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Coparenting and Early Conscience Development in the Family

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Abstract

The current research examined children's observed compliance in a family clean-up paradigm and parents' reports of coparenting to predict young children's conscience (e.g., affective discomfort and moral regulation) in a sample of 58 families with two parents and at least two children. Results demonstrated relations between parent reports of children's conscience development and observer-rated compliance in a family clean-up session, in addition to significant correlations between coparenting and conscience development. There were more significant results for younger, 2-year-old siblings than older siblings which may reflect the importance of the period between 2 and 3 for the emergence of conscience. Multiple regressions revealed that younger siblings' age, observed compliance/noncompliance, and parent reports of coparenting were significant in predicting parents' reports of affective discomfort and moral regulation. Findings underscore the importance of continuing research on whole-family dynamics when studying young children's early conscience and moral regulation.

Many developmentalists point to the early years of childhood as a significant time period for the development of the internalization of a set of standards that govern behavior and proper conduct in a socially acceptable manner (Dunn, 1987; Kagan, 1981; Kochanska, 1993; Emde & Buchsbaum, 1990; Kochanska De Vet, Goldman, Murray, & Putnam, 1994; Kopp, 1982). Indeed, research suggests that the period between 2 and 3 is a critical time for the emergence of early conscience and the development of a "moral self" (Emde, Biringen, Clyman, & Oppenheim, 1991; Kagan, 1981; Kochanska, Coy, & Murray, 2001; Kochanska, Tjebkes, & Forman, 1998). Few studies, however, have assessed moral development from a family systems' perspective. Family systems theory posits that families consist of subsystems of relationships and family dynamics are a result of the interaction between these subsystems (Cox & Paley, 1997; Minuchin, 1985). In support of this theory, a number of studies examining family influences on child development have found significant relations between marital, parent-child, and sibling relationships (Cowan & Cowan, 2002; Feinberg & Hetherington, 2001; Kowal, Krull, & Kramer, 2006; Richmond & Stocker, 2006; Stewart, Mobley, Salvador, & Van Tuyl, 1987; Volling, McElwain, & Miller, 2002; Volling & Elins, 1998). More recently, researchers have underscored the importance of whole-family interactions, such as coparenting between mothers and fathers, noting that family influence goes beyond the direct effects of dyadic interaction (McHale, 1995; Mchale, Lauretti, Talbot, & Pouquette, 2002; Schoppe-Sullivan, Frosh, Mangelsdorf, & Mchale, 2004; Volling, Blandon, & Grovine, 2006). Yet, there is little in the way of research examining family-level processes as it pertains to early moral development. One of the primary goals of this research was to examine the role of whole-family dynamics such as coparenting in predicting the emergence of early conscience.

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Child Compliance and Early Conscience Development as a Predictor of Moral Development

In her model of early conscience development, Kochanska (1993) argued persuasively that early internalization or conscience consists of two interrelated components. The first involves the affective discomfort or the necessary arousal, anxiety, guilt or remorse the child feels in response to a committed or anticipated transgression, in addition to the empathic concern a child shows to another in distress. Guilt, empathy and remorse are considered to be moral emotions. The second component is behaviorally-based and reflects the young child's ability to resist temptation and forbidden impulses and to exercise self-restraint, along with the ability to execute socially desirable behaviors when asked. This ability to act in accordance with expressed rules of conduct also reflects early moral regulation (Kochanska, 1993; Kochanska et al., 1994).

Children's compliance in laboratory clean-up tasks, as well as their ability to resist temptation in delay of gratification tasks, are often used as early indicators of the behavioral, rule-compatible component of conscience, whereas the guilt expressed by children in laboratory mishaps (e.g., the child is led to believe they broke a valued object) is one indicator of the affective discomfort component that underlies conscience (Cole, Barrett, & Zahn-Waxler, 1992; Garner, 2003; Kochanska, Gross, Lin, & Nichols, 2002). Although there appears to be a major developmental shift in the development of conscience between the ages of 2 and 3, children are already exhibiting these behaviors as young as 2 years of age (Aksan & Kochanska, 2004; Kochanska, 1993; Kochanska, Coy, & Murray, 2001; Kochanska et al., 1994;

Previous research suggests that there are two forms of compliance observed in laboratory clean-up tasks: committed or self-regulatory compliance and situational or externally motivated compliance (Feldman & Klein, 2003; Kochanska, Aksan, & Koenig, 1995; Kochanska & Aksan 1995; Parpal & Maccoby 1985). Committed compliance occurs when a child embraces a task wholeheartedly and is eager to accept the parental agenda throughout a given task, whereas situational compliance reflects a child who is generally cooperative, but lacks interest and needs frequent parental prompting to complete a task. Children's committed or self-regulatory compliance is an early indicator of internalization because the child's eagerness to comply with parental requests suggests they are internally motivated to do so. Such whole-hearted and enthusiastic compliance has been related to concurrent measures of conscience (Kochanska, 2002; Kochanska, Aksan, & Koenig, 1995; Laible & Thompson, 2000) and longitudinally predicts subsequent moral reasoning and moral conduct (Kochanska et al., 1995; Kochanska et al., 2001).

Children's resistance or noncompliance to parents' requests can take the form of passive noncompliance (e.g., a child ignores a parent's request); refusal (e.g., child shows overt resistance to a parent's request); and defiance (e.g., child outright rejects parental directives). Kuczynski and Kochanska (1990) found that while noncompliant behaviors are less frequent than compliant behaviors, they do occur through the age of five. Occurrences of defiance and passive noncompliance tend to decrease in frequency with age, whereas more skillful forms of refusal (e.g., negotiation) tend to increase with age (Kuczynski & Kochanska, 1990; Kuczynski, Kochanska, Radke-Yarrow, & Ginius-Brown, 1987). Specifically, Power, McGrath, Hughes, and Manire (1994) demonstrated that unskillful forms of noncompliance were most common among 2-year-olds and by age 4 there was a much lower frequency of defiance and passive noncompliance and an increase in refusal. Evidence suggests that early problems with noncompliance in toddlerhood may form the basis for later behavior problems and oppositional behavior (Calkins & Dedmon, 2000; Kuczynski & Kochanska, 1990; Smith, Calkins, Keane, & Anastopoulos, 2004). Specifically, children that demonstrated unskillful forms of noncompliance (e.g. refusal or passive noncompliance) were those who had more behavior problems and were also more likely to use coercive strategies when persuading their mothers (Kuczynski & Kochanska, 1990).

Most studies of child compliance are based on laboratory observations of mother-child clean-up tasks. Few researchers have included fathers in their studies and as a result, are unable to examine family-level or whole-family dynamics in determining young children's compliance and noncompliance. In a recent series of studies, Volling and her colleagues (Volling, Blandon, & Gorvine, 2006; Volling, Blandon, & Kolak, 2006) used a within-family perspective to study children's early compliance by developing a family clean-up paradigm that included mothers, fathers, and two children. The family clean-up paradigm allowed the researchers to address within-family processes such as coparenting between mothers and fathers, as well as differential parenting across siblings, and then relate these two family-level processes to committed compliance exhibited by older and younger siblings. Analyses revealed that it was the interaction between mothers' and fathers' gentle guidance during the cleanup task that predicted unique variance in both the older and younger siblings' committed compliance, above and beyond the effects of dyadic mothering and fathering (Volling, Blandon, & Gorvine, 2006). In addition, regression models also revealed that it was the interaction between the toddler's attachment security with mother and with father that predicted the toddler siblings' committed compliance. In other words, toddler siblings complied with their mothers when they were securely attached to mothers, but insecurely attached to their fathers (Volling, Blandon, & Kolak, 2006).

Even though this research found support for family-level dynamics as predictors of children's committed compliance, these studies did not examine whether the compliance and noncompliance observed during the family clean-up actually predicted other indicators of children's conscience development, namely, the affective discomfort and moral regulation components underscored by Kochanska (1993). Kochanska, Forman, Aksan, & Dunbar (2005) recently demonstrated that children's committed compliance when interacting with their mothers during the first two years of life was linked to behavioral components of moral development (i.e., moral regulation) at age 5, but found no effects on moral emotion or cognition (i.e., affective discomfort). Thus, moral regulation and affective discomfort appear to be distinct components of conscience. The fact that young children's committed compliance was linked to the moral regulation rather than the affective discomfort component is most likely due to the fact that compliance reflects children's behavioral rather than affective outcomes. The first aim of this study was to address older and younger siblings' compliance and noncompliance in a family clean-up and their relations to mothers' and fathers' reports of conscience. We hypothesized that observed committed compliance during a clean-up task would be related to parents' reports of rule-compatible conduct and moral regulation, which is the behaviorally-based component of conscience. It was unclear whether there should be strong associations between compliant behavior and parents' reports of affective discomfort, which emphasizes the moral emotions of guilt and empathy instead of moral behavior.

The Role of Coparenting for Children's Behavior

Most research on children's compliance has examined maternal socialization factors and their relationships to compliance. Family systems theory, however, would suggest that child compliance and conscience development may be different when the whole family is present because of the interaction between family subsystems. The second aim of this research was to examine how the parent level subsystem of coparenting influenced developmental outcomes for both siblings and how the coparental relationship may impact children's moral behaviors.

Coparenting refers to the behaviors used by mothers and father to either support or undermine each others' parenting efforts (Gable, Belsky, & Crnic, 1995; McHale, 1995). McHale (1995) asserts that coparenting is a family-level dynamic that should be treated separately from other marital domains. Coparenting is not characterized by parents individually carrying out childcare routines on a daily basis, but instead, involves synchronization among adults

responsible for the upbringing of children (McHale, Kuersten-Hogan, & Rao, 2004). Coparenting can be conceptualized as a polyadic construct, involving a dyadic relationship between parents or a triadic or larger relationship involving parents and children (McHale et al., 2004; McHale, Lauretti, Talbot, & Pouquette, 2002). At the present time very little is known about coparenting in families with multiple children, however, McHale, Lauretti, DeCoursey, & Zaslavsky (2000) suggest that families with two children most commonly use a *parallel twosome* strategy instead of a unified family strategy. This strategy involves each parent engaging with one child at a time.

Supportive coparenting occurs when parents assist one another in their parenting efforts. McHale (1995) has underscored partner cooperation and coparental warmth as aspects of supportive coparenting. Cooperation reflects interactions when one parent repeats the same request as the other parent, and warmth occurs when parents express moderate to high levels of positive affect during interaction. Unsupportive coparenting is when parents undermine each others' efforts to parent their children and is measured by observing the extent of behavioral competition and verbal sparring between parents. This is seen in such behaviors as interrupting the other parent, undermining the other parent's agenda, or disagreeing with the other parent in the children's presence (Gable et al., 1995; McHale, 1995). Further, Margolin (2001) conceptualized coparenting behaviors into three categories: cooperation, conflict, and triangulation. Cooperation reflects supportive interactions between parents, conflict refers to disagreements about parenting decisions, and triangulation is an unsupportive coparenting technique when one parent forms an alliance with the child against the other parent during conflict (Margolin, 2001).

Supportive and unsupportive coparenting behaviors are moderately stable over time and are related to children's behavioral adjustment (Gable et al., 1995; Schoppe-Sullivan, Frosch, Mangelsdorf, & McHale, 2004). Specifically, fathers who use supportive coparenting tactics have young children with fewer behavior problems (McHale & Rasmussen, 1998). Schoppe, Frosch, and Mangelsdorf (2001) found that supportive coparenting techniques and more adaptive family structures (i.e., balanced alliances and high family cohesiveness) were related to less externalizing behavior problems, whereas unsupportive coparenting was related to more externalizing behavior problems. Belsky, Putnam, & Crnic, (1996) found that less supportive coparenting was associated with lower levels of behavioral inhibition.

Although coparenting has been linked to children's behavioral adjustment, no studies currently have examined the role of coparenting in the emergence of young children's conscience. As discussed above, Volling et al., (2006) demonstrated that the interaction term between maternal and paternal gentle guidance observed during the family clean-up may reflect coparenting processes and that the coparenting relationship may indeed influence a children's willingness to comply. Based on earlier studies finding a link between coparenting and children's behavior problems, we hypothesized that unsupportive coparenting or coparental conflict would be associated with children's noncompliance, whereas supportive or cooperative coparenting would be related to children's committed compliance and their conscience development. Specifically, supportive coparental behaviors were expected to relate to child compliance and higher levels of parent-reported conscience development and unsupportive coparental behaviors would be associated with noncompliance and lower levels of conscience development.

Method

Participants

Participants for this study included 58 2-year-old toddlers, their older siblings, their mothers, and their fathers. Recruitment took place through local birth announcements, birth records,

newspaper advertisements, and bulletin announcements at local churches, day cares, and preschools. Families with 2-year-old children were contacted with a description of the study and invited to participate if they fit the following criteria: (1) couples were married with both parents living at home, (2) both mothers and fathers agreed to participate, (3) one child was approximately 2 years of age, and (4) there was an older sibling in preschool or early elementary school. The primary goal of the study was to investigate the role of the family in facilitating children's positive developmental outcomes such as prosocial and cooperative behavior as well as the early emergence of morality. Initially, 93 families expressed interest in the study, but only 58 families (62%) eventually agreed to participate. Most parents cited scheduling constraints and finding alternative childcare for other children as the most frequent reasons for declining participation.

All parents were the biological mothers and fathers of the children. The majority of mothers ($n = 56$) and fathers ($n = 54$) were European American. The sample also included one Latino mother and one Latino father and one Asian American mother and three Asian American fathers. Families were predominately middle or upper-middle class (fathers' modal income: \$70,000 to \$80,000; mothers' modal income: \$10,000 or less). Forty-three percent of mothers were unemployed and stayed at home with their children. On average, parents were married 8.7 years ($SD = 3.4$). The average age of mothers was 35 years old ($SD = 4.5$) and all mothers had completed some college. Thirty percent of mothers had a Bachelor's degree, 10% completed some graduate education, 2% had a professional degree, 35% had a Master's degree, and 9% had greater than a Master's degree. The average age of fathers was 37 years old ($SD = 4.6$). All fathers had completed at least some college, with 35% having a Bachelor's degree, 5% with some graduate education, 5% with a professional degree, 35% had a Master's degree, and 5% had greater than a Master's degree. On average, the younger child was 27 months ($SD = 3$) and the mean age for the older sibling was 58 months ($SD = 12$; range 3-7 years). Sibling dyads included 14 girl/girl (older/younger), 12 boy/boy, 11 boy/girl, and 16 girl/boy: 85% were first and second born pairs; 10% were second and third born, 3% were third and fourth born, and one dyad was fourth and fifth born.

Procedure

Participation included two laboratory visits occurring approximately four weeks apart and lasting about three hours each. Visits were conducted in a laboratory "living room" consisting of a couch, a loveseat, chairs, tables, and a variety of toys. During the first visit, couples participated in several videotaped marital communication tasks and both spouses received a packet of questionnaires that assessed marital and individual characteristics.

The second visit, from which data for the current report come, included all family members (mother, father, older and younger siblings). Parents and children were observed in several interaction tasks during a three hour laboratory visit. At the end of the visit, the parents were given questionnaires regarding their individual children. These questionnaires assessed parenting, sibling, and child characteristics and were returned by mail. For their participation in the study, families were given \$50 and each child received a small gift. The current study will rely on data from the 5-minute family clean-up session and parent reported data of their coparenting as well as their children's conscience development. The n 's for various analyses range from 53 to 57 because of missing data (53 fathers and 57 mothers returned questionnaires).

Observational Coding

The family clean-up session included all four members of the family. Parents were instructed to have their children pick-up toys and clean-up the laboratory playroom with no further instructions on how to do so. It was emphasized that the children were to clean-up as much of

the room as possible and that parents were there to offer assistance, but not to do the task entirely themselves. Videotapes of the 5-minute clean-up session were later coded for child compliance behaviors.

Children's Compliance—Compliance codes were based on Kochanska and Aksan (1995) and measured the level of individual compliance both the younger and the older siblings showed when given directives from either their mothers or their fathers. An adapted version of this coding system for the family clean-up session has been used successfully in earlier work (Volling, Blandon, & Gorvine, 2006). Two coders independently rated the four dyads of the family, with one coder rating mother-older sibling and father-younger sibling and the other rating mother-younger sibling and father-older sibling dyads, in order to ensure that coders did not rate the same person twice for one clean up session. Both younger and older siblings were coded for their level of compliance with both mothers' and fathers' directives during each of the 15-second intervals and were given one of six possible codes. *Committed compliance* was coded when the child responded whole-heartedly and enthusiastically to the parents' directive. Parents did not need to intervene to maintain orientation to the clean-up task. *Situational compliance* described a child who cooperated with the task at hand, but needed reminders to stay on task. The child had limited interest in cleaning up and was slow to comply. *Passive noncompliance* was used when the child did not clean up on her own. The child did not complete the task and ignored parents' directives. *Refusal/negotiation* involved overt resistance to the parental agenda. This resistance was generally verbal, but also included shaking head no. It consisted of general refusal to comply or an attempt to negotiate with the parent, but not in an aversive manner. *Defiance* consisted of outright refusal to perform a parental directive. The child resisted cleaning up in an uncontrolled manner (e.g., kicking, throwing toys, having a tantrum, or whining). *Time Out* was used when the entire interval was spent with the parent and child engaged in an activity unrelated to the cleanup task.

Proportion scores were created for each parent-child dyad by noting the number of intervals the behavior was coded out of the total 15-sec intervals coded. Inter-rater reliability was calculated using 23% ($n = 13$) of dyads ($\kappa = .80$). Refusal and defiance occurred infrequently for both siblings (refusal: less than 13% of the time for older siblings and less than 18% of the time for younger siblings; defiance: less than 3.5% of the time for older siblings and less than 11% for younger siblings) so both of these variables were dropped from further consideration. Because it is early committed compliance, not situational compliance, that consistently predicts children's moral development (Kochanska et al., 2001; Kochanska et al., 1995), we focus on the older and younger siblings' committed compliance in the remainder of this paper and do not consider situational compliance further.

Parent-Reports

Coparenting questionnaires—Coparenting was assessed using questionnaires given to the parents to take home to complete and then return during the second lab visit. Each parent completed the Coparenting Questionnaire (CQ) developed by Margolin, Gordis, and John (2001). Parents completed the scale once for their younger child and once for their older child. The questionnaire included 14 items focused on coparenting behaviors which were rated using a 5-point scale (1 = Never and 5 = Always). Three scales were created: *cooperation* (e.g., "my spouse tells me lots of things about this child"), *triangulation* (e.g., "my spouse tries to get this child to take sides when we argue"), and *conflict* (e.g., "my spouse and I have different standards for this child's behavior"). Internal consistency was calculated for each scale and with the exception of father's reports of coparental triangulation with the younger sibling, alphas ranged from .74 to .87 ($M = .80$). The alpha for the triangulation scale for fathers in relation to the younger sibling was .27 so this scale was dropped from further consideration and only the mother's triangulation scale was used in all subsequent analyses. Further,

correlations for coparenting scales across siblings were fairly high (.50 to .90, all p 's < .001) leading us to average coparenting scales across older and younger siblings to create one coparenting score of cooperation, conflict, and triangulation for mothers, and one coparenting score of conflict and cooperation for fathers.

Children's conscience development—Both mothers and fathers completed the My Child questionnaire, a measure of conscience for both the older and younger siblings (Kochanska et al., 1994). Kochanska et al. (1994) developed this measure with children as young as 21 months, so it was deemed appropriate for assessing conscience development in our sample of 2-year-olds. Parents rated 100 items, but only 88 items were used in final analysis. Kochanska et al. (1994) found that two of their original subscales of the My Child questionnaire (Symbolic Reproduction of/dealing with Wrongdoing and Sensitivity to Flawed or Damaged Objects, Themes of Wrongdoing) were not as reliable as the remaining 8 subscales so the 12 items of these subscales were dropped from analyses. Items were answered using a 7-point scale (1 = extremely untrue, 7 = extremely true) which were then summed to create eight subscales: (a) *guilt, remorse/other emotional reactions after transgression* (e.g. “child likely to feel responsible whenever anything goes wrong”, 18 items, $\alpha = .73$ to .86); (b) *concern over good feelings with parent after wrongdoing* (e.g. “after having done something naughty, child asks to be forgiven”, 8 items, $\alpha = .79$ to .84); (c) *confession* (e.g. “child may confess to doing something naughty even if unlikely to be found out”, 7 items, $\alpha = .66$ to .78); (d) *apology* (e.g. “child will spontaneously say sorry after having done something wrong”, 6 items, $\alpha = .79$ to .90); (e) *reparation/amends* (e.g. “child is eager to make amends for doing something naughty”, 9 items, $\alpha = .68$ to .83); (f) *corrections occasioned by others' transgressions* (e.g. “child is likely to scold another child who violated a house rule”, 7 items, $\alpha = .77$ to .86); (g) *internalized conduct* (e.g. “child will spontaneously pick up toys, even without being asked”, 20 items, $\alpha = .80$ to .90); and (h) *empathic, prosocial response to another's distress* (e.g. “child will try to comfort or reassure another in distress”, 13 items, $\alpha = .78$ to .83). Based on the work of Kochanska et al. (1994), the subscales were composited by further summing them to create scores for (a) *affective discomfort* (guilt/remorse, concern over good feelings with parent, empathic response to other's distress, apology, $\alpha = .88$ to .93) and (2) *moral regulation* (confession, internalized conduct, reparation, corrections occasioned by others' transgressions, $\alpha = .88$ to .92). When data were missing for individual items, the scale mean was imputed and used to calculate scale scores.

Results

Means (standard deviations) for all variables used in analyses are reported in Table 1. Preliminary analyses between demographic characteristics and child compliance/noncompliance and conscience development and coparenting behaviors were calculated. Correlational analyses were conducted to examine the associations between siblings' observed compliance/noncompliance and parent reports of conscience, and reported coparenting and conscience. The final analyses examined the multiple predictors of children's conscience outcomes by examining the unique prediction of observed compliance/noncompliance and reported coparenting for children's conscience.

Preliminary Analysis: Parent, Sibling, and Gender Differences

In order to discern differences between parent (mother vs. father), sibling (older vs. younger), and sibling gender dyad composition (brother/sister, older/younger), $2 \times 2 \times 4$ mixed model ANOVAs were performed with sibling and parent as repeated factors, gender dyad as a between-group factor, and children's conscience development as the dependent variables.¹ There was a significant main effect of sibling, $F(1, 49) = 32.81, p < .001, \eta_p^2 = .40$, for parent reports of children's moral regulation. As expected, parents reported higher moral regulation

for older compared to younger siblings ($M = 17.76$ and 15.85). Parent reports of affective discomfort revealed a significant sibling effect, $F(1, 49) = 26.62, p < .001, \eta_p^2 = .35$, which was qualified further by a significant parent by sibling interaction, $F(1, 49) = 6.93, p < .05, \eta_p^2 = .12$, and a parent by sibling by gender composition interaction, $F(3, 49) = 3.56, p < .05, \eta_p^2 = .18$. Even though parents, in general, reported that older siblings experienced more affective discomfort than younger siblings ($M = 18.05$ and 16.46), follow-up contrasts of the parent by sibling by gender dyad interaction (all p 's $< .001$) revealed that fathers of boy/boy dyads ($M = 16.45$) reported lower affective discomfort scores for the older siblings (sons) than they did for their older daughters in girl/girl ($M = 18.50$) dyads. Fathers also reported lower scores on affective discomfort for younger siblings in girl/boy ($M = 15.04$) dyads than boy/boy ($M = 16.88$) and girl/girl ($M = 18.25$) dyads. Mothers and fathers also differed significantly in their reports of their older sons in boy/boy dyads ($M = 19.11$ and 16.45 , respectively). Mothers of these same children (boy/boy) also reported greater differences in affective discomfort for older ($M = 19.11$) and younger sons ($M = 15.80$). Finally, mothers and fathers of girl/boy dyads reported greater affective discomfort scores for their older daughters ($M = 18.42$ and 18.31 , respectively) than their younger sons ($M = 15.22$ and 15.05 , respectively), but not for any of the other dyads.

Further, demographic variables (i.e., parents' annual income, number of hours parents worked, and parents' education level) were correlated with children's conscience development and compliance variables, as well as with coparenting behaviors. Five significant correlations (4%) resulted, but some caution should be exercised in interpreting these findings given that the number of significant correlations did not exceed chance levels. Fathers' reports of younger siblings' affective discomfort was inversely related to fathers' annual income, $r = -.30, p < .05$. Mothers' reports of coparental cooperation was negatively associated with fathers' annual income, $r = -.31, p < .05$, whereas fathers' reports of coparental cooperation were positively related to mothers' education level, $r = .42, p < .01$. Finally, mothers' reports of coparental triangulation were significantly associated with mothers' annual income and the number of hours mothers worked, $r = .30, p < .05$; $r = .36, p < .01$, respectively.

Age of both siblings was also examined to see if age was significantly associated with children's conscience development and compliance variables, as well as with coparenting. The age of the older sibling did not reveal any significant associations. Age of the younger sibling, however, was significantly related to mothers' and fathers' reports of affective discomfort, $r = .39, p < .05$; $r = .55, p < .001$ respectively, and fathers' reports of moral regulation, $r = .39, p < .05$. Younger siblings' age was also positively related to mothers' reports of coparental cooperation, $r = .39, p < .05$. Given the number of significant associations for the age of the younger sibling, this variable was included in all the multiple regression models reported later as a control.

Correlations between Observed Compliance and Conscience

Correlations between observed compliance and conscience revealed significant associations for the younger siblings, but not the older siblings. Correlations for both siblings can be found in Table 1. There was a significant positive relation between younger siblings' committed compliance to mothers and moral regulation as reported by their mothers and their fathers. Similarly, observed committed compliance for younger siblings with their fathers was significantly and positively associated with mothers' and fathers' reports of moral regulation for the younger siblings. Mothers' reports of the younger siblings' moral regulation revealed

¹We report results here for the conscience measures only because similar analyses were conducted on the observed compliance and noncompliance variables in a separate investigation reported in Blandon and Volling (under review), which was designed specifically to replicate the original findings of Volling et al. (2006). They are not duplicated here. The analyses revealed sibling effects for committed compliance and passive noncompliance such that older siblings used more committed compliance and less passive noncompliance than younger siblings.

a significant negative correlation with the younger sibling's passive noncompliance with mother. There was also a marginal negative association with younger siblings' passive noncompliance with fathers and maternal reports of the younger siblings' moral regulation. Further, fathers' reports of affective discomfort for the younger sibling were marginally associated with committed compliance with mothers.

Cross-sibling correlations (e.g., mothers' reports of moral regulation for the older and younger sibling) were also examined and can be found along the diagonal of Table 1. Mothers' and fathers' reports of affective discomfort, as well as, mothers' reports of moral regulation were all positively and significantly associated across older and younger siblings. There were no significant correlations across siblings for their observed behaviors in the clean-up.

Correlations between Coparenting and Conscience

Table 1 displays the correlations between parent-reported conscience development and parent-reported coparenting behaviors. For toddler siblings, mothers' reported coparental cooperation was positively correlated with both mothers' and fathers' reports of affective discomfort. Also, mothers' reported coparental triangulation was negatively related to fathers' reported affective discomfort and moral regulation for the younger siblings. Mothers' reported coparental conflict was negatively associated with both parents' reports of moral regulation, as well as fathers' reports of affective discomfort. Fathers' reports of conflict were also negatively related to mothers' reports of moral regulation. Further, there was a negative trend between mothers' reports of coparental conflict and mothers' reports of affective discomfort. Fathers' reports of cooperation were also marginally related to mothers' reports of moral regulation for the younger siblings.

Far fewer correlations were significant when looking at the findings for older siblings. When mothers reported more coparental conflict, mothers and fathers reported less moral regulation for older siblings. Also, when fathers reported more coparental conflict, they reported less moral regulation for the younger siblings. Additionally, mothers' and fathers' reports of more coparental cooperation were marginally associated with the older siblings' moral regulation as reported by mothers.

Correlations between Observed Compliance and Coparenting

There were few significant correlations when assessing the relation between children's observed compliance and reported coparenting behaviors. There were no significant correlations between the younger siblings' compliance and parent-reported coparenting reports. For the older siblings' observed compliance, there was one significant correlation and two marginal correlations. Older siblings' committed compliance with mothers was positively associated with maternal reports of triangulation and showed a negative trend with mothers' reports of coparental cooperation. Additionally, older siblings' passive noncompliance with fathers was marginally associated with fathers' reports of coparental conflict.

Coparenting and Observed Compliance as Predictors of Parental Reports of Affective Discomfort and Moral Regulation

Because no prior studies have examined coparenting and early conscience development, our final analyses were considered exploratory. Hierarchical multiple regressions (HMR) were performed using coparenting and children's observed compliance/noncompliance as predictors of parental reports of affective discomfort and moral regulation. These regression models were developed by examining all significant univariate relations with each sibling's score of affective discomfort and moral regulation. All variables revealing significant bivariate correlations were then entered into the hierarchical regression analyses in an effort to determine whether demographic variables, children's observed compliance and/or noncompliance, and

parent-reported coparenting explained unique variance in conscience outcomes. We were only able to build HMR models for the younger siblings because there were more significant correlations for the younger than the older siblings. In the first analysis the age of the younger sibling was entered in the first step, then significant demographic variables were entered, followed by significant child behaviors observed during the clean-up, and in the final step, significant family variables (e.g., coparenting behavior) were entered.

Given the number of variables to be included, we were concerned about the variable to subject ratio. Thus, we attempted to reduce the number of variables in the regressions in several ways. First, mothers' and fathers' reports of coparental conflict were combined into one scale because of the strong, positive correlation between reports, $r = .54, p < .01$. Second, we ran all the analyses with the demographic variables included, but because none of the demographics were significant in predicting conscience outcomes in any of the models examined, they were dropped in order to increase statistical power by reducing the variable to subject ratio. Recall also that the number of significant associations did not exceed chance levels for demographic variables in the correlational analyses.

In the end, three HRM models were conducted (1) younger siblings' age, younger siblings' committed compliance, passive noncompliance with mother, their committed compliance with father, and coparental conflict to predict mothers' reports of moral regulation; (2) younger siblings' age, mothers' reports of coparental cooperation and triangulation, and parents' combined reports of coparental conflict to predict fathers' reports of affective discomfort; and (3) younger siblings' age, younger siblings' committed compliance with mother and father; and mothers' reports of triangulation were entered to predict fathers' reports of moral regulation.

Table 2 presents the results of these analyses. These three models each explained a significant percentage of the variance in predicting parental reports of younger siblings' conscience development. In Model 1 of Table 2, a significant 23% of the variance overall in mothers' reports of the toddler siblings' moral regulation was explained. Although the age of the younger sibling in this case did not explain a significant amount of variance, the addition of the child's observed behavior during the family clean-up explained a significant 14% of the variance and the younger siblings' observed passive noncompliance was a significant predictor of maternal reports of moral regulation. The addition of coparental conflict explained a significant 10% of the variance and was a significant predictor of mothers' reports of moral regulation in the final regression model when all variables were included.

Model 2 accounted for 34% of the variance in fathers' reports of the younger siblings' affective discomfort, with the majority of the variance (30%) being accounted for by the age of the younger sibling. A marginal 9% of the variance was explained by the addition of coparenting. In the final regression model, age and mothers' reports of coparental triangulation were significant predictors.

In Model 3, 48% of the total variance was explained. Significant amounts of variance were explained at each step of the model: 17% for younger siblings' age, 17% for observed child compliance, and 18% for the addition of mothers' reports of coparental triangulation. The younger siblings' observed committed compliance with mother, as well as mothers' reports of coparental triangulation, were significant predictors of fathers' reports of the younger siblings' moral regulation in the final regression model.

Discussion

The current study examined the relations between observations of children's compliance and noncompliance in a family clean-up paradigm and their relations with parents' reports of

affective discomfort and moral regulation to determine if child behavior assessed in the family clean-up was indeed related to other measures of conscience development. If children's committed compliance is indeed an indicator of early internalization, then we should expect associations between committed compliance observed with mothers and fathers during the family clean-up paradigm and other indicators of conscience, particularly, the child's ability to partake in rule compatible behaviors. We were more successful in finding these associations for the younger, 2-year-old siblings in the current study than for their older brothers or sisters who were approximately 4.5 to 5 years of age. In general, higher levels of parent-reported conscience development were significantly and positively related to observations of toddler siblings' committed compliance and inversely related to their passive noncompliance.

There are several possible explanations for why parent-reported conscience development was significantly related to observations of compliance for younger siblings but not older siblings. Research has underscored the period between 2 and 3 as critical for the emergence of early conscience (Kochanska, 1993; Emde & Buchsbaum, 1990). In the current study, because younger siblings were approximately 2 years old, the significant associations between parent-reports of conscience development and observations of compliance for these younger children may reflect the emergence of this important developmental milestone. Older siblings are beyond this critical timeframe and have developmentally surpassed this period of early conscience development. This possibility is supported by the fact that the range of scores was more restricted for the older siblings than for the younger siblings with respect to parents' reports of affective discomfort and moral regulation. Older siblings were also more likely to engage in committed compliance during the family clean-up paradigm than were their toddler siblings, which is consistent with the cross-sectional and longitudinal work of others finding that children perform more committed compliance and less noncompliance with age (Kochanska et al., 1995; Kuczynski & Kochanska, 1990).

There was no standard pattern for the significant associations between children's compliance, coparenting and conscience development variables. There were, however, more significant correlations with parental reports of moral regulation than affective discomfort. This is most likely because moral regulation captures the behavioral component of conscience development, whereas affective discomfort reflects the emotional and cognitive components of conscience (Kochanska, 1993). In this study, children's behaviors were the primary interest, given the emphasis on compliance and noncompliance. Therefore, it is reasonable to expect stronger relations with moral regulation than affective discomfort.

Kochanska et al. (1994) also found only modest relations between maternal reports of affective discomfort and moral regulation, using the same questionnaire as that in the current study, and observed compliance behaviors for 3-year-old children. Our findings do lend credence to the possibility that at least in the case of the toddler siblings, committed compliance as observed in a whole-family interaction task is indicative of early conscience just as earlier research has found with observations of children's committed compliance using dyadic clean-up paradigms between mother and child (Kochanska et al., 1995; 2001; 1998). These findings suggest that utilizing a family perspective, which focuses on children's compliance in whole-family interaction tasks, is an important area for future research.

Parent, Sibling, and Gender Differences

As expected, our results also indicated developmental differences for conscience outcomes such that parents reported more moral regulation and affective discomfort for older siblings than younger siblings. This finding is clearly in line with much of the earlier work of Kochanska underscoring age differences (Kochanska, 1994; Kuczynski & Kochanska, 1990; Kuczynski, Kochanska, Radke-Yarrow, & Girmius-Brown, 1987). There were also several interesting patterns of findings based on gender for affective discomfort. Fathers reported that boys,

especially older sons in boy/boy dyads and younger sons in girl/boy dyads, had lower affective discomfort than older daughters in girl/girl and younger daughters in girl/girl dyads. In general, gender differences were apparent in same-gender as opposed to mixed gender dyads for both older and younger siblings according to fathers' reports. Why such differences exist is not entirely clear and because no other study has examined gender differences in conscience outcomes in relation to the gender of a sibling, we can only speculate at this time what may account for these findings. The literature on empathy and moral development has consistently reported that girls are more empathic, use more committed compliance and score higher on moral understanding tasks than do boys (Kochanska et al., 1997; Kochanska et al., 2002; Zahn-Waxler, Robinson, & Emde, 1992). For instance, Kochanska, Murray, and Coy (1997) demonstrated that early school age girls outperformed boys on tasks testing conscience development. These differences may be due to gender socialization practices where parents expect girls to be more empathic and caring than boys or may actually be due to maturational differences in young boys' and girls' emotion regulation. From past research, we also know that children comply more with fathers' than mothers' requests (Power et al., 1994) so it is possible that children also engage in more rule-compatible conduct and exhibit more affective discomfort in their fathers' presence. Thus, fathers may actually witness different behaviors from their sons and daughters than do mothers. More research is needed in order to clearly articulate what is responsible for the current findings.

Association between Coparental Behaviors and Children's Compliance

We also hypothesized that more positive coparenting behaviors would be related to children's committed compliance and negative coparenting behaviors would be related to children's noncompliance. Contrary to our hypotheses, there were no significant associations between younger siblings' compliance and coparenting and only one significant association for the older sibling, but in the opposite direction of what we expected. The older siblings' committed compliance was actually positively related to mothers' reports of coparental triangulation. Triangulation within the family indicates that one parent is trying to get the child to side with them against the other parent. It is possible that when mothers' reported greater triangulation they had also developed closer relations with the older sibling and that these children were more likely to comply to their requests as a result. If this family dynamic were evident, then one might expect children to comply more with their mothers than with their fathers. Future research might benefit from coding coparenting behaviors during the clean-up paradigm to determine if observations of coparenting triangulation show similar relations to those reported here for maternal reports of triangulation.

Associations between Coparental Behaviors and Conscience Development

Because of our interest in the family system and within-family processes, another goal of this study was to examine the relations between coparenting as reported by mothers and fathers, and children's conscience development. We hypothesized that cooperative coparenting should facilitate children's conscience development, whereas coparental conflict and triangulation might undermine development in this regard. For the most part, our hypotheses were confirmed in that cooperative coparenting behaviors were associated with higher scores of affective discomfort and moral regulation. These findings also held for both the older and the younger siblings, although there were far more significant findings for the toddlers than the older siblings. Again, the differing results for the two siblings may be due to developmental differences. As noted earlier, because children begin to internalize social agendas and conscience development emerges between the ages of 2 and 3, many of the older siblings in this study have advanced past this critical developmental stage (Kochanska et al., 1998). As such, they may not require the same type of guidance or control as do their younger siblings to comply or to remain on task. Thus, mothers and fathers may not have to coparent as much with these children as with toddlers who may still need external supports and persistent prompts

to complete the clean-up task. Therefore, coparental behaviors may not have the same relations with older siblings' compliance as they do with younger siblings' compliance. To our knowledge, the current study is the only study to consider the role of coparenting in early conscience development and more research is certainly needed in this area. Only when more studies attempt to replicate the current findings, can we feel more confident of the post-hoc explanation offered here.

As a final exploratory analysis, correlated variables were included in a series of hierarchical multiple regressions to assess whether age, coparenting, and observed compliance/noncompliance were unique predictors of parent-reported conscience development. In 2 of the 3 models examined for the younger siblings, observed behaviors added significant variance to the prediction of conscience outcomes. Similarly, coparenting explained additional variance in all 3 models even after controlling the age of the younger sibling and their observed compliance/noncompliance.

In studies where parents are asked to report on two or more constructs, there is a real concern about shared method variance and whether significant results are due to similar methods or to actual relations between the constructs of interest. In the current report, we might expect relations between parents' reports of coparenting and their reports of conscience, but in the final regression analyses, observations of the younger siblings' compliant or noncompliant behavior during the family clean-up continued to predict the conscience outcomes even after variance shared across methods and reporters was taken into consideration. Further, the inclusion of both mothers' and fathers' reports of conscience outcomes and coparenting helped alleviate some of the concerns of reporter bias because it was mothers' reports of coparenting, for instance, that predicted fathers' reports of conscience. Specifically, younger siblings' committed compliance with the mother remained a significant predictor of fathers' reports of moral regulation; even after variance from parent reports were considered. Because there were no significant associations at the bivariate level between observed behaviors and the older siblings' affective discomfort and moral regulation, we were unable to test the unique contribution of observed compliance and coparenting for these children. Therefore, future research should consider family level dynamics as possible contributors to early morality (see also Dunn, 2006).

Limitations and Future Research

Although this study revealed several significant findings, some limitations need to be noted. First, the small sample consisted primarily of White, middle-class families who were relatively low risk. Not only did the sample size limit the power of statistical analyses, but we need more research looking at different family structures and families from different ethnic backgrounds to know if our results may generalize to other family situations. For instance, families that use power assertion and less negotiation between parents and children may have a different view of children's noncompliance and occurrences of these behaviors may be infrequent. Similarly, family dynamics function differently in one-child families and coparenting takes on a different meaning if the mother and father are divorced rather than married, as in the current research. Because of our interest in early conscience development and the developmental significance of the first 2 to 3 years of life, the questions asked and the results obtained with respect to coparenting most likely do not generalize to other developmental ages. Future research examining whole-family dynamics such as coparenting is needed that takes into consideration diverse family structures and families with children of different ages.

It is important to note the correlational nature of the current research. As such, causal relationships cannot be determined and no conclusions about causality can be inferred from the results. It is possible that coparenting determines children's compliance/noncompliance and early conscience or that children's behaviors influence the amount of coparenting they

receive. Due to the nature of family systems, it is most likely the case that these associations are reciprocal in nature and that multiple family relationships interact to predict the individual well-being and functioning of all members of the family not only concurrently, but also longitudinally. Thus, coparenting no doubt influences children's conscience development, but coparenting is also being influenced by children's behavior over time. Larger longitudinal studies are needed that follow children across the toddler and preschool years.

In conclusion, this research suggests that there are relations between coparental behaviors and children's conscience development, and underscores the importance of continuing research on whole-family dynamics. It is important that research moves beyond the strict focus on mother-child interaction as the sole means of assessing socialization influences for children's social and emotional development. Children live in a vast world with multiple caregivers and interactive partners. Similarly, most families include more than one child and we know that parents do not treat all children in the family the same whether these differences are due to age, gender, or temperamental differences between children (Deater-Deckard, Pike, & Petrill, 2001; Volling, 1997; Volling & Elins, 1998). The current study found that some of our hypothesized relations existed for one sibling, but not both children, in the family, which in many respects make sense given that the age of our younger siblings coincided with the age at which significant strides are made in the development of conscience. Further research is needed that examines the associations not only between coparental behaviors and children's conscience development, but also between other family subsystems as well (e.g., sibling, marital). Research of this type must also go beyond the typical laboratory observation and assess these behaviors and relationships across multiple contexts and with multiple methods in order to understand more clearly family functioning. Once studies begin to embrace a family perspective, we will eventually be able to understand the multiple ways in which families influence children's developmental outcomes.

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Table 1
Intercorrelations between Children's Compliance, Conscience Development, and Coparenting Behaviors along with Means and Standard Deviations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Aff Dis (M)	.41**												
2. Mor Reg (M)	.64***	.38**											
3. Aff Dis (F)	.29*	.32*	.27*	.16***	-.02	.17	-.10	-.05	.12	.05	.05	.15	.01
4. Mor Reg (F)	.07	.18	.34***	.38**	-.12	-.08	.24†	-.24†	.23†	-.18	-.36**	.25†	-.16
5. Comm (M)	.16	.17	.73***	.10	-.01	.16	-.09	.09	.15	.13	-.11	.20	-.20
6. Passive (M)	-.17	.28*	.26†	.46***	-.05*	-.28*	.03	-.20	.16	-.17	-.33*	.25	-.28*
7. Comm (F)	-.05	-.27*	.18	.07	-.26*	.12	.19	-.30*	.10	.45***	.20	-.20	.14
8. Passive (F)	-.22	.27*	.01	.30*	.28**	-.03	-.46***	.32*	.10	-.08	.03	.02	-.07
9. Coop (M)	.34**	-.25†	-.08	-.07	-.37*	.19	-.04	-.31*	-.08	.06	-.08	.01	.04
10. Triang (M)	.07	.19	.34**	.22	-.14	.15	.21	-.03	.09	.02	.06	.10	.23†
11. Conflict (M)	-.26†	-.02	-.41**	-.55***	-.15	-.03	-.15	-.09	.10	.30*	-.64***	.44**	-.42**
12. Coop (F)	.06	-.30*	-.39**	-.40**	-.04	-.15	-.07	-.02	-.64***	.10	.57***	-.27*	.18
13. Conflict (F)	-.19	.11	.25†	.20	-.04	.16	.03	.01	.44**	.57***	.10	-.49***	.54***
M (SD) OS	18.47	18.15	17.73	17.47	.14	-.07	-.10	-.01	-.42**	.18	.54***	.10	-.61***
Measures	(2.61)	(2.56)	(2.10)	(1.83)	(.15)	(.10)	(.15)	(.11)	(.68)	(.32)	(.56)	(.53)	(.55)
M (SD) YS	16.28	15.93	16.50	15.87	.10 (.	.14 (.	.07 (.10)	.12 (.	3.94	1.13	1.90	4.30	1.91
Measures	(3.13)	(2.58)	(2.59)	(2.24)	(.11)	(.13)	(.12)	(.12)	(.68)	(.32)	(.56)	(.53)	(.55)

Note. Aff Dis = Affective Discomfort; Mor Reg = Moral Regulation; M = Mother; F = Father; Comm = Committed Compliance; Passive = Passive Noncompliance; Coop = Cooperation; Triang = Triangulation; OS = Older Sibling; YS = Younger Sibling. Correlations above the diagonal are for the older sibling and correlations below the diagonal are for the younger sibling. Correlations across siblings are underscored and in the diagonal. Because coparenting measures were computed across siblings, the correlations between these measures are reported twice.

† $p < .10$
 * $p < .05$
 ** $p < .01$
 *** $p < .001$

Table 2
Hierarchical Multiple Regression Results Examining Younger Siblings' Conscience Development

	<u>Model 1</u>			<u>Model 2</u>			<u>Model 3</u>		
Dependent Variable:	β	ΔR^2		β	ΔR^2		β	ΔR^2	
Moral Regulation (M) ($N = 54$)				Affective Discomfort (F) ($N = 52$)			Moral Regulation (F) ($N = 53$)		
Step 1				Step 1			Step 1		
YS Age	.15	.06 [†]		YS Age	.45***	.30***	YS Age	.21 [†]	.17**
$\Delta F(1, 54)$		3.62		$\Delta F(1, 52)$		22.31	$\Delta F(1, 51)$		10.30
Step 2				Step 2			Step 2		
Committed Compliance (M)	.14						Committed Compliance (M)	.32**	
Committed Compliance (F)	.18						Committed Compliance (F)	.11	.17**
Passive Noncompliance (M)	-.27*	.14*							
$\Delta F(3, 51)$		2.96					$\Delta F(2, 49)$		6.14
Step 3				Step 2			Step 3		.18***
Coparental Conflict (M & F)	-.32*	.10*		Coparental Conflict (M & F)	-.04		Coparental Triangulation (M)	-.45***	
				Coparental Triangulation (M)	-.26*				
				Coparental Cooperation (M)	.09	.09 [†]			
				$\Delta F(3, 49)$		2.43	$\Delta F(1, 48)$		18.00
$\Delta F(1, 50)$	.23**	6.93		Adj. R^2	.34***		Adj. R^2	.48***	
Adj. R^2					$F(5, 53) = 7.86$			$F(5, 47) = 10.21$	

Note. Standardized regression coefficients (β s) presented are from the final step of the model in which all variables were entered.

 $\neq p < .10$ $p < .05$
$$p < .01$$

 $p < .001$.

Adj. = adjusted; M = mother, F = father, YS = Younger Sibling.