over and Harry's friend is sad.

Action RIGHT

Ian [point] thinks it would be funny for his friend's house [point] to get ruined. It is easy for him to push it. He pushes it and knocks it over [switch block tower with scattered blocks]. The house falls over and Ian's friend is sad.

- 1) Who pushed his friend's house? H, I, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 2) If still incorrect after "Are you sure", say "I think this one [point] pushed his friend's house and this one [point] didn't put his hand out."
- 3) Why did he push the house over?
- 4) Who didn't put his hand out to catch his friend's house? H, I, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 5) If still incorrect after "Are you sure", say "I think this one [point] pushed his friend's house and this one [point] didn't put his hand out."
- 6) Why didn't he put his hand out?
- 7) Was H's behavior bad? If yes: How do you know his behavior was bad?
If no: Go on to next question.
- 8) Was I's behavior bad? If yes: How do you know his behavior was bad?
If no: Go on to next question.
- 9) Did one of the kids behave worse than the other - H, I, or both the same?
- 10) Why do you think he behaved worse?/ OR How do you know they behaved the same?
- 11) Did H want the blocks to fall? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 12) Did I want the blocks to fall? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 13) Did one of the kids want her friend's blocks to fall over more than the other, or were they both the same?
If different: Which one? How do you know he wanted them to fall over more? If same: How do you know they wanted them to fall over both the same?

Puddle

Now I'm going to tell you a story about some kids riding bikes. Do you ever ride a bike?

John [point] and Kevin [point] are riding their bikes outside with their friends. See? This is John's friend [point] and this is Kevin's friend [point]. There are puddles on the ground [point to both]. Their friends [point to both] say they don't like to get wet.

Action LEFT

John [point] thinks it would be funny for his friends to get wet. John sees that his friend [point] is about to ride around a puddle, but his friend doesn't see the puddle. John tells his friend to ride his bike straight through the puddle. John's friend rides through the puddle and he gets wet [replace picture of kid on bike with picture of splashed kid on bike]. His friend is sad to get wet.

Omission RIGHT

Kevin [point] thinks it would be funny for his friend to get wet. Kevin sees that his friend [point] is about to ride through a puddle, but his friend doesn't see the puddle. If Kevin [point] shouts to his friend, his friend will see the puddle and be able to stop in time. Kevin doesn't say anything to his friend. Kevin's friend rides through the puddle and he gets wet [replace picture of kid on bike with picture of splashed kid on bike]. His friend is sad to get wet.

- 1) Who told his friend to ride through the puddle? J, K, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 2) If still incorrect after "Are you sure", say "I think this one [point] told his friend to go through the puddle, and this one [point] didn't warn him about the puddle."
- 3) Why did he tell his friend to ride through the puddle?
- 4) Who didn't shout to his friend to warn him about the puddle? J, K, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 5) If still incorrect after "Are you sure", say "I think this one [point] pushed his friend's house and this one [point] didn't put his hand out."
- 6) Why didn't he shout to his friend to warn him?
- 7) Was J's behavior bad? If yes: How do you know his behavior was bad?
If no: Go to next question
- 8) Was K's behavior bad? If yes: How do you know his behavior was bad?
If no: Go to next question
- 9) Did one of the kids behave worse than the other - J, K, or both the same?
- 10) Why do you think he behaved worse?/ OR How do you know they behaved the same?
- 11) Did J want his friend to get splashed? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 12) Did K want his friend to get splashed? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 13) Did one of the kids want her friend to get wet more than the other, or were they both the same?
If different: Which one? How do you know he wanted the friend to get wet more? If same: How do you know they wanted the friend to get wet both the same?

Birthday cake

Now I'm going to tell you a story about some kids and a birthday. When's your birthday?

Matthew [point] and Nicholas [point] are playing. Both of them have brothers who are having a birthday party. Their brothers put the pet dogs outside so the dogs won't come in and ruin the party food [point to both]. Oh no! The dogs got in the houses by themselves [put dogs in each room].

Omission LEFT

Matthew [point] thinks it would be funny if the dog ruined his brother's birthday cake [point]. He sees the dog is walking over to the table with the cake [move dog over toward table]. If he calls to the dog, it will go over to him [point] and won't eat the birthday cake. Matthew doesn't call to the dog. The dog eats the cake [replace full cake with half-eaten cake] and Matthew's brother is sad.

Action RIGHT

Nicholas [point] thinks it would be funny if the dog ruined his brother's birthday cake [point]. He sees the dog is walking over to the table with the cake [move dog over toward table]. He takes a piece of cake and feeds it to the dog [put cake in kid's hands, move dog over to cake]. The dog eats the cake [replace full cake with half-eaten cake] and Nicholas's brother is sad.

- 1) Who fed the cake to the dog? M, N, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 2) If still incorrect after "Are you sure", say "I think this one [point] fed the cake to the dog and this one [point] didn't call to the dog."
- 3) Why did he feed the cake to the dog?
- 4) Who didn't call the dog away from the cake? M, N, or both? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 5) If still incorrect after "Are you sure", say "I think this one [point] fed the cake to the dog and this one [point] didn't call to the dog."
- 6) Why didn't he call the dog away?
- 7) Was M's behavior bad? If yes: How do you know his behavior was bad?
If no: Go to next question.
- 8) Was N's behavior bad? If yes: How do you know his behavior was bad?
If no: Go to next question.
- 9) Did one of the kids behave worse than the other - M, N, or both the same?
- 10) Why do you think he behaved worse?/ OR How do you know they behaved the same?
- 11) Did M want the dog to eat the cake? Are you sure? Good job! (If incorrect, repeat correct info from story)
- 12) Did N want the dog to eat the cake? Are you sure? Good job! (If incorrect, repeat correct info from story)

13) Did one of the kids want the dog to eat the cake more than the other, or were they both the same?

If different: Which one? How do you know he wanted the dog to eat it more? If same: How do you know they wanted the dog to eat it both the same?

Cups - Intention/accident

You've been doing such a great job! You're a good listener. We're almost done. Now I have one last story for you.

Accident LEFT

Once there was a boy named Andy (point), and Andy's mother asked his to help get some cookies out of the cupboard. While Andy (point) was helping his mother, he accidentally knocked his mother's cups over, and five of them fell and broke on the floor.

Intention RIGHT

Now Billy thinks it would be funny to break his mother's cups. He goes over to the table and knocks the cups over, and one of them falls and breaks on the floor.

- 1) Did Andy [point] behave badly?
- 2) Did Billy [point] behave badly?
- 3) Did one behave worse than the other?

If yes: How do you know he behaved worse? If no: Were they the same? How do you know they behaved the same?

- 4) Did Andy [point] want the cups to break? Why?
- 5) Did Billy [point] want the cups to break? Why?

Now what if I told you that Andy broke 5 cups by accident while helping her mother, and Becky broke 5 cups because he thinks it's funny.

- 6) Did Andy [point] behave badly?
- 7) Did Billy [point] behave badly?
- 8) Did one behave worse than the other?

If yes: How do you know he behaved worse? If no: Were they the same? How do you know they behaved the same?

- 9) Did Andy [point] want the cups to break? Why?
- 10) Did Billy [point] want the cups to break? Why?

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