A Moral Vocabulary?

Exploring the Link between Moral Emotion Label Knowledge and Moral Judgment in

Preschool-Aged Children

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Abstract

This study serves as an initial step in investigating the link between moral emotion labels (e.g., guilt and shame) and moral judgment/conscience development in preschool-aged children. Sixty 4-year-olds (31 male; average age= 57.6 months) completed measures of general vocabulary knowledge, basic emotion label knowledge, moral emotion label knowledge, and moral judgment. Multiple linear regression analyses showed that moral emotion label knowledge was a marginally significant predictor of overall conscience (β = .24, *p* = .06). More tellingly, knowledge of moral emotion label *antecedents* predicted overall conscience (β = .28, *p* = .03). General vocabulary knowledge did not predict performance on conscience measures (β = .96, *p* = .35), but knowledge of basic emotion labels did (β = .34, *p* = .01). Overall, the data support the study's hypothesis that acquiring specific types of vocabulary knowledge (e.g., knowledge of emotion labels, both basic and moral) can be a critical factor in children's conscience development.

Introduction

A functional understanding and demonstration of morality is of critical importance for any society to function, much less flourish (Maccoby, 1980). Human societies require us to depend on others in order to survive. Therefore, all members of a social group are expected to understand and abide by certain moral codes. If an individual does not, he or she is punished, either by social censure or, in more serious cases, with punitive legal action. While the specific moral values of a society may vary across time and culture, certain mores seem to be inherently human—namely, to respect life and help one's fellow man, to respect property and authority, and to value the truth and protect the secrets of others (Maccoby, 1980). It is perhaps for this reason that actions violating these basic tenets are viewed as the most inexcusable in our society.

Because society relies so much on its members behaving in a moral way, research into the development and course of morality is prevalent. Many seek to answer the question of why some turn against the basic moral codes that seem so obvious to most members of society. Research into this question has yielded results indicating many factors that may influence the degree of one's moral development. If the goal is to find the contributors to acceptable moral development, and to identify the circumstances under which moral development "goes bad," so to speak, it seems logical to investigate the differences in moral development existing among society's smallest actors—children. For much of the history of research on morality, children were viewed as progressing through rigidly sequenced stages of moral development. But, recently, researchers have focused more on individual differences between children with regard to moral functioning. The following work will briefly trace views of children's morality across its

development, before focusing on current research trends and exploring a new variable—

knowledge of self-conscious emotion labels—that may add a new puzzle piece to the

picture of human moral development.

Children's Morality: Historical Trends

Young children appear to possess some sense of morality—an ability to judge

right from wrong—and this moral sense changes and becomes more refined as children

get older. Piaget (1932) first attempted to outline the developmental changes in a child's

moral judgment. The interview procedures he developed to conduct his research have

been the basis, with alterations, for most of the research conducted in this area. For

example, in his work assessing intent, Piaget asked children who was naughtier—Marie,

who, while cutting a piece of sewing for her mother as a surprise, cut a big hole in her

dress, or Margaret, who took her mother's scissors when she was not at home and cut a

small hole in her dress. In both cases, the damage to the dress was reported to have been

done because the girl did not know how to use the scissors. Overwhelmingly, children

judged that Marie had been naughtier, because she cut a bigger hole in her dress. Even

when Piaget ascertained that children knew Marie was trying to be helpful, they still said

she had been naughtier because she did more damage. Piaget called this *objective*

reasoning—the tendency for children in early middle childhood (about 6-9 years) to

judge actions based on their material outcome, not on the intentions behind them (Piaget,

1932).

Piaget's work (1932) is much too extensive to cover in any detail at present.

However, he did describe what he believed to be a major transition in children's morality.

He posited that children first experience a stage wherein they believe "wrong" is simply

whatever adult authority figures say is wrong or punish them for doing. In this stage

(Piaget referred to it as *morality of constraint,* and it is typical up to around age 9)

children see rules as something generated from outside forces. Children then enter a

stage described as the *morality of cooperation* (at around age 9 and above), under which

they realize that rules are a type of social contract and begin to take responsibility for

internalizing them.

Kohlberg (1984) built on Piaget's work (1932), creating a more comprehensive

cognitive developmental theory for moral development that long dominated the literature.

Kohlberg also asked children to provide the "right" response for a series of moral

dilemmas. Perhaps the most well known of these vignettes is one that asks children

whether it would be moral for a man to steal medicine in order to save his wife's life.

Children are told that the man does not have the money to buy the medicine and has

already tried to make an alternate arrangement with the pharmacist, who is unwilling to

help. By analyzing children's answers to this and other moral dilemmas, as well as the

rationale provided for those decisions, Kohlberg identified three levels of morality:

Preconventional morality, Conventional morality, and Postconventional morality. Each

of these levels is further differentiated into two substages (Maccoby, 1980).

Preconventional morality (ages 4-10) is similar to Piaget's (1932) *morality of*

constraint in that rules are viewed as external to the self, instead of being internalized.

The child at this stage of moral development makes decisions about moral dilemmas

based on the possibility of punishment and/or reward. For example, a preconventional

child would say that the husband should steal the medicine only if he will not be caught

or because he will feel very happy that his wife will get better (Kohlberg, 1984).

During the *conventional morality* stage (age 10-adolescence), according to Kohlberg (1984), children are concerned with doing what others will approve of and have begun to internalize (live by) standards they regard as coming from legitimate authorities.

Finally, under *postconventional morality*, individuals view right and wrong through the lens of a larger sense of justice, which is now independent of what authority figures might advocate. At this level, people can differentiate between something that is legal and, therefore, supported by legitimate authority (proof enough of "right" under conventional morality) and something that is moral. Postconventional morality does not emerge until late adolescence or adulthood, and some people will not reach this stage (Kohlberg, 1984).

Kohlberg's (1984) theory of moral development continues to be prominent in the field today.   And, for many years, most, if not all, of the research in the area of moral development was conducted within the paradigm of these levels of morality (Maccoby, 1980; for an alternative view, see Gilligan, 1977). For the present purposes, it is neither feasible nor necessary to detail the subsequent studies and the application of Kohlberg's levels of morality. The important point to be made is that Piaget (1932), Kohlberg, and those who built on their works situated moral development squarely in the cognitive domain. Changes in moral reasoning were seen as following an *invariant sequence* (Sigelman & Rider, 2003). In this approach, most children at a certain age are expected to make moral judgments according to the same types of reasoning, although how far children progress through the stages might differ.

However, other research traditions have focused on, and found, individual differences among children even early in development. That is, children who, according

to Kohlberg (1984), should be operating in the same stage of moral reasoning make moral judgments using different justifications. To explain such differences, some modern theorists have turned from the cognitive approach of Piaget (1932) and Kohlberg (1984), drawing in part from the psychoanalytic and social learning traditions in the study of moral development.

In the cognitive tradition of Piaget (1932) and Kohlberg (1984) (discussed above) the ability to understand various moral issues and make causal attributions is the critical point of moral development. However, in the psychoanalytic perspective, the affective and motivational components of moral development are considered critical, while the social learning tradition emphasizes the role of parents and parental discipline.

Freud (1927) posited that conscience emerges in the form of the superego as a result of anxiety which arises from the erotic and hostile feelings a child experiences during the resolution of the Oedipal/Elektra complex. In this view, children identify with their same-sexed parent at age 4-6, adopting the parent's moral codes as well. Identification with the same-sexed parent is the key to the formation of the "superego," an internalization of parental values and constraints that generates anxiety (guilt) when the child is tempted to misbehave and pride when the child exhibits good behavior. While Freud and psychoanalytic theory do not figure much into the study of moral development today, it is worth mentioning this theory because Freud was the first to propose a mechanism which allowed for differences from child to child. In his view, variations in family dynamics may lead to differences in identification and, therefore, differences in superego development.

Similarly, the social learning approach could explain individual differences (e.g., Maccoby, 1980). In this tradition, children's moral behavior is learned due to social influences, and is specifically tied to parents' disciplinary techniques. Parents who are warm and nurturing and who place demands and limits on their children tend to have children who control their behavior. Children are motivated to exert this control over behavior because it allows them to maintain good relations with their parents.

Children's Morality: Current Trends

The research perspectives discussed above take different approaches to explaining moral development. However, they all have one very important thing in common. Each theory focuses on *one* aspect of the emergence of conscience. Psychoanalysts focused on the moral *emotion* of guilt, an affective discomfort at the thought of or completion of a transgression. The social learning theorists addressed moral *conduct*, investigating a vast set of moral behaviors as a function of parental discipline. And Piaget (1932), Kohlberg (1984), and the cognitive approach explored moral *cognition*, paying little attention to either moral emotion or conduct (Kochanska & Aksan, 2004).

Recently, however, researchers have recognized that a comprehensive answer to the question of moral development can only be reached if we consider all possible influences on morality and the potential relationships among the three aspects of conscience—emotion, conduct, and cognition. Based in this new approach, Grazyna Kochanska and her colleagues (e.g., Kochanska, Barry, Jimenez, Hollatz, & Woodard, 2009) have built an influential theory of how individual differences shape morality. Key elements of this work are summarized here to demonstrate some of the complex

influences on individual differences in moral development. Not only do outcomes differ,

but the pathways to similar outcomes differ as well.

Also important for the study undertaken here, Kochanska's work (e.g.,

Kochanksa, 1991; Kochanska, Padavich, & Koenig, 1996) provides effective strategies

for assessing conscience development. This is perhaps best typified by Kochanska et al.

(1996), who combined both direct and indirect measures of conscience in one study.

Direct observation techniques involve placing the child in a situation where the

temptation to commit some transgression is created. Valuable results can be found in

whether or not the child in fact transgresses, the latency it takes to transgress, and the

number of transgressions committed (Kochanska, Aksan, & Koenig, 1995). Kochanska

et al. (1995) use a form of this manipulation known as a *cheating game*, in which the

child is asked to play a game which is impossible to win if the player does not cheat.

One example of such a game is Kochanska's version of what is called the *animal

game* (e.g., Kochanska et al., 1995). In this game, the child is presented with a basket

and models of several animals. Initially, the experimenter covers one animal with a cloth

while the child's back is turned. The child is then asked to guess which animal the cloth

is covering in order to win a prize. The child is told that the rules of the game are to not

lift the cloth or look under it, and that the only action allowed is to touch the animal with

the tip of one finger. In the initial practice trial, the animal (in this case, a large turtle)

has a tell-tale shape, and all children are able to guess correctly. After this practice trial,

the experimenter presents the child with 3 more animals, so that they can "play for

real,"(p. 1757). However, the animals used at this stage are oddly shaped (e.g. a rabbit

standing on a jar), rendering the task nearly impossible. After the child tries

unsuccessfully to guess the first 2 animals, the experimenter suddenly "remembers" that

she needs something from the other room, and leaves the child alone for 3 minutes to

play the game. During this time, the child is observed for trangression (cheating)

behaviors, e.g, picking up the cloth to look into the basket. When the experimenter

returns, she notices that she had used the "wrong" animals for the game, apologizes to the

child, and replaces the oddly shaped animal with a characteristic one (a caterpillar)

enabling all the children to guess correctly and win a second prize.

        Due to various situational, contextual, and population constraints, direct

observation is not always feasible and, even when it is, such a paradigm does not offer

any insight into the thought processes children use to make moral decisions. For this

reason, indirect measures such as hypothetical moral interviews like those created by

Piaget (1932) are sometimes favored. Such indirect measurement is available in a variety

of forms. Kochanska et al. (1996) provided children with dolls and asked them to act out

the end to a hypothetical moral situation. More traditionally, the test works by providing

the child with a hypothetical situation in which a protagonist's wishes are in conflict with

the "right" thing to do. One example from Eisenberg-Berg and Hand (1979) tells the

story of Mary (or Eric; protagonists and victims are usually portrayed as being of the

same gender as the child being tested) who is on her way to a birthday party when she

encounters a girl (or boy) who has fallen and hurt her leg. The girl asks Mary to go find

her parents to come and take her to the doctor. If Mary does this, she might be late to the

party and miss the cake, ice cream, and games. Children would then be asked a variety of

questions depending on the hypotheses and goals of the study. Examples might include:

What should Mary do? What would you do? Why? How would Mary feel if she doesn't

help? If she does help? How would the girl feel if Mary won't help?

Another approach involves providing narratives about more blatant transgressions

(e.g., Thompson & Hoffman, 1980). For example, a child pushes a friend off a play

horse because he (she) wants to play with it. In this case, questions require children to

put themselves in the place of both transgressor and victim. Examples might include:

How would you feel if you did this? How intense would that feeling be? Would you still

feel that way if no one found out? What will/should happen next?

By using a variety of these methods in various combinations, Kochanska and

colleagues (e.g., Kochanska, Forman, Aksan, & Dunbar, 2005) have been able to refine

the measures available to assess conscience in children. More importantly, by conducting

large scale studies (e.g., Kochanska et al., 1996) involving both direct and indirect

measures, they have found strong correlations between moral reasoning (measured by

indirect means such as the hypothetical interview) and moral conduct (measured more

directly via cheating games, etc.). This helps resolve an old question of whether or not

results from hypothetical interviews can be seen as truly tapping into a child's

conscience. The results of Kochanska et al. (1996) suggest that the information gleaned

from moral judgment tasks can be reliably linked to the actual moral behavior an

individual may or may not perform. So, both indirect and direct measures can be used to

study the manifestation of conscience. But, what does the work of Kochanska and her

colleagues (e.g., Kochanska et al., 2009) have to say about the formation of conscience?

The Nature of Conscience

Kochanska and colleagues (e.g., Kochanksa et al., 2005) see moral emotion, moral conduct, and moral cognition as three parts of one interrelated system. Here, moral emotion primarily refers to feelings of guilt related to transgression. Moral conduct is the actual behavior that a child exhibits and is determined, in large part, by the development of an executive ability to follow rules and prohibitions, even when unsupervised by authority figures. Finally, moral cognition involves the ability of a child to understand the rules they are provided with and to mentally represent the consequences of violating those rules (Kochanska & Aksan, 2006). For Kochanska, these three moral processes are all involved in the development of conscience, "an inner guidance system"(Kochanska & Aksan, 2006, p. 1588).

Among the earliest indicators of moral development is children's tendency to comply with parental demands. Kochanska differentiates situational and committed compliance in toddlers (Kochanska et al., 1995). *Situational compliance* applies when a child goes along with a parental agenda, but lacks a true commitment to the task or an internal sense of obligation. *Committed compliance*, on the other hand, is "when the child endorses and embraces the parental agenda, does not require external control to act in accord with parental rules, and feels an internal obligation to comply" (Kochanska et al., 1996, p. 1421-1422). For Kochanska, 2-year-olds' committed compliance is a trait-like quality demonstrating substantial individual differences. Understanding these differences is critical for a true understanding of moral development and, indeed, provides evidence that strong compliance traits serve as a type of "proto-conscience" from which more refined conscience emerges (Kochanska & Aksan, 2006). For example,

toddlers who cooperate eagerly when mothers ask them to help clean up after playing are likely at age 4 to choose the welfare of others over self-interest in hypothetical moral dilemmas and to show more self-control (e.g., not playing with a forbidden object) in a situation where they believe themselves to be alone (Kochanska, 1991). Kochanska and colleagues (e.g., Kochanska et al., 2005) propose that such trait-like individual differences are especially affected by two interacting factors: child temperament and socialization.

Child Temperament

Within the realm of child temperament, Kochanska (1991) has identified two inhibitory systems that are of particular importance—the child's fearfulness (a passive system) and effortful control (an active system).

Fearfulness is assessed in observational studies that place a child in an unfamiliar environment. In such a situation, some children will show a pattern of inhibited behavior (e.g., Kochanska, 1997). They will appear tense or occasionally distressed and show greater latency than other children before interacting with any features of the environment. Children who exhibit such behavior are classified as *fearful*. Some children, on the other hand, actively and quickly explore the new environment, showing pleasure in the novel situation. These children are classified as *fearless*. The assumption is that fearful children are more easily aroused to experience anxiety in general. They are, therefore, more likely to become anxious at the thought or reality of committing a transgression, ultimately helping them to avoid future wrongdoing and facilitating internalization of moral rules (Kochanska, 1993).

Effortful control is an ability that is demonstrated early in a child's second year, typically around the time that parents begin to expect children to somewhat regulate their behavior. Basically, this form of control is an ability to take control of voluntary actions and choose "correct" responses over "desired" responses when they conflict (Kochanska & Aksan, 2006). As in fearfulness, individual differences are prevalent in this ability. Since effortful control develops throughout childhood, it is easy to see how the differences affecting this process are of interest in moral development.

Family Socialization

Effects of family socialization have long been considered in conscience development. Some studies have focused on the effects of parental discipline (Maccoby, 1980), while others have taken a more relationship-oriented approach, looking at concepts such as attachment style (Thompson, 1998). Between them, these different approaches have provided evidence that willingness to acquiesce to a parental agenda (committed compliance) is closely linked to both gentle disciplinary strategies (involving reasoning and possibly minimal power assertion) and to responsive, sensitive caregiving. Regarding socialization, Kochanska (e.g, Kochanska & Murray, 2000) emphasizes the importance of a "mutually responsive orientation" (MRO). This type of orientation is "a positive, mutually binding, and cooperative relationship between the parent and child" (Aksan, Kochanska, & Ortmann, 2006, p. 833). But how does MRO emerge? As supported by research on attachment theory, parental responsiveness to children's needs creates trust, a sense of security, and expectations of future positive reciprocal interactions between relationship partners (Kochanksa & Aksan, 2006). Research has

also shown that parental responsiveness is linked to increased child cooperation (e.g., Westerman, 1990).

Kochanska (e.g., Kochanska et al., 2005) therefore proposes a framework of conscience development that begins with committed compliance and is influenced both by the child's temperament (fearfulness and effortful control) and by socialization practices that create MRO. We turn next to empirical results that have supported this paradigm.

Support for Kochanska's Model: Moral Emotion

As stated earlier, Kochanska (e.g., 1997) argues that fearful children are more prone to anxious arousal, and this makes them more likely to avoid moral transgression. The unstated hypothesis is that, in a morally relevant situation, the negative emotion associated with such anxious arousal is guilt and that future transgressions are avoided in order to remove the occurrence of that emotion. In several studies, Kochanska and colleagues have demonstrated that, compared to fearless children, fearful children exhibit more anxiety (guilt) when manipulated into believing they have broken a valuable object, and that they are also more likely to avoid committing a transgression when tempted (e.g., Kochanska, 1993, 1997; Kochanska et al., 1995).

Support has also been found for the idea that socialization affects the experience of guilt in children. Maternal power assertion is negatively correlated with several conscience measures (Kochanska et al., 1996). The more power assertion mothers routinely use, the less distress their children display after being manipulated into thinking that they have committed a transgression (Kochanska, Forman, & Coy, 1999). Kochanska proposes that forceful discipline leads to a view of parental values and agenda

as forced, decreasing the likelihood that a child will internalize those values (Kochanska et al., 1996; see also Kochanska, Aksan, & Nichols, 2003) and fostering a sense of resentment toward the parent which may undermine feelings of guilt (Kochanska & Aksan, 2006). At the other end of the spectrum, parental warmth (e.g. showing affection, giving the child positive attention, listening to the child, and explaining reasons for parental demands) is correlated with higher levels of susceptibility to guilt (Zahn-Waxler & Kochanska, 1990, as cited by Kochanska & Aksan, 2006). Parental warmth encourages MRO, and shared affect and responsiveness between mother and child observed during the first two years predict a greater propensity for guilt during preschool (Kochanska et al., 2005). The roles of temperament and socialization in the development of moral emotion are, therefore, strongly supported.

Support for Kochanska's Model: Moral Conduct and Moral Reasoning

Kochanska et al. (2009) expected that effortful control would be the more important temperamental factor in determining moral conduct. Indeed, children's effortful control does predict future moral conduct both concurrently and longitudinally (e.g., Kochanska, 1997; Kochanska & Murray, 2000; Kochanska et al., 2009). For example, Kochanska et al. (1995) conducted a longitudinal study in which children's inhibitory control and their conscience (either moral conduct, moral reasoning, or both) were assessed as toddlers, during the preschool age, and at early school age. They found that children's effortful control remained stable across test periods and that effortful control reliably predicted both moral conduct and moral reasoning within and across each time period. However, fearfulness has also been found to be an important factor.

Children who are fearful are more likely (presumably due to anxious arousal) to avoid

transgressions than children who are not (see also Kochanska & Aksan, 2004, 2006).

Kochanska and Aksan (2006) frame these results with reference to Rothbart's

model of self-regulation (Posner & Rothbart, 2000). Basically, fearfulness and effortful

control are making distinct but important contributions to moral conduct. Fearfulness

leads to a desire to avoid wrongdoing and the emotional arousal that accompanies it, and

effortful control provides the executive capacity needed to follow through on a moral

decision without supervision.

Socialization is also a key factor in moral conduct (see Kochanska, 1991, 1993,

1997; Kochanska et al., 1995; Kochanska et al., 1996; Kochanska et al., 2003). Briefly,

maternal power assertion is negatively correlated with moral conduct. However, MRO

(based on parental warmth) is positively associated with appropriate conduct (Kochanska

& Aksan, 2006; Kochanska et al., 1999). Longitudinal data indicate that MRO at 2 years

predicts children's enjoyment of parental interactions at 3 years and their moral conduct

at 5 years (Kochanska & Aksan, 2006). Kochanska (1993) also finds evidence that MRO

is linked to children's "ability to read others' emotions and to react with distress,

empathy, and prosocial activities to others' distress (Kochanksa, 1993, p. 326).

Kochanska (1993) argues that, when MRO exists, children are able to engage in

consistent, emotionally available affective communication with their parents. Those

children then enjoy interactions with their parents and, as a result, are more likely to be

cooperative and seek to internalize the rules they are given.

Once again, then, the multiple influences Kochanska (e.g., 1993, 1997;

Kochanska et al., 2009) proposes to moderate conscience are supported with data on

moral conduct. However, as stated previously, a major appeal of Kochanska's work

(e.g., Kochanska & Aksan, 2004) is that it does not simply focus on isolated factors in

moral development. In particular, her research has highlighted the interaction of the

multiple influences on moral development.

Moderating Relationships Among Temperamental Factors and Socialization

By now it is clear that temperament and socialization, especially parent-child

relationship style, greatly affect individual differences in conscience development.

However, it is possible that different temperamental characteristics will affect children

differently depending on the type of relationship they have with their parents. Likewise,

the impact of socialization factors may depend on temperamental qualities of the child.

Kochanska's work (e.g., 1993) indicates that, for fearful toddlers, gentle discipline that

includes reasoning (e.g., "We don't act like that because it makes other people feel bad.")

and perhaps very mild power assertion (e.g., "If you act like that, I'm going to be upset.")

will be sufficient to arouse anxiety and effect a change in behavior to approved actions.

Such gentle discipline also predicts more advanced conscience development as the child

gets older. Harsher power assertion (e.g., "Stop doing that right now or you're going to

be in trouble!") is actually counterproductive for conscience development in fearful

children.

However, in fearless children, power assertion, mild or harsh, is relatively

ineffective (Kochanska, 1997). Kochanska suggests that the amount of power required to

force compliance from a fearless child may lead to resentment and increased

unwillingness to internalize moral rules. Thus, anxious arousal is an inefficient source of

moral development for these children. Rather, MRO is the key factor. Studies

consistently find that gentle discipline practices are correlated with moral conduct in fearful children, but parental attachment, warmth of relationship, and maternal responsiveness are more predictive of moral conduct for fearless children (Kochanska, 1997; Kochanksa, Aksan, & Joy, 2007; Kochanska et al., 1995).

As we have seen, another component of temperament that appears to affect conscience development is that of effortful control. However, recent research (e.g., Kochanska et al., 2009) suggests that the effects of effortful control, like the effects of power assertion, may be moderated by the fearfulness of a child. Specifically, children who are more fearful do not need a great deal of effortful control to avoid wrongdoing. Therefore, among fearful children, variations in effortful control do not predict, or predict to a lesser degree, instances of transgression. On the other hand, fearless children who are not easily aroused to guilt appear to need to rely more on effortful control in order to avoid wrongdoing. For fearless children, then, effortful control is a significant predictor of inappropriate behaviors. Kochanska et al. found that measurements of effortful control at 25, 38, and 52 months were negatively correlated with disruptive behavior at 67 months, and this relationship was moderated by the amount of guilt demonstrated by the child, such that lower amounts of effortful control were more predictive of poor behavior when coupled with a low susceptibility to guilt (fearless children).

In summary, fearful children are easily aroused to guilt, providing them with an affective motivation to avoid wrongdoing. When this is coupled with gentle discipline and a parenting style that favors inductive reasoning over power assertion, children achieve an internalized sense of morality. Fearless children, however, cannot rely on arousal to motivate them to avoid wrongdoing. Power assertive discipline actually

decreases the likelihood of internalization because of the amount of power needed to

arouse anxiety in these children. MRO, and the bond such a relationship creates, is

needed to motivate fearless children to avoid transgressions and to internalize morality.

In addition, fearless children may require greater amounts of effortful control to keep

from transgressing.

While Kochanska's work (e.g., 1993, 1997; Kochanska et al., 2009) has found

empirical support and her framework is well-accepted today, perhaps the most influential

effect of her research (at least, in terms of the present project) is that it shines a light on

the fact that there are multiple, complexly interacting sources of individual differences

among children in moral development, and that they are very much worthy of additional

study. A variety of studies have identified other individual factors that are associated

with moral development. Some of these factors, such as differences in emotional

understanding and knowledge of mental states, the amount of time spent by parents in

discussing emotions, and overall verbal ability are of particular relevance to the proposed

research and are discussed in more detail below.

Emotions and Mental States

Researchers have found that understanding basic human emotions is linked to

better performance on morality tasks (Dunn, Brown, & Maguire, 1995; Dunn, Brown,

Slomkowski, Tesla, & Youngblade, 1991; Dunn & Hughes, 1998). For example,

Denham (1986) created a widely used measure of children's understanding of basic

emotions, known as the *affective labeling task*. Children are provided with four faces

representing four different basic emotions—happy, sad, angry, and afraid. They are

asked to express which emotion each face represents and are also given the chance to

point to the appropriate face when given the emotion label by the experimenter. With

this affective labeling task, Denham found that 2- to 3-year-old children who were able

the correctly label basic emotions were significantly more likely to engage in prosocial

behaviors in a semi-structured environment. Similarly, other studies using the affective

labeling task have found greater emotional understanding to be a reliable predictor of

lower levels of moral transgression in kindergarten and first grade (e.g., Dunn et al.,

1995).

   Why is accurate identification of others' emotions linked to moral development?

One possible explanation may lie in the degree to which interactions with parents help

children to understand their feelings, provide children with opportunities to learn labels

that help them articulate their feelings, and promote children's learning to recognize

emotions in others. The amount of time parents spend referring to emotions in

explanations to a child has been indicated as a factor in moral development (Turiel,

2006). For example, Dunn et al. (1995) found that children whose mothers spent more

time using reasoning and humanistic concerns to resolve conflicts when their children

were 2 to 3 years old performed better on conscience measures during kindergarten and

first grade. Greater knowledge of emotion labels may often be an indicator of a better

understanding of personal feelings, as demonstrated in the affective labeling task, and of

a greater ability to recognize the emotions of others, leading to better performance in

conscience tasks.

   If knowledge of basic emotion labels is associated with more advanced moral

development, then it seems likely that knowledge of more sophisticated emotion labels is

also linked to the operation of the conscience. Specifically, we proposed that an

understanding of the labels for "moral emotions" would be related to performance on moral judgment tasks. By *moral emotions*, we refer to a subset of those emotions classified by others as *self-conscious emotions*.

Self-conscious Emotions

Self-conscious emotions include (but are not limited to) embarrassment, pride, guilt, and shame. Lewis (e.g., Lewis, Sullivan, Stanger, & Weiss, 1989) is well-known for his use of the *mirror rouge* test to elicit embarrassment in toddlers. In this task, a spot of rouge is placed on an infant's (Lewis' sample included infants from 9 to 24 months) nose and he is placed in front of a mirror. Infants who touch their own noses in response, indicating that they recognize themselves in the mirror, also exhibit signs of embarrassment (e.g., gaze aversion, movement of hands to touch face, etc.). Infants who do not show signs of recognizing that the rouge is on their own noses do not exhibit such signs. Lewis argues that a sense of the self (as indicated by mirror recognition) is necessary to experience certain emotions. Wariness, for example, in the presence of a stranger is exhibited whether children can recognize themselves in a mirror or not. Self-conscious emotions such as embarrassment, however, are not demonstrated until recognition of the self is achieved, which is typically between 18 and 24 months.

According to Lewis (2008), guilt, shame, and pride are more complex self-conscious emotions than embarrassment. He suggests that these emotions would be better classified as *self-conscious evaluative emotions,* and that they require that the child have an ability to judge his or her behavior against some type of a standard. Sometime between the 2nd and 3rd year, Lewis contends, children become aware of certain standards, rules, and goals (SRG's). Not only can they recognize SRG's, but the sense of

self exhibited earlier allows the child to compare his or her behavior to the SRG's. It is

the child's recognition that his or her behavior has either met or fallen short of an SRG

that results in the behavioral manifestations of pride, guilt, or shame. Embarrassment,

then, should be viewed as a more general awareness of being examined, without self

evaluation of behavior according to SRG's. In the present study, our focus is on the self-

conscious emotions that are more clearly relevant to morality. These *moral emotions*, as

we refer to them, include guilt, pride, and shame, and require the evaluation of SRG's as

proposed by Lewis.

Definitions provided by a number of researchers (e.g., Harris, 2008; Lewis, 2008)

suggest that shame and guilt arise in situations where an individual has fallen short on a

perceived evaluation, whereas pride occurs when one meets such an evaluation. More

specifically, shame involves a negative evaluation that encompasses one's global self.

On the other hand, guilt is specific to a certain event or set of circumstances. Guilt

causes one to reflect on the antecedent actions and often spurs one towards recompense.

Shame, on the contrary, does not result from an evaluation of a particular circumstance,

but from a judgment of failure attributed to the individual as a whole. The experience of

shame is often characterized by a desire to die or disappear. And, as shame is a judgment

of the individual, not of one action committed by the individual, it is much less likely to

motivate one to try to rectify any given situation. Pride, like guilt, is the result of a

specific set of circumstances where one judges one's self to have met a standard. The

positive emotion is therefore focused on and determined by one event. Thus, in guilt and

pride, the event and the self remain separate; however, in shame, the event and the self

become linked (a correlate to shame in the case of positive evaluation would be hubris, not discussed further in this work).

When do such moral emotions emerge? Can very young children experience these emotions? And if they do, how much information do they have available about such emotions? The answers to these questions depend, in part, on the measurement procedures that are used to assess children's experience and knowledge of moral emotions. Researchers can either study the behavioral manifestations of the emotion or use verbal tasks that require children to discuss emotion labels and their knowledge of them. The former technique is problematic when dealing with moral emotions because there is more controversy surrounding which behaviors indicate guilt, pride, or shame than there is surrounding the behavioral markers of more basic emotions such as joy or fear. However, in the case of the latter technique, one runs into possible difficulties in the fact that verbal responses children give when provided with moral emotion labels may not be a complete and accurate reflection of the child's moral emotion knowledge.

As mentioned earlier, Lewis (e.g., Lewis et al., 1989) observed behavioral signs of embarrassment in children as young as 18 months. Kochanska et al. (2009) have measured what they construe to be guilt in children as young as 22 months old. Kochanska and colleagues hold that a young child demonstrates guilt by averting gaze and showing signs of discomfort or tension such as squirming, hunching shoulders, hugging oneself, biting lips, covering the face, and so on. Other researchers have also found that children as young as 2 years old behaviorally manifest signs of complex moral emotions. When children at this age are manipulated into thinking that they have broken an object, they will either try to fix it (interpreted to indicate guilt) or avoid eye contact

and show a closed posture (indicating shame) (Barett, 1998). Also, instead of merely showing pleasure after successfully finishing a task, these children will look to the adult figure present, apparently expecting to find approval or praise, showing pride in their accomplishment (Stipek, 1995).

Others have claimed that very young children do not experience emotions such as guilt or pride. In fact, Griffin (1995) says that such emotions can only be experienced from age 7 or 8 onward specifically *because* of the need to compare one's behavior to a standard—the SRG's described by Lewis (2008). Griffin believes that it is only at this later age that children possess the working memory capacity necessary to represent both a standard and the reality of the child's actions at the same time. In addition, children younger than 6, Griffin argues, do not possess the capacity for intentional thought needed to experience self-conscious emotions. Therefore, he believes that children of 6 and below will experience sadness or anger, not guilt or shame, and happiness instead of pride.

The behavioral evidence offered by Kochanska et al. (2009) seems to sufficiently contradict Griffin's (1995) proposal, however, and it seems justified to say that, from the age of 2 onward, children experience at least rudimentary forms of moral emotions. However, experience of emotions may be different from forming emotional concepts or from possessing and transmitting specific information about those emotions. Are very young children capable of possessing such knowledge, much less discussing it verbally?

First of all, can young children even be relied upon to talk about emotions in any sort of systematic way? Wellman, Harris, Banerjee, and Sinclair (1995) recorded children's spontaneous talk from 2 to 5 years of age and found that even 2-year-olds were

talking about emotions in a systematic way, ascribing emotion to others. Wittgenstein

(1953), however, argued that when young children make utterances about emotions, they

are not actually trying to talk about emotions. Rather, such utterances are merely a vocal

expression of emotions and are fundamentally no different from an exclamation of

"Ouch!" when in pain or any other of the facial and behavioral indicators of emotion. If

this were true, however, Wellman et al. argue, very young children would only make

emotional utterances in response to present events. And, even at 2 years old, they found

that children refer to emotions in situations that involve the past, the future, recurrent

events, and present circumstances. It seems safe to assume, then, that young children can

discuss emotions, and that these discussions reflect the child's actual knowledge of the

emotions and are not simply "lexical substitutes for scowls and smiles" (Harris, 2008, p.

321).

What children say, then, can be viewed as providing valuable insight into what

they know. So, then, what do young children know about moral emotions? Griffin

(1995) asked 4-, 6-, and 8-year olds to provide definitions for the labels of moral

emotions and reported that 4-year-olds showed almost no knowledge of embarrassment,

pride, and shame, while 6- and 8-year olds showed basic and more refined knowledge,

respectively. These results seem to suggest that younger children, indeed, do not have a

strong knowledge of these moral emotion labels. Other researchers, also using largely

definitional tasks, have reported similar results (e.g., Harris, Olthof, Meerum Terwogt, &

Hardman, 1987). However, a closer look suggests that Griffin's methods may not have

allowed children to express the full breadth of their knowledge.

Denham and Kochanoff (2002) outline nine areas of importance for emotion understanding including, for example, recognizing that there is an emotional signal to interpret, recognizing and/or labeling related facial or behavioral expressions, and understanding both causes and consequences of emotional situations. They suggest that soliciting definitions from subjects provides an incomplete assessment at best.

To address such concerns, Berti, Garattoni, and Venturini (2000) investigated the understanding of sadness, guilt, and shame in 5-, 7- and 9-year olds. They developed an interview that went beyond simply asking the children to define these emotions. The interviewer presented the children with a picture of E.T. from the Steven Spielberg film of that name. The children were told that E.T. wanted to learn about our planet and were asked to help him by answering some questions. The children were then questioned about the emotions "sadness" and "guilt". The children were first asked to provide a definition for the emotion. In constructing the rest of the interview, Berti et al. included questions about several areas of emotion understanding (as outlined by Denham & Kochanoff, 2002) not considered by other researchers (e.g. Griffin, 1995). They asked children about the antecedents of a labeled emotion, the role of an audience, and the kinds of thoughts, probable actions, and emotion regulation strategies associated with each emotion. In line with earlier research, Berti et al. found that the youngest children (age 5) could not typically give a cohesive definition of moral emotions, especially guilt. However, even these youngest children demonstrated a clear understanding of the two emotions and the differences between them in their responses to other parts of the interview. For example, even the 5-year olds provided different antecedents, thoughts, probable actions, and regulation suggestions for sadness as compared to guilt. These

children would suggest distraction or finding something fun to do as a way to stop feeling sad, but suggested apologizing or making up as the way to stop feeling guilty. This same pattern of results was found when Berti et al. interviewed children regarding the differences between guilt and shame. Even here, where a more subtle distinction existed between the two emotions, young children provided distinctly different factors to be characteristic of each emotion.

The Current Study

Overall, the picture painted by the data suggests that knowledge of moral emotions is characterized by levels of development. First, beginning around 2 years old, children engage in behaviors that suggest that they experience moral emotions (e.g., Kochanska et al., 2009). According to Lewis (2008), these behaviors are fueled by the judgment of the self against newly discovered SRG's. Next, children learn to recognize the various labels for moral emotions and which apply to which feelings. Initially, knowledge of these labels is rudimentary, but some evidence of such knowledge is present even at 5 years old. Finally, more elaborated and refined understanding of the antecedents and consequences of these emotions for the self and for others, as well as more explicit definitions for moral emotion labels, develops throughout the school years.

According to this, then, children do possess some knowledge of moral emotions such as pride and guilt from an early age, earlier even than has typically been expected of them. We can reasonably argue that some knowledge of moral emotion labels should be found in a sample of preschool aged children. But should this knowledge, if found, be expected to correlate with performance on moral judgment tasks?

As described earlier, we expect that the level of communication about emotions a child experiences within the home is a key factor in helping children learn emotion labels. For children, knowing emotion labels is both a product of this kind of communication and an aid to the child in his or her moral development. Studies have already shown a link between meaningful communication about emotions and conscience measures for young children (e.g. Dunn et al., 1995). We propose that increased knowledge of moral emotion labels may be one mechanism through which this relationship operates.

Previous work on the association between vocabulary knowledge and moral development has focused either on general vocabulary development or on basic emotion words. Kochanska (1991) found no association between Verbal IQ (general vocabulary knowledge) and performance on moral tasks for 8- to 10-year-olds. However, it appears that, by that age, any influence of general verbal ability has been supplanted by other factors. Indeed, Dunn et al. (1995) found a correlation in kindergartners between high scores on moral judgment tasks and performance on the Peabody Picture Vocabulary Test, a measure of the breadth of receptive vocabulary. This correlation had all but disappeared by the time the children were in the first grade, but that does not mean that it did not have an important influence while it existed.

Denham (1986) demonstrated that toddlers' knowledge of basic emotion labels is predictive of more sophisticated moral reasoning. In this study, we looked at a much more specific type of verbal knowledge—children's understanding of the moral emotion labels *guilt* and *shame*. Berti et al. (2000) established that differences do exist in knowledge of such words by 5 years old, and we hypothesized that such differences may

predict moral development beyond the role of either general vocabulary knowledge or knowledge of basic emotion labels. To our knowledge, no other study has looked beyond general verbal ability and basic emotion labels to more specific knowledge of moral emotion labels as a factor in moral development. It is for this reason that the present study makes a unique contribution to our understanding of possible contributors to children's moral development.

This study involved three possible predictors of moral judgment—general verbal knowledge (as measured by the Peabody Picture Vocabulary Test), knowledge of basic emotion labels (assessed through Denham's (1986) affective labeling technique), and knowledge of moral emotion labels (evaluated through a comprehensive interview similar to that of Berti et al., 2000). We expected to find a significant correlation between each predictor variable and the outcome variable of moral judgment in 4- to 5-year olds. Moral judgment was assessed via responses to hypothetical transgression stories (e.g., Kochanksa, 1991). Further, we expected the knowledge of moral emotion labels to remain a predictor of moral judgment, accounting for a significant portion of the variance, when the other two predictor variables were accounted for.

Multiple regression analyses were carried out to assess the contribution of each predictor variable—general vocabulary, basic emotion label knowledge, and moral emotion label knowledge—on the outcome variable of moral judgment/conscience development and to test the prediction that knowledge of moral emotion labels remains a significant predictor of moral judgment even when the shared variance with general verbal ability and basic emotion label knowledge is removed.

In summary, we know that dialogue with caregivers that specifies and discusses emotions in morally relevant situations, likely in the context of Kochanska's mutually-responsive orientation (see Kochanska, 1997; Kochanska, Aksan, Prisco, & Adams, 2008; Kochanska et al. 1999), gives children a better understanding not only of their personal emotions, but also of the effects of such emotions on others (Dunn et al., 1995; Bennett, Bendersky, & Lewis, 2005). Such knowledge, in addition to increasing and enhancing emotional knowledge available to children and their capacity to describe emotions, influences the development of an internally driven, self-regulated conscience (Kochanska & Aksan, 2006). We proposed that this system of emotional knowledge extends beyond what is demonstrated by the classic affective labeling task, and that knowledge of more sophisticated moral emotion labels would be associated with conscience development in young children as expressed by moral judgment. The current study serves as a first step in exploring the connections between knowledge of self-conscious (moral) emotion labels and moral development.

Method

Participants

Participants were 60 Caucasian 4-year-olds (31 males; average age=57.6 months)

recruited from nursery schools in the Western suburbs of Philadelphia, Pennsylvania.

Materials

Peabody Picture Vocabulary Test (IV)

This measure was used to assess participants' receptive vocabulary. Children

were presented with a series of four pictures. The experimenter provided the child with a

word that described one of the pictures and asked the child to indicate which picture was

being described. This measure was chosen because it can be administered quickly, is

well within the participant's ability, and provides a valid estimate of the child's general

word knowledge.

Denham's Affective Labeling Paradigm

Stimuli devised by Denham (1986) to ascertain children's knowledge of basic

emotion labels were used. These consist of four cartoon faces, one each representing

sadness, happiness, anger, and fright. (See Appendix A.)

Moral Judgment Interview

This interview used 3 transgression stories developed by Kochanska (1991), with a

series of 4 original pictures to illustrate each story. (See Appendix B.)

Self-conscious Emotion Label Interview

Based on the work of Berti et al. (2000), the interview referenced WALL-E (from the

Disney/Pixar film of that name) instead of E.T., and contained questions on the

antecedents, role of audience, attending thoughts, probable actions, and coping

techniques characteristic of guilt and shame. (See Appendix E.)

<p style="text-align:center">*Procedure*</p>

Pretest Session

All children were pretested during an initial visit on the Peabody Picture

Vocabulary Test (IV). As described, this measure provided an estimate of each child's

general vocabulary knowledge.

Test session

Each child completed three assessment measures—a measure of basic emotion

label knowledge, a moral judgment task, and a moral emotion label test. These measures

were administered in the order described below for all children.

Basic emotion label knowledge assessment. Knowledge of basic emotion labels

was tested using the affective labeling task as described by Denham (1986). The

participant was presented with four faces, representing sadness, happiness, fear, and

anger. Children's knowledge of the labels for these basic emotions was first tested

expressively and then *receptively.* During the expressive task, the faces were presented in

a row. The experimenter pointed to each face and asked "How does he/she feel?" The

child scored 2 points for providing the correct response, 1 point for an incorrect response

that fell within the same emotional valence (e.g., saying "good" for happy or "scared" for

angry), and 0 points for an incorrect response that was not within the appropriate valence

(e.g., "sad" for happy or "surprised" for scared). For the receptive task, the faces were

shuffled and once more presented to the child in a straight line. The child was then

instructed to "point to the X face." Again, 2 points were awarded if the child pointed to

the correct face, 1 point for an incorrect face with the same emotional valence, and 0

points for an incorrect face in an incorrect valence. Scores on the expressive and

receptive tests were summed to yield a single basic emotions score that ranged from 0 to

16 points.

     Moral judgment task. Moral judgment was assessed using a task originally used

by Kochanska (1991) and adapted from Thompson and Hoffman (1980). Children were

provided with the beginnings of three stories, with a series of four pictures used to

illustrate each story. The subject was introduced to the task as "answering questions and

telling stories about kids your age, with no right or wrong answers" (Kochanska, 1991, p.

1383). In each story, a child the same age and gender as the subject committed some

transgression (e.g., cheating at a game, grabbing a toy from someone else, not helping

someone after knocking them down). For example, one story involved two children who

were playing with blocks (phrasing is the same as Kochanska, 1991):

> (SHOW PICTURE 1A)
> Lara and Sarah are building towers out of blocks. They want to see who can build
> the tallest tower. Both are trying really hard! Look, their towers are just about
> even!
> (SHOW PICTURE 1B)
> Now, Sarah's mom is calling her, so she has to go to the other room just for a
> little while.
> (SHOW PICTURE 1C)
> While Sarah is gone, Lara takes some of the blocks from Sarah's tower and puts
> them on top of her own tower. Now her tower is taller, and Sarah's tower got
> shorter, see?
> (SHOW PICTURE 1D)
> Now Sarah comes back, and she looks at her short tower. Lara looks at her tall
> tower.

The subject was then asked to assume the role of the transgressor. Questions included: 1)

Suppose you were Lara, and you were the one who took your friend's block when she

was gone. How would you feel then? 2) How bad/happy would you feel? Very,

very…or just a little? 3) Why would you feel that way? 4) Suppose nobody ever found out what you did, that you took someone's block. Would you still feel bad? 5) Tell me what you think happens next. What will Lara do or say? What will Sarah do or say? Anything else?

Subjects' responses were coded as outlined in Kochanska (1991). Using this coding scheme, three measures of conscience development were determined: affective moral orientation, story completion (reparation), and discomfort intensity.

Affective moral orientation is a measure of the reasoning strategies used by the children in making moral decisions. Types of reasoning, ranging from the least to most morally mature, include hedonistic, authority-oriented, relationship-oriented, stereotypic, empathic, and internalized (Kochanska, 1991). For example, in the "blocks" story described above, a child using a hedonistic reasoning strategy might say that Lara would feel good after taking the block from Sarah's tower because now her tower is taller. On the other end of the spectrum, a child using an internalized reasoning strategy would "feel sad thinking about taking the block later." Reasoning responses were coded on a scale from 1 to 6. If a child used hedonistic reasoning, he received 1 point. Authority-oriented reasoning received 2 points, relationship-oriented reasoning 3 points, stereotypic reasoning 4 points, empathic reasoning 5 points, and internalized reasoning 6 points. If the child merely restated the facts of the story or provided some other reasoning that nonetheless showed some consideration of the motives behind the transgression, they received 1 point. If a child did not provide any explanation for the actions (including stating "I don't know"), he did not receive any points for this section of the moral judgment task. If a child used more than one type of reasoning in response to the same

transgression, he received points for each type of reasoning used (However, the majority of children provided only one type of reasoning per story). Thus, the affective moral orientation score for each story could range from 0 to 21 points, and scores for each story were summed to derive an overall affective moral orientation score ranging from 0 to 63 points.

The story completion score was determined by the child's response after the question, "Now, tell me what you think would happen next." It was scored on a 4 point scale, with 1 indicating no resolution of the transgression or conflict (e.g., "He kept playing with the blocks now that his tower is taller."), 2 indicating an external resolution to the transgression/conflict (e.g., "The other boy told his mom and she made him give 'em [the blocks] back) , 3 indicating an attempt by the child to resolve the situation (e.g., "He said 'sorry'"), and 4 indicating the child's attempt to make reparation for the transgression (e.g., "He said 'sorry' and gave the blocks back."). Story completion scores were summed across all three stories to create an overall story completion score ranging from 3-12 points.

Finally, discomfort intensity was determined by the children's indication of "how much" they would feel the emotions they provided to the experimenter, as well as how those feelings might change with the presence of an audience. A set of four faces was used to provide the child with a visual representation, with a small smiling face to indicate feeling a little bit happy with a gradual increase in size to a huge smiling face to indicate feeling very, very happy. A second set of four frowning faces similarly scaled was used to represent negative emotions of varying intensity. (See Appendix C). For each story, the emotions provided by the child and the intensity with which they felt them

were coded to create an overall sense of "good" emotion (ranging from 0-10) and an

overall sense of "bad" emotion (ranging from 0-10). The overall "good" feeling score

was then be subtracted from the "bad" feeling score to arrive at a discomfort intensity

score from -6 to 6 points. Across stories, the total discomfort intensity score ranged from

-18 to 18 points.

For each of these three measures—affective moral orientation, story completion

(reparation), and discomfort intensity, a higher score indicates a higher level of moral

reasoning/conscience development. Once the overall score for each of these three

conscience measures was computed, they were combined to form one, aggregate, score of

conscience development that was used as the outcome variable in the multiple regression

analyses. For a complete breakdown of coding procedures, see Appendix D.

Moral emotion label knowledge assessment. A procedure adapted from Berti et

al. (2000) was employed to assess subjects' understanding of the self-conscious (moral)

emotion labels *guilt*, and *shame*. Since the results of Berti et al. suggested that 4-year-

olds cannot provide an explicit definition of the target words, and to avoid starting the

task with a question the subjects could not answer, children were not asked to define the

words. Rather, they were questioned on the likely antecedents, audience role, attending

thoughts, action tendencies, and coping techniques used for each emotion. For an

example of the questioning format, see Appendix B. (Wording is the same as that used

by Berti et al., with "WALL-E" substituted for "E.T.") Questioning about *guilt* and

shame was counterbalanced.[1]

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[1] In addition, the stories presented in the moral judgment task were presented in one of two orders. 50% of the time, the first story involved removing blocks from another child's tower. The remaining 50% of the time, the first story involved physically knocking another child down. Therefore, 4 conditions were created, with 2 possible story orders and 2 possible presentations of the moral emotion label words.

Based on the results of their study, Berti et al. (2000) identified responses within each category (e.g., antecedents, action tendencies, etc.) that were characteristic of each emotion. For example, a common antecedent given by a 5-year old for shame is a negative social event (e.g., being rejected by a peer), while a common antecedent at the same age for guilt is aggression towards someone else (e.g., pushing a peer). Using the data from Berti et al., key responses in each of the categories (e.g., antecedents, action tendencies, etc.) that are characteristic of guilt and shame were identified. For each response that a child provided that was properly characteristic of the target emotion, they received one point. Children were given credit only once for each type of appropriate response in each category. For example, reparation is a characteristic theme for "attending thought" when describing *guilt.* Children were only given credit for mentioning thoughts of reparation once, no matter how many individual thoughts that fit that theme they may have provided. Scores from the two words, *guilt* and *shame,* were summed to produce a moral emotion label score, ranging from 0 to 23 points[2]. In this way, higher scores on the moral emotion labeling task reflect a more comprehensive knowledge of the emotions in question. (For a complete list of appropriate responses, see Appendix F.)

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[2] During testing, it became obvious that the question probing children on emotion regulation strategies cued the children into the fact that these emotions are negative. We felt, therefore, that responses indicating that they would seek comfort or distract themselves somehow may not necessarily reflect knowledge of *guilt* or *shame,* but may merely reflect what the child does when they feel "bad" in general. Therefore, we removed the points awarded for comfort seeking/distraction in the emotion regulation category, and used the corrected moral labels total in all statistical analyses.

Results

Preliminary Analyses

Skewness and Kurtosis

We began by computing simple descriptive statistics for all variables of interest to the current study. This analysis demonstrated that our variables of total moral emotion label knowledge and total antecedent knowledge had skewed distributions. We, therefore, converted these variables using a square root conversion and used these converted variable values for all further statistical analyses.

General Correlations

We next calculated bivariate correlations for all variables of interest to aid in the formation of our regression equations. These correlations can be found in Table 1.

Gender

Some researchers have found gender differences in moral orientation (e.g., Jaffee & Hyde, 2000) and expression of emotions (e.g., Lewis, Alessandri, & Sullivan, 1992). Therefore, for the outcome variable of total conscience, a preliminary independent samples t-test was used to compare performance of males versus females. If a significant effect of gender were found, it would be included as a predictor variable in the regression analyses. However, results of the t-test showed no significant impact of gender on total conscience score, t (58) = .72, p = .48. A second independent samples t-test was used to see if gender affected moral label knowledge, our predictor variable of interest. Again, no significant effect of gender was found, t (58) = .48, p = .63. Based on these preliminary analyses, gender was not included as a predictor variable in the regression analyses.

Table 1

Bivariate Correlations of Interest

		1	2	3	4	5	6	7	8	9	10	11
1	Gender[3]											
2	Teacher Rated Temperament	-0.06										
3	Condition	0.12	-0.06									
4	PPVT Standard Score	0.16	0.18	-0.17								
5	Affective Labeling Score	0.06	0.03	0.25	0.10							
6	Discomfort Intensity	-0.11	0.00	0.06	0.09	.29*						
7	Moral Reasoning	0.02	0.08	-0.06	0.22	0.24	.28*					
8	Story Completion	-0.09	.30*	-0.02	0.22	0.17	0.22	.34**				
9	Total Antecedent Knowledge	0.03	0.25	-0.25	.26	-0.01	0.14	.38**	.266*			
10	Moral Labels Knowledge	-0.06	0.19	-.32	0.17	-0.09	0.10	.26*	0.25	.77**		
11	Total Conscience Score	-0.09	0.10	0.02	0.19	.33*	.88**	.64**	.521**	.30*	0.23	
	M =	0.48	2.22	2.48	115.45	14.22	7.37	6.00	5.72	0.30	0.64	19.13
	SD =	0.50	0.81	1.14	12.61	1.50	8.77	4.35	3..02	0.52	0.71	12.12

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

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[3] Male = 0; Female = 1

Condition

As mentioned earlier, subjects received the moral judgment and moral label knowledge task in 1 of 4 possible orders. One-way analyses of variance found no effect of condition on either total conscience score, $F(3, 56) = .014$, $p = .99$, or total moral label knowledge, $F(3, 56) = 2.26$, $p = .09$. However, some interesting effects for condition were discovered in more detailed analyses; these will be discussed later.

Temperament

As discussed at length above, Kochanska (e.g., 1991, 1993) suggests that child temperament may be involved in the development and manifestation of conscience. It is, therefore, worth considering the influence of temperament on performance in both the moral judgment and moral label knowledge tasks. During testing, each child's teacher was asked to rate the child on a scale of 1 to 3, with 1 indicating a shy temperament (what Kochanska would call fearful), 2 indicating an average temperament, and 3 indicating an outgoing (or fearless) temperament. One-way analyses of variance indicated that teacher-rated temperament was not significantly related to overall conscience score, $F(2, 56) = 1.61$, $p = .21$. It also was not significantly related to knowledge of moral labels, $F(2, 56) = 1.01$, $p = .37$.

Main Analyses

All of our regression analyses were carried out in 2 steps. In Step 1, we entered general vocabulary (Peabody Picture Vocabulary Test score) and basic emotion label knowledge (Denham's Affective Labeling Test), those variables previously explored in the literature in relation to children's conscience development. In Step 2, we entered those variables related to moral emotion label knowledge. This was done to assess the

predictive power of moral emotional label knowledge towards children's conscience

beyond that which was accounted for by the other 2 variables.

Predictive Power of Overall Moral Label Knowledge

Hierarchical regression analysis was carried out in order to see if moral label

knowledge contributes unique variance to overall conscience once the effects of overall

vocabulary (PPVT-IV score) and affective labeling are taken into account. Results are

summarized in Table 2.

Table 2

Summary of Hierarchical Regression Analysis for Variables Predicting Total Conscience

Score (N = 60)

Variable	*B*	*SE B*	β	T
Step 1				
PPVT Score	.16	.12	.16	1.30
Affective Labeling	2.53	1.00	.31	2.52*
Step 2				
PPVT Score	.11	.12	.12	.96
Affective Labeling	2.75	.99	.34	2.78*
Moral Label Knowledge	4.08	2.09	.24	1.95

* significant at .05 level

When overall conscience score was predicted, affective labeling score was found

to be a significant predictor ($p = .01$). However, overall vocabulary ($p = .34$) and moral

label knowledge ($p = .06$) were not significant predictors, although the effect of moral

label knowledge did approach significance. The addition of moral label knowledge in the

second step of the regression analysis did show a unique effect on the variance (R^2

Change $= .06$).

Since the conscience measure in actuality comprises three different tasks, we next

analyzed whether moral label knowledge was a significant predictor of any of the

individual moral judgment components. Moral label knowledge was a significant

predictor (R^2 Change $= .07$, $\beta = .26$, $p = .04$) of the moral reasoning aspect of the

conscience measure. When story completion was entered into the regression equation as

the outcome variable, moral label knowledge only approached significance as a predictor

of better performance on that task (R^2 Change $= .05$, $\beta = .24$, $p = .07$). Moral label

knowledge was also not a significant predictor of total discomfort intensity (R^2 Change $=$

$.01$, $\beta = .12$, $p = .36$).

Predictive Power of Moral Label Antecedents

Although overall moral label knowledge did not quite reach significance as a

predictor of overall conscience, a trend in the expected direction did appear to be present.

Upon re-examining the moral label knowledge task, it appeared that children's ability to

provide antecedents for *guilt* or *shame* showed the best evidence of an ability to

understand and differentiate these emotion labels. This observation was supported in the

fact that knowledge of moral label antecedents is significantly correlated with overall

conscience ($r = .30$, $p = .02$), while total moral label knowledge is not ($r = .23$, $p = .08$).

Therefore, the total number of points achieved by providing antecedents for moral

emotions was substituted for total moral label knowledge as a predictor variable in the

hierarchical linear regression. In this case, knowledge of moral label antecedents did

significantly predict ($p = .03$) performance on the overall conscience measure, even after

accounting for the effects of overall verbal ability and affective labeling (R^2 Change =

.07). For a complete description of the effects of moral label antecedent knowledge on

conscience, please see Table 3.

Table 3

Summary of Hierarchical Regression Analysis Showing Moral Label Antecedent

Knowledge to Predict Total Conscience Score (N = 60)

Variable	B	SE B	B	T
Step 1				
PPVT Score	.16	.12	.16	1.30
Affective Labeling	2.53	1.00	.31	2.52*
Step 2				
PPVT Score	.09	.12	.09	.71
Affective Labeling	2.62	.97	.32	2.70*
Total Antecedent Knowledge	6.52	2.90	.28	2.25*

* significant at .05 level

Discussion

The purpose of this study was to investigate the previously unexplored possibility of a link between knowledge of moral emotion labels and the development of moral judgment (conscience) in young children. The relationship between our full moral label knowledge score and total conscience was only marginally significant in this study. However, a key component of the moral label score—knowledge of antecedents of *guilt* and *shame*—did significantly predict total conscience scores, even when overall vocabulary and knowledge of basic emotion labels were taken into account.

The measure of moral label knowledge was derived from Berti et al.'s (2000) interview procedure. Most of the categories of questions asked during the interview, such as those pertaining to action tendencies or emotion regulation, tend to elicit and give credit for vague responses that would be appropriate for any negative emotion, not just the moral emotion labels. However, questions about antecedents to these emotions require answers that are quite specific to said emotions, and appear to be indicative of true knowledge of these labels. That the ability to provide such antecedents is a significant predictor of conscience suggests that learning labels for moral emotions is, as we predicted, an important factor in children's conscience development.

Previous work on the role of overall vocabulary or general verbal ability in moral development has produced conflicting results, with some (e.g., Kochanksa, 1991) finding no association between general verbal knowledge and conscience and others (e.g., Dunn et al., 1995) finding a significant relationship between the two in younger (5-year-old) subjects but not older (8- to 10-year old) children. This study found no significant link between overall knowledge of vocabulary (PPVT-IV scores) and any of the conscience

outcome measures. Therefore, the possibility that conscience in young children depends on general vocabulary knowledge was not supported.

However, the results of this study do replicate the findings of previous work (e.g., Denham, 1986) that shows the significant effect of basic emotion label knowledge on conscience. Regression analyses in this study all show that better performance on the affective labeling task (testing the basic emotion labels *happy, sad, angry,* and *afraid)* is significantly predictive of a higher overall conscience score. Taken together, the lack of a link between general verbal ability and conscience, the now well-established relationship between basic emotion label knowledge and conscience, and this study's finding that knowledge of moral emotion labels is linked to conscience, support the view that *specific* types of vocabulary knowledge play an important role in children's conscience development. That is, it is not simply having a good vocabulary that is critical. Rather, the type of vocabulary, specifically the ability to recognize and truly understand the labels for basic *and* moral emotions, is a critical factor linked with better conscience development.

As suggested by Dunn et al. (1995), such knowledge of emotion labels may arise as a result of meaningful communication about emotions experienced in the home. Recall that Dunn et al. observed that mothers who spent more time using reasoning (explaining *why* a certain emotion should be felt) to resolve conflicts when their children were young (2 to 3 years old) had children who performed better on conscience measures in kindergarten and the first grade. We observed that moral label knowledge significantly predicted performance on the moral reasoning aspect of the conscience measure. That is, children who showed more knowledge of moral emotion labels tended to provide more

sophisticated explanations for *why* they would feel a certain way, couching their responses in relationship-orientated or empathetic terms, rather than expressing hedonistic or authority-oriented concerns. It is, therefore, possible that discussion in the home that focuses on emotions and how they affect oneself and others leads to a better understanding of emotion labels. And, this understanding, in turn, improves conscience, especially as demonstrated through tasks that require one to be able to comprehend and express *why* a certain emotion should be felt or expressed in the face of a particular transgression.   One area for future study should be to explore whether communication in the family is indeed the mechanism through which the relationship between emotion label knowledge and conscience operates.

Further, the role of Kochanska's mutually responsive orientation, or MRO, (e.g., Kochanska et al., 2005) between parent and child should be explored in terms of moral label knowledge. Kochanska and her colleagues argued that a parent-child relationship characterized by MRO allows for consistent affective communication and that this type of communication makes internalization of parental rules by children more likely. Such communication and, in a broader sense, the type of parent-child relationship characterized by MRO, may be a factor in acquiring moral label knowledge.

As mentioned earlier, Kochanska and colleagues (e.g., Kochanska et al., 2009) identified child temperament (specifically, fearful versus fearless temperament) as an important factor in early conscience development. Specifically, children who demonstrate fearful temperaments are expected to be more easily aroused to guilt. One would expect, therefore, that fearful children would report a greater degree of discomfort intensity in the face of transgressions. However, such an effect was not observed in this

study. There was, in fact, no relationship between overall discomfort intensity and child

temperament. While this initially seems contrary to Kochanska and colleagues (e.g.,

Kochanska et al., 2009), it may very well simply be a function of the way in which

temperament was rated in this study. We asked the children's teachers to rate them on a

scale of 1 (shy/fearful) to 3 (outgoing/fearless). While the teachers are well acquainted

with the children's behavior at school, a more accurate measure of temperament may

nonetheless be achieved through parent or caretaker ratings. Also, this assessment

merely divided the children into 3 broad categories. A more specific rating, which

includes multiple questions more accurately designed to assess fearful/fearless

temperament as defined by Kochanska and colleagues (e.g., Kochanska et al., 2005,

2007, 2008), might be more likely to show a relationship.

Interestingly, the only relationship of statistical significance regarding child

temperament as we assessed it showed a relationship between child temperament and the

story completion aspect of the conscience measure. That is, temperament significantly

predicted story completion ($\beta = .267$, $p = .03$), with more outgoing (fearless) children

more likely to provide complex, internally-driven story completions. But, again, this

relationship is likely more a function of the nature of the task. The entire moral judgment

task required the children to verbally respond to a virtual stranger. This was likely easier

for the more gregarious and outgoing children. The story completion aspect of the task,

in particular, required the most imagination and willingness to engage with the

experimenter outside the child's comfort zone. Future studies of moral development,

especially as it relates to temperament, should probably include verbal tasks more

comfortable for such young children to complete, or take on the logistical and economic

difficulties of incorporating observational measures of conscience, such as the cheating games previously discussed.

As discussed above, condition (defined by some variations in task order) was not a significant predictor for either moral label knowledge or total conscience. However, one unique effect of condition was observed. Namely, an analysis of variance indicated that the average number of points scored on the moral label knowledge task was higher for conditions 1 and 2 ($M = 1.32$, $SD = 1.66$) than it was for conditions 3 and 4 ($M = 0.50$, $SD = 0.67$). Conditions 1 and 2 end the moral judgment task with a story in which the transgressor knocks down another child and does not help them back up. Meanwhile, in conditions 3 and 4, this story is placed first. Perhaps, at this young age, certain offenses are classified as "bad" more quickly and easily than others, and causing physical harm to someone else may be one of these. When such an experience was presented immediately before the child was asked to talk about *guilt* or *shame*, it may have remained fresh in their minds, thereby making it easier for them to provide information on moral labels. However, such young children may lack an ability to retain the knowledge of that offense after 2 other stories or may have difficulty calling forth such examples from memory.

In conclusion, this study provides an important first step in exploring the relationship between moral emotion label knowledge and children's conscience development. A key component of moral label knowledge, the ability to specify antecedents of those emotions, is a significant predictor of conscience development. Therefore, the central thesis of this study—that it is *specific* types of verbal knowledge, not verbal ability in general, which is critical for a better understanding of conscience development—was, indeed, supported. Regardless, as mentioned previously, this study

serves merely as a *first* step. Future study must continue to explore this relationship, and better define the parameters within which it functions. Only then can we hope to understand how what we feel, and what we can express about what we feel, work together to affect how we treat one another.

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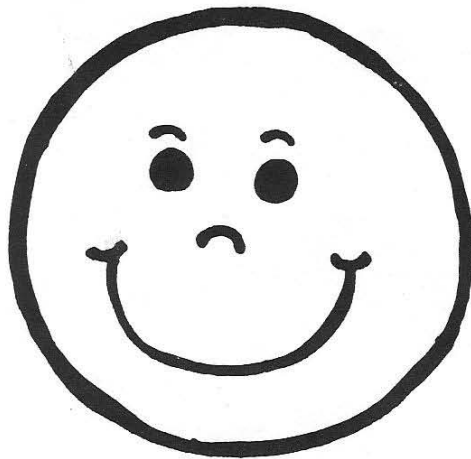Wittgenstein, L. (1953). *Philosophical investigations.* Oxford: Blackwell.

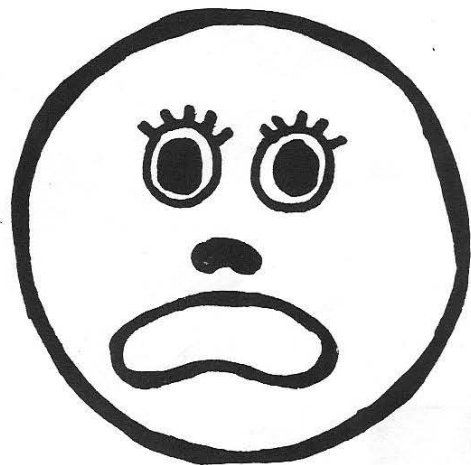**Appendix A: Affective labeling faces**

The 4 Emotion Faces

sad

mad

happy

scared

Appendix B: Illustrations for moral judgment task*
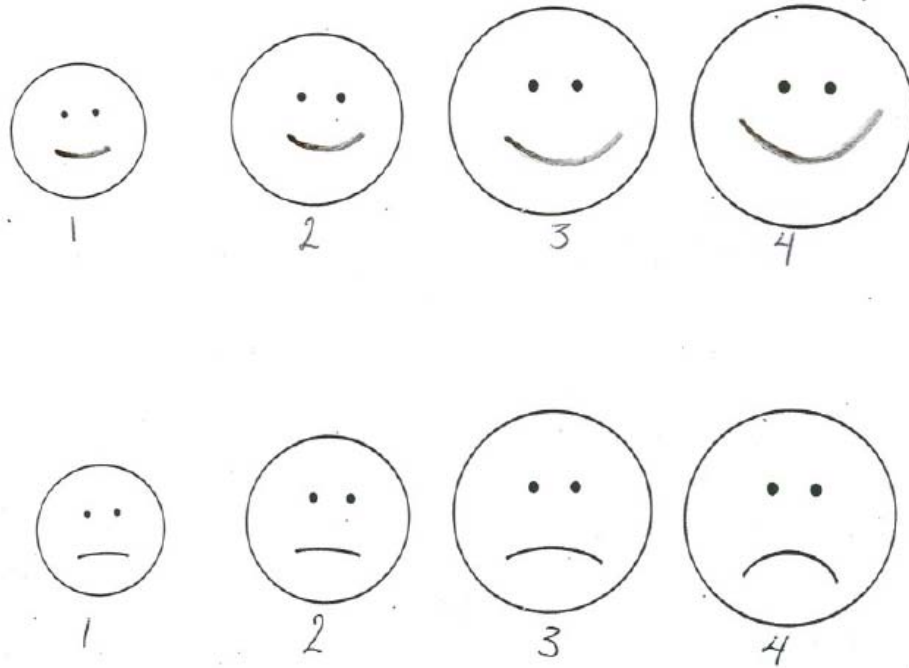
"Blocks" Story
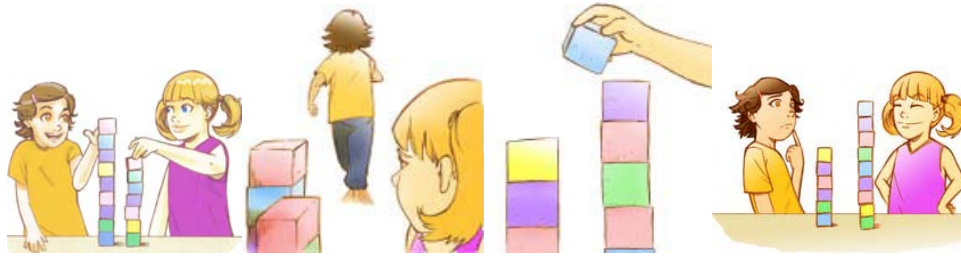
"Puppet" Story

"Knock-Down" Story

* Illustrations provided are for the female version of the stories. Versions depicting male characters carrying out the same events were also prepared, and illustration type was matched to subject gender. (Special thanks to Michael Shelfer for providing original illustrations.)

Appendix C: Discomfort intensity faces scale

Appendix D: Coding for moral judgment task

Story 1: Stealing Blocks
<u>Discomfort Intensity after wrongdoing</u>
Feeling (0 if absent; 1 if mentioned)   Bad _____   Good _____
How good/bad (faces; 0-4)   Bad _____   Good _____
Feeling if undetected (0-2)   Bad _____   Good _____
TOTAL DISCOMFORT INTENSITY   Bad _____-- Good _____= Sum _____

<u>Reasons for feeling (0-6)</u>   <u>Story Completion/ Reparation (1-4):</u> _____

Hedonic   _____   Empathic   _____
External/Authority   _____   Internalized   _____
Rel.-Oriented   _____   Stereotypical   _____
Other   _____   **TOTAL:**   _____

Story 2: Puppet
<u>Discomfort Intensity after wrongdoing</u>
Feeling (0 if absent; 1 if mentioned)   Bad _____   Good _____
How good/bad (faces; 0-4)   Bad _____   Good _____
Feeling if undetected (0-2)   Bad _____   Good _____
TOTAL DISCOMFORT INTENSITY   Bad _____-- Good _____= Sum _____

<u>Reasons for feeling (0-6)</u>   <u>Story Completion/ Reparation (1-4):</u> _____

Hedonic   _____   Empathic   _____
External/Authority   _____   Internalized   _____
Rel.-Oriented   _____   Stereotypical   _____
Other   _____   **TOTAL:**   _____

Story 3: Hit-and-run
<u>Discomfort Intensity after wrongdoing</u>
Feeling (0 if absent; 1 if mentioned)   Bad _____   Good _____
How good/bad (faces; 0-4)   Bad _____   Good _____
Feeling if undetected (0-2)   Bad _____   Good _____
TOTAL DISCOMFORT INTENSITY   Bad _____-- Good _____= Sum _____

<u>Reasons for feeling (0-2)</u>   <u>Story Completion/ Reparation (1-4):</u> _____

Hedonic   _____   Empathic   _____
External/Authority   _____   Internalized   _____
Rel.-Oriented   _____   Stereotypical   _____
Other   _____   **TOTAL:**   _____

Sum discomfort: _____
Sum reasoning: _____
Sum completion: _____

Final conscience score:
_____

Appendix E: Sample moral emotion interview

Introduction

Show the child a picture of WALL-E Invite the child to pretend that she has to answer

WALL-E's questions, to help him understand what people living on Earth are like:

> This is WALL-E. He comes from a place where things are very different from here, so he needs a friend who helps him and explains how things work here. So, let's pretend that you are his friend, and that you have to answer his questions. Try to be very clear, because WALL-E knows very little about humans.

Questions

> WALL-E has heard a girl (or boy) saying the she was feeling guilty. WALL-E wonders what might have happened to this girl to make her feel guilty. Can you tell him? (Antecedents)

> If the girl's mommy or daddy was there when this (antecedent described) happens, how does she feel? How does she feel if she is alone? (Role of the audience)

> WALL-E wonders, are there certain thoughts someone has when they feel guilty? (Thoughts characterizing the emotion)

> WALL-E wonders if there are things you feel like doing when you're guilty. (Action tendencies)

> Now WALL-E understands almost everything, but he is curious about one more thing: Is there anything people can do when they feel guilty to make the guilt go away and feel better? Why does this help them feel better? (Emotion regulation)

Appendix F: Appropriate responses for moral emotion interview

Shame	**Guilt**
<u>Antecedents</u>	**<u>Antecedents</u>**
Failure	Aggression to peers
Embarrassing situation	Infringements towards adults
Negative social event	
<u>Thoughts characterizing emotion</u>	**<u>Thoughts characterizing emotion</u>**
Block, mental void	Reparation, good intentions
Desire to be somewhere else	Remorse
Self-disparaging	Anticipation of negative conseq.
Anticipation of negative consequences	
<u>Action tendencies</u>	**<u>Action tendencies</u>**
Escaping/hiding	Repairing
Seeking comfort	
Doing nothing/crying	
<u>Role of the audience</u>	**<u>Role of the audience</u>**
Eases/Heightens Emotion	Irrelevant
(Dependent on context of antecedents given)	
<u>How to make the emotions pass</u>	**<u>How to make the emotions pass</u>**
Doing nice things	Repairing
Forgetting, distraction	
Nothing can be done	
Hiding	