Early moral conscience development: The contributions of fathers' authoritative parenting style and father–child mutually responsive orientations including the moderating effects of child temperament

by

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Abstract

The current study examined the extent that fathers' authoritative parenting style (APS) and father–child mutually responsive orientation (MRO) explained children's moral conscience. Two dimensions of child temperament, fearfulness and effortful control, were investigated for moderating effects of fathers' APS and father–child MRO on children's moral conscience. Participants included 59 father–child dyads (children's mean age = 32.75 months; 30 male and 29 female). Fathers completed questionnaires measuring parenting styles and their children's temperament, and fathers and children were observed during a home-based play task to measure mutually responsive orientation between fathers and children. Children completed narrative story stems of moral dilemmas and were observed for elements of moral conscience development. Results revealed fathers' APS and father–child MRO did not significantly explain variance in children's moral conscience outcomes. There was a significant moderation effect of children's fearfulness on the relationship between APS and moral conscience, but not between MRO and moral conscience. Follow-up analyses showed a positive relationship between fathers' APS and moral conscience only for children with low levels of fearfulness. While there was a significant direct effect of children's effortful control on moral conscience, there was no significant moderation effect of effortful control on the relationship between either APS or MRO and children's moral conscience outcomes.

Keywords: authoritative parenting, child temperament, conscience, effortful control, fathers, fearfulness, moral development, mutually responsive orientation.

Preface

This thesis is an original work by Lita L. Day. The overall original research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, “MUTUALITY IN PARENT–CHILD INTERACTIONS: THE EMERGENCE OF EMOTION REGULATION STRATEGIES AND SOCIAL COMPETENCE IN EARLY CHILDHOOD”, No. PRO00000074, May 15, 2009. The overall research project, from which the data for this thesis were derived, was a research collaboration between Dr. C. M. Rinaldi at the University of Alberta, co-investigator Dr. N. Howe of Concordia University, and collaborator Dr. L. Urichuk. The overall project was funded by a grant from Social Sciences and Humanities Research Council (SSHRC). The data analyses in this thesis are my original work, as well as the literature review.

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Finally, to my husband and to my children, thank you for your love, encouragement, inspiration, patience, humour, and enthusiastic support of me to pursue a dream to return to university and conquer the challenges of a major career change. May the attainment of this degree serve as an example to my children, and to anyone, that it is never too late to pursue new horizons or to embrace the joy of lifelong learning.

Table of Contents

Introduction

Morality is key to human thriving. Interior moral formation within the person, and an external union among persons, to live peaceably, to seek goodness and truth, and to conduct ourselves congruent with the highest and best principles of human moral virtue, are vital and necessary components to human flourishing (Levering, 2011; Pinckaers, 2001; Spalding et al., 2019; Sri, 2016; Wren, 2014). The classical worldview of morality is an objective and prescriptive domain and may be defined as principles of how to conduct oneself and how to treat others with regard to virtues that are foundational to moral development (Ball et al., 2017; Gibbs, 2014; Killen & Cooley, 2014; Smetana et al., 2018; Sri, 2016; Walker & Frimer, 2013).

Consistent with a classical view of morality, moral development is integral to children's overall development; in order to facilitate functioning within society, to form an internal moral self, and to flourish in relationship with others (Wren, 2014). Moral development is a distinct domain of social knowledge that occurs concurrent to other social–cognitive competencies (Smetana, 1999; Turiel, 1983). Current theories on moral development research take an integrative wholistic approach that includes both socialization within the family (through interactions with parents) and children's individual characteristics as foundational to lifespan moral development (Grusec et al., 2014; Hoffman, 1979; Thompson, 2012, 2014).

Theories of moral development have necessarily included the formation of conscience as a central moral construct and researchers have focused on conceptual, social, and temperament contributions to moral conscience development in early childhood (Killen & Smetana, 2014; Thompson, 2014). Young children exhibit an emerging moral sense, not only by their emotional dispositions, but also through their social knowledge and awareness of how things ought to be (Kagan, 1981; Walker & Frimer, 2013). Contemporary theories of conscience development focus

on young children's cognitive and emotional capacities and even very young children possess early capacities for the three interrelated domains of conscience: (a) moral conduct (i.e. behavior), (b) moral emotions, and (c) moral self–concept (Hamlin & Van de Vondervoort, 2018; Kochanska & Aksan, 2006).

Both an authoritative parenting style and a mutually responsive parent–child orientation make important socialization contributions to moral conscience development (Kochanska, 2002b; Kochanska & Aksan, 2006; Kochanska et al., 2003, 2005; Kochanska & Murray, 2000; Smetana, 1999). Child temperament, specifically the domains of fearfulness and effortful control, are associated with moral conscience outcomes and also interact with unique parenting and parent–child dyadic contributions to moral conscience (Dienstbier, 1984; Eisenberg et al., 2016; Hoffman, 1983; Kochanska, 2002a; Kochanska & Aksan, 2006; Kochanska et al, 1997, 2007; Kochanska & Kim, 2014; Rothbart et al., 2001; Rothbart & Bates, 1998; Spinrad et al., 2012).

Historically, investigators in the area of moral conscience development focused almost exclusively on mother–child interaction, and though research that includes father–child interaction is scant, the inclusion of fathers in socialization studies is a growing area of interest (Kochanska et al., 2005). With changes in the structure of nuclear families, more mothers in the workplace, more fathers involved in child and home, increasing numbers of lone father families (Statistics Canada, 2014, 2017), there are timely and compelling reasons to more fully explore the possible impacts that fathers have on children's moral development. There are few studies that specifically explored the contributions of fathers' parenting styles, father–child dyadic relationships or the interactions with child temperament to explain moral conscience development.

The current study employs an integrative approach to investigate the contributions of fathers' authoritative parenting style, positive father–child mutually responsive relationships, and the moderating effects of children's temperamental fear and effortful control on moral conscience development in preschoolers. This investigation incorporates fathers' evaluations of their parenting style and of their children's temperament along with researcher observations of father–child mutuality and children's responses to moral dilemmas.

Specifically, the purpose of this research is to explore the extent to which children's moral conscience is explained by: (1) fathers' report of authoritative parenting style (APS), (2) a positive mutually responsive orientation (MRO) as observed between fathers and children, (3) the interaction between fathers' reports of children's trait fearfulness with each of fathers' APS and father–child MRO variables, and (4) the interaction between fathers' reports of children's trait effortful control with each of fathers' APS and father–child MRO variables. It is hypothesized that: (1) fathers' APS and father–child MRO will partially explain the variance in children's moral conscience development, (2) children's higher trait fearfulness in interaction with fathers' APS will explain the variance in children's moral conscience more so than the interaction with MRO, (3) children's effortful control interacting with father's APS will explain a smaller extent of children's moral conscience variance while the interaction with MRO will contribute more.

The findings of this study are intended to add to the moral development literature for fathers and children by exploring fathers' and children's unique and shared contributions to moral conscience and by building on previous studies of maternal and mother–child dyadic contributions.

Literature Review

Morality

To open the current study, it is first necessary to provide an overview and define terms such as morality, moral development, and conscience. Morality is a broad and complex concept that crosses into the philosophical realm as well as theoretical research domains, including the social sciences, and its definition remains a topic of debate (Smetana et al., 2018). While some academics take a modernist worldview of morality that is subjective and relativistic, many others employ a classical worldview of morality that is objective and prescriptive (Killen & Cooley, 2014; Smetana et al., 2018; Sri, 2016).

The modernist worldview focuses on specific moral issues—the *what* of morality—such as social issues, sexual issues, and environmental issues (Sri, 2016). The tendency within the modernist view is that such issues are only believed to be contextually relevant at the specific moment they happen to enter one's life, but otherwise are not believed to affect one's day-to-day living (Sri, 2016). An example of a modernist viewpoint is that of Walker and Frimer (2013) who assert that moral phenomena are personal and subjective experiences derived from within the individual to be studied through an individual's psychological functioning as they experience, form, and react to their internal morality in a relativistic way. This viewpoint excludes any external objective basis for moral principles and leaves morality up to the opinion or feelings of the individual. Basically, the modernist view is that an individual may do anything he or she feels or desires so long as it does not cross into another individual's lane; in this mode the theoretical claim is made that subjective morality is value-neutral (Sri, 2016). However, a major problem with that claim is that, in a practical sense, a value-neutral position cannot be realized because individuals do not live in a vacuum and it is inevitable that the choices and will

of one person will eventually crash into another's (Sri, 2016). When these wills collide, it is highly likely that some greater and more powerful authority will be called upon to arbitrarily decide whose individual will must be privileged over the other—far from being value-neutral (Pinckaers, 2001; Sri, 2016).

Academic writer C. S. Lewis (1952) provides an effective analogy that describes the rationale for why the modernist position on morality has historically failed and will continue to do so. Lewis likens morality to operating a fleet of ships dependent on three interactive criteria: (a) fair play and social harmony between individuals (i.e., the boats stay on course and do not crash into each other), (b) harmonization and healthy functioning of the inner moral workings of each individual (i.e., each boat is functioning properly and capable of staying on course), and (c) the general purpose of human life as a whole (i.e., what course the whole fleet ought to be on). Lewis' argument is that often modern society focuses on the first point (e.g., do not hurt others) while paying little mind to the morality within each person. What is the point of drawing up rules of fair play and social behavior if we know that, without good moral foundation and formation, individual moral dysfunction (e.g., ill temper, dysregulation, greed) will prevent people from adhering to the rules and thereby harm others (Lewis, 1952)? The first criterion of social harmony is necessarily built upon the second criterion of inner moral harmony of individuals and a great society is built not just on good laws, but fundamentally on people of great moral character (Lewis, 1952; Sri, 2016). To summarize Lewis, you cannot make people good by law, and without good people, you cannot have a good society.

The classical worldview of morality historically derives from the earliest of philosophers (e.g., Plato, Socrates, Aristotle, Aquinas) and, along with Lewis' three criteria, concerning itself less with the *what*, but starting with the question of *who*—*who* do I want to become and what

kind of person do I want to be (Sri, 2016)? Ethics (Greek origin *ethikos*) pertains to a person's moral character which is the disposition to live a certain kind of life and, in this sense, every moment in life becomes a moral moment leading us toward who we want to be within the purpose of human life and flourishing as a whole (Sri, 2016). This is why the prospective funeral eulogy exercise often asks, "How would you want to be described at the end of your life—*who* were you?"—and often the responses are given in the context of our qualities or virtues (e.g., loving, generous, joyful) and our relationships with others (e.g. loving and generous husband/wife/father/mother, loyal colleague) (Sri, 2016). Our exercise then becomes all about getting from who we are right now (internal) to who we want to be if we fulfill our purpose or end (Greek *telos*) which consists of our virtues and relationships; growing in the virtues required to live our relationships well (Sri, 2016). More particularly, classical morality has its basis in natural law and so in five particular universal natural instincts inherent in all human beings: (1) the yearning for the good, (2) the inclination to preserve one's life and to thrive, (3) the power to transmit life through sexual reproduction and bonds of affection, (4) the yearning for truth as the proper object of the intellect, and (5) the natural inclination to live in relationship and society with love, affection and friendship (Pinckaers, 2001). The classical view holds that morality is key to human flourishing and is summarized well in the Aristotelian–Thomistic view of the human person whereby human flourishing is derived largely from behaving in ways that are congruent with the highest and best principles of the human person (Spalding et al., 2019).

Within the field of moral developmental research, the classical objective view of morality also holds that external social perspective-taking within relationships is a key to moral development and behavior (Gibbs, 2014). Within this view, social perspective-taking relates to the right and the good of morality—truth, justice, mutual respect, beneficence, empathy, and

caring—whereby the right and the good are virtues foundational to morality and become the primary strands of moral development (Gibbs, 2014). The right and the good are objectively distinct, mutually irreducible, and complementary foundations to morality and both cognition and affect are relevant to moral motivations and behavior (Gibbs, 2014; Smetana et al., 2018). Human flourishing follows from an understanding of how human cognition and emotion lead to behavior that is congruent with the best in human natures (Spalding et al., 2019). A failure to behave in accord with the best natures will tend toward failures in human flourishing (Spalding et al., 2019).

Building further on the classical viewpoint within developmental research, morality is also defined as being a prescriptive domain (i.e., prescribes how matters ought to be) regulating the social interactions and relationships of individuals within societies, and may be defined as principles of how to conduct oneself and how to treat others with regard to the right and the good (Killen & Cooley, 2014; Smetana et al., 2018; Walker & Frimer, 2013). Objective moral principles are applied in everyday social interactions and require a complex interplay of multiple judgments about social relationships, mental states of others, and principles of right or wrong actions (Killen & Cooley, 2014; Vozzola, 2014).

While classical morality is unique in that it exists as an objective set of external principles by which to judge and evaluate social actions and events, these principles must be independent and cannot be defined by group/societal norms or behaviors that may be ideological to a particular nation, group, or peers (Killen & Cooley, 2014; Piaget, 1932). Lack of independence from specific group social norms or behaviors may not be compatible with universal notions of the right and good, justice, fairness, or equality (Killen & Cooley, 2014; Piaget, 1932).

For the purposes of clarity, moral concepts are prescriptive judgements of right and wrong concerning universal issues of welfare/harm, justice, and rights (Ball et al., 2017). Moral concepts are not the same as prosocial concepts which focus on arbitrary and agreed–upon norms, rules, and regularities (e.g., etiquette) based on social-conventional concordant expectations dependent upon one's cultural and social contexts (Ball et al., 2017; Bicchieri & Muldoon, 2014; Piaget, 1932). Prosocial acts are not obligatory in all contexts and still entail a component of personal choice that would be absent from a universal moral obligation (e.g., not to harm others) (Nucci & Turiel, 2009). While some modern developmental researchers tend to look at prosocial group actions such as cooperation, collaboration, and commitment as moral ends (Tomasello, 2018), it has been demonstrated that such activities can take many forms and may include non–moral or morally wrong goals (Turiel, 2018). Thomas Aquinas, in differentiating between peace and concord in moral terms, points out that concordance (i.e., a prosocial union of wills) can exist even between persons intent on executing a wicked project (Levering, 2011). Concord may be a union of wills, but it does not have to be rooted in a shared commitment to goodness and truth (Levering, 2011). Therefore, peace goes beyond more than concord; it requires an internal union or morality within the person as well as an external union among persons (Levering, 2011; Lewis, 1952). In other words, concord may still be consistent with interior disorder within each person, while peace builds its concord between persons based upon interior order and virtue within each person (Levering, 2011; Lewis, 1952).

Living peaceably in relationship or society may not be achievable through adopting a modernist view of morality in which the individual claims primacy and each person asserts his or her own will subjectively (Pinckaers, 2001). The struggle to assert one's own will sets humans in opposition to each other and can provoke rivalry and indifference. In turn, such a rivalry

endangers the lives of others resulting in a society that becomes an artificial creation resting on the power delegated by a collective of individuals to a supreme political authority or state (Pinckaers, 2001).

While the modernist morality—a freedom of subjective indifference—fosters rivalry between powers and opposition between the freedom of individuals and of institutions, classical morality consists of the formation of persons toward an objective freedom for excellence, virtue, the inclination toward life, caring, and justice (Pinckaers, 2001). Classical morality further concerns itself with the development of one harmonious body moving in the same direction toward the universal goods of familial affection, friendship, social solidarity, justice and peace (Pinckaers, 2001). The current study is situated within the realm of a classical objective morality summarized as the interior moral formation within the person and an external union among persons to seek goodness, truth, and human flourishing by striving to conduct ourselves congruent with the highest and best principles of human moral virtue.

Moral Development

Consistent with the classical view on morality, moral development is integral to a child's overall development to facilitate functioning within society, to form an internal moral self and to flourish. As Thomas Wren (2014) noted, morality provides a way of getting along with others and a way of getting along with oneself. Moral development serves both a necessary condition for social self-control and a means of self-realization (Wren, 2014). Concurrent with other social-cognitive competencies, morality develops in early childhood through adult–child relationships and peer interactions that form psychological knowledge of the intentionality and mental states of others which assists with young children's moral judgment (Decety & Howard, 2014; Killen & Cooley, 2014; Lagattuta & Weller, 2014; Mulvey et al., 2013). Moral

development occurs over the lifespan and may be further defined as: (a) changes across time and experience in how a person understands right versus wrong, justice, and beneficence, and (b) identifiable by individual differences in moral judgments, emotions, and actions (Vozzola, 2014). The broader process of developing morality includes the acquisition of values, judgments and virtues that support the formation of conscience and agency from which one may choose to act toward a moral good (Aksan & Kochanska, 2005; Killen & Cooley, 2014; Vozzola, 2014).

Early Moral Development Theories

Historical perspectives on moral development are varied and range from morality being socially constructed, to having biological and evolutionary origins, or to being actively constructed by the developing child (Vozzola, 2014). Early studies of moral development fell into three major theoretical approaches: psychoanalytic, behaviorism, and cognitive-developmental. Freud's (1927) psychoanalytical approach proposed that moral development occurs through the interactions of the superego with parents, but morality in this context is limited to processes of emotional regulation (Walker & Frimer, 2013). Behaviorism theories such as Skinner (1938) considered moral development as an acquisition of overt behaviors that can be shaped and conditioned through environmental contingencies, but this approach ignores the epiphenomena of cognition and affect (Walker & Frimer, 2013). Early cognitive developmental theories of moral development include those of Piaget (1932) who held that moral judgment develops through functions of growth and of struggles with cognitive disequilibrium, but in his approach moral behavior is only a byproduct of moral cognition (Walker & Frimer, 2013). Building on Piaget, Kohlberg (1969) theorized that morality develops through universal stages of moral reasoning that become more complex so that as children mature, they become more adept at solving moral problems.

Contemporary Moral Development Theories

The study of moral development has been enjoying a resurgence of theoretical and methodological innovation not seen in some time since the earlier Piagetian and Kohlbergian stage theories of cognitive development (Lapsley & Carlo, 2014). Contemporary researchers found that the scope of stages theory was narrow and focused on moral judgment of older children and adults while considerations of moral formation in early childhood that align with other developmental features (e.g., temperament, self-regulation, emotions, character) were excluded (Lapsley & Carlo, 2014). Kohlberg's stage theory lacked distinction between the types of reasoning used by people in different contexts and took the stance that preschool-aged children lacked foundational morality (Pratt & Hardy, 2015). Subsequently, social domain theorists found that young children could differentiate multiple domains of social knowledge: moral, social conventional, and personal (Smetana, 1999; Turiel, 1983). As alternative models of intellectual development gained momentum, interest in stages and structures as explanatory mechanisms of moral development began to decline (Lapsley & Carlo, 2014).

Kohlberg's theories have been used as the basis for more contemporary neo-Kohlbergian researchers (e.g., Rest et al., 1999) who remain focused on uniform processes and factors that characterize developmental changes in children's judgments and reasoning within moral contexts (Aksan & Kochanska, 2005). Also deriving from Kohlberg are more contemporary social-cognitive theories (Nucci & Turiel, 1978; Smetana, 1997; Turiel, 1998) that focus on cognitive representations of moral rules in children's interactions with parents and peers where it is thought moral values are acquired in either arbitrary conventional or more universal moral domains (Aksan & Kochanska, 2005).

Aksan and Kochanska (2005) give an overview of a second contemporary approach to moral development stemming from the socialization traditions of Maccoby (1984) and Sears et al. (1965) who emphasize exploration of the consistency and stability of observed variations in emotion, behavior, and cognition across contexts, time, and through variations in children's own individual trajectories. The authors noted that researchers who use a socialization framework to moral development (e.g., Collins et al., 2000; Eisenberg et al., 2006; Hoffman, 1970, 1983; Kochanska, 1993, 1995) investigate processes and factors, jointly constructed over time between parents and children, that account for variations in children's increasingly complex behavioral, emotional, and cognitive repertoires within morally relevant contexts.

Early experimental researchers of moral development relied more on social-conventional tasks dependent on obedience, compliance, and self-regulation rather than morally relevant dimensions of harm or welfare, emotions, or cognition (Kochanska, Koenig, et al., 2010). An example of research on children's moral thinking that looked beyond task paradigms is Recchia et al. (2014) who explored how children and adolescents reasoned through their own experiences of helping or harming others. The researchers analyzed mother–child conversations about children's own positive/helping and transgressive/hurting moral experiences to gain understanding of the development of moral agency and whether mothers scaffolded its development. The investigators found that as children aged, mothers' roles in conversations about moral experiences evolved in ways that were responsive to their children's capacities to make sense of their experiences. Along with other aspects of their development, reflecting on their own experiences of helping or harming helped with children's understanding of themselves and others and provided opportunities for developing moral agency (Recchia et al., 2014, 2015).

Psychological approaches to moral development were previously framed as being dichotomous—either the actions of people dealing with right or wrong within their social relationships (i.e., nurture) versus morality being determined by psychological mechanisms or traits (i.e., nature) (Turiel, 2014). As researchers progress in the area of moral development, they are beginning to understand that morality arises as the complex interaction of socialization and the psychological traits of the individual. Research on moral development has expanded to the include the interplay of moral emotions (e.g., empathy, sympathy, guilt, shame), moral cognitions and behaviors, integration of children's individual trait and biological factors (e.g., temperament), as well as contexts of socialization (e.g., parents, peers, culture) (Ball et al., 2017; Carlo, 2006; Carlo & Randall, 2001; Eisenberg, 1986; Eisenberg et al., 2006; Hoffman, 2000; Malti, 2016). While traditional theories focused primarily on external influences of early morality, more recent studies offer a wholistic and integrative perspective that includes both socialization and the child's individual characteristics as foundational to lifespan moral development (Thompson, 2012, 2014). Such an integrated approach to moral development research fits well with the classical definition of morality rooted in the universal nature of persons which develops further through socialization within the family and later as the person interacts with society. It is from this integrated approach of socialization and trait differences that the current study investigated children's moral conscience.

Roots of Morality in Infancy

Evidence of morality in infancy is an area of research that is growing through investigations into the complex interplay of early biological tendencies and contexts of socialization—with morality having roots that are innate to each newborn human being (Emde et al., 1991; Hamlin & Van de Vondervoort, 2018; Hamlin & Wynn, 2011). Recent findings on the

early signs of instinctive emotion-based moral distinction in infants further support an integrated approach (Hamlin & Van de Vondervoort, 2018; Hamlin et al., 2007; 2010).

Young children exhibit an emerging moral sense, not only by their emotional dispositions, but also through their social knowledge and awareness of how things ought to be (Kagan, 1981; Walker & Frimer, 2013). Moral development has its beginnings in infancy, in the form of a moral intuition based on emotion that is initially experience-independent (Hamlin & Van de Vondervoort, 2018). These early intuitions form the sprouts of moral development prior to the experiential and cognitive development of children that occurs through socialization (Hamlin & Van de Vondervoort, 2018). Young infants evaluate third parties based on objective morally relevant acts reflecting content (e.g., helping or hindering actions) that is known to structure the explicit moral judgment of older children and adults (Hamlin & Van de Vondervoort, 2018). Although reason and emotion are often presented as separate bases for moral judgment, the two are interconnected and demonstrated—emotional reactions to certain events may support the construction of abstract principles (e.g., permissible and impermissible acts) whereby emotions play a fundamental role in the emergence of moral reasoning (Hamlin & Van de Vondervoort, 2018).

The tendency to respond emotionally to moral violations early in development plays a causal role in developing moral reasoning (Ball et al., 2017; Decety et al., 2012; Malti, 2016; Malti & Ongley, 2014). Even young children can make the distinction between social conventions and moral prescriptions that are obligatory, generalizable, and unalterable (i.e., wrong regardless of existing rules or mandate by an authority figure) (Ball et al., 2017; Smetana, 1984, 1995; Turiel, 1983). Toddlers exhibit increased emotional reactions to moral violations compared to social-conventional violations (e.g., etiquette) (Malti & Ongley, 2014; Smetana,

1984) and from 14 months of age are more likely to comply with and less likely to protest caregiver interventions in moral transgressions than conventional (Dahl, 2016). By the age of 3 or 4, children can provide verbal responses to hypothetical moral transgressions and principles unique to the moral domain dependent on moral rules that are unalterable, obligatory, and generalizable across contexts (i.e., objective morality) (Ball et al., 2017; Nucci & Gingo, 2011; Smetana, 2006; Smetana et al., 2014; Turiel, 2006). From 3 to 5 years of age, children report they prefer helpers over hinderers (e.g., helpers are judged to be nicer while hinderers are deserving of punishment) and, by 4 to 5 years, children can justify why they believe the hinderer should be in trouble (Van de Vondervoort & Hamlin, 2017). Results of studies suggest infant preferences for helping actions predicted aspects of social and behavioral adjustment at 4 years of age and future caregiver reports of fewer callous-unemotional traits (Tan et al., 2018).

Moral Development Through Socialization in the Family

The initial context in which early moral development occurs is within the family. Historically, researchers have focused on the extent to which parents influence the moral development of their children through various dimensions of their childrearing and socialization. Parents, being the primary educators of their young children, have the affective bonds that are key to the receptivity of children to their parents' influences (Killen & Smetana, 2015). Through social learning, children internalize parental values and expectations through interactions with parents or caregivers throughout childhood. Social learning theorists have focused their research on how parenting practices and discipline techniques influence the process of children's internalization of parental values (Grusec et al., 2014).

It is worthwhile to note that most historical parenting studies in the area of conscience and moral development, focused exclusively on mother–child interactions. Though studies that

include father–child dyads are scant, the inclusion of fathers in socialization research is growing as an area of interest (Kochanska et al., 2007).

Parenting and Parent–Child Relationships. Presently, it is held that socialization of the child within the family includes aspects of parenting such as the style of parenting and discipline, and the reciprocal and positive qualities of the parent–child relationship (Kochanska & Aksan, 2006). An authoritative parenting style (APS—warmth, gentle inductive discipline, structure, and autonomy support) and mutually responsive orientations (MRO—founded in secure attachment and positive, trusting, cooperative, and reciprocal parent–child relationships) are important to children's internalization of morality and conscience development (Kochanska et al., 2005, 2007; Kochanska & Murray, 2000). For the purposes of this study, the focus will be on the influences of socialization on children's moral conscience development by way of fathers' authoritative parenting style and mutual reciprocity along with each in interaction with child temperament. A more detailed discussion of these aspects of socialization will follow.

Changing Landscape of Families. It is no longer the case that Canadian families are defined in the traditional sense of a working father, a stay-at-home mother, and children in one nuclear family. More fathers juggle family responsibilities, mothers are often working while covering child and home care, and some families rely more on outside childcare (Radey & Brewster, 2007). Today, we find there are a significant number of mothers (73%) in the workforce who still have young children living at home and, since 2006, single-parent families have grown while step-families made up 12.6% of the population (Amato & Dorius, 2010; Lamb & Lewis, 2010; Statistics Canada, 2012). In 2011, it was estimated that 1.2 million parents were no longer in married or in common-law relationships with the other parent of their children and 20% of children under 24 years of age lived primarily with their father (Statistics Canada, 2014).

By 2016, among Canadian children aged 0 to 14 years, 70% lived in intact two-parent families, 11% in complex stepfamilies or foster care, and 19% were living in lone-parent families of which 19% were lone father families (Statistics Canada, 2017). Over the 15-year period from 2001 to 2016, the number of children living with a lone father grew much faster (by 34.5%) than the number of those living with a lone mother (by 4.8%) (Statistics Canada, 2017). This increase may reflect a wider acknowledgment of the role of fathers and their parental responsibilities within society and in the legal system where fathers are more frequently being awarded joint custody of their children after marital breakdown (Beaupré et al., 2010).

Such rapid changes in family landscapes and the expanded roles of fathers are compelling reasons to investigate father–child relationships and especially the possible impact fathers may have on the moral development of their children**.**

Fathers and Children's Moral Development. In their overview of fathers and child developmental research, Cabrera et al. (2018) noted that significant global social, economic, and demographic changes over the last decades suggest that traditional mother-focused models of developmental influence are outdated and not representative of the experiences of most children. The authors proposed that while children develop in a socially complex, ecological contexts in which mothers and fathers both exert influence over their growth and wellbeing, researchers have focused almost exclusively on mother–child dyads. Fathers mainly contribute silently to children's development, or are omitted, and most studies of parenting do not include or control for fathers' effects on children's developmental outcomes (Cabrera et al., 2018; Lamb, 1975). When fathers are included, measures of fathering are often derived from assessments of mothering, even though fathers may not engage in the same sorts of activities that characterize mother–child relationships (Cabrera et al., 2018).

There is growing empirical evidence in socialization research over the past decade that increasingly indicates that fathers do make unique contributions to their children's development. While it may be expected that fathers' sensitivity to their children may differ from that of mothers, who presumably interact and care for infant children more than fathers, it has been shown that most fathers are responsive to their infants and can form attachments given sufficient time to interact with their children (Lamb & Lewis, 2010). In fact, fathers who have increased contact with their infants, especially through parental leave, have been shown to adapt to parenting more easily and become more involved in their children's care (Feldman et al., 2004). Children who experience sensitive and responsive fathering perform better on cognitive and language tests; and involved fathering in early childhood is associated with children's increased empathy, self-esteem, and social competence (Bernadett-Shapiro et al., 1996; Bronte-Tinkew et al., 2008). For toddlers and preschool children, educated fathers and fathers whose partners have supportive relationships with their children are more supportive and this supportiveness matters for their children's cognitive and language development, and emotional regulation (Cabrera et al., 2007). In a recent study, investigators found that father–child interactions, even from a very young age (i.e., 3 months) may influence children's cognitive development independent of the effects of maternal sensitivity (Sethna et al., 2017). In this study, children whose fathers were more engaged and sensitive, and whose fathers were less controlling in their interactions, scored higher in cognitive functioning, while those children whose fathers displayed more withdrawn and depressive behaviors in father–infant interactions at 3 months scored lower (Sethna et al., 2017). In a study of preschool children (aged 4 years), positive caregiving by fathers was associated with lower ratings of aggression and higher rates of self-regulation (i.e., higher levels of inhibitory control and lower levels of impulsivity) in their children (Meece & Robinson,

2014). Fathers' play style (arousal, excitement, and unpredictability) and their methods of encouragement are also associated with children's self-regulation, their ability to explore their worlds, to be courageous in unfamiliar situations, and to overcome obstacles (Paquette, 2004). Further, it has been shown that an authoritative parenting style by fathers is associated with adaptive behaviors in toddlers and is predictive of fewer externalizing problems (Rinaldi & Howe, 2012).

While researchers are beginning to shed light on fathers' increasing roles in socioemotional and cognitive dimensions of child development, there is little research that has considered fathers' unique influences (e.g., parental warmth, responsiveness, attachment, parenting style) on the conscience and moral development of children (Killen & Smetana, 2015). There are few investigations that examine the way in which fathers contribute uniquely to moral behavior and some studies that included both mothers and fathers combined the data for both parents making it difficult to ascertain the unique contribution of each parent (Mounts & Allen, 2019). Specifically, there has been little exploration of the influence of fathers' authoritative parenting style and their mutually responsive and positive orientations with their children on children's moral development (Killen & Smetana, 2015). The present study explores to what extent fathers' authoritative parenting style (APS) and father–child mutually responsive orientations (MRO), and the interaction of these variables with children's temperament (fearfulness and effortful control), explain children's moral conscience development.

Moral Conscience Development

As previously stated, moral development includes acquisition of values, judgments and virtues that support the formation of conscience and moral agency from which one may choose to act toward an objective moral good. To enable successful moral functioning within social

systems and relationships, children must develop an internal regulation of their moral behavior that guides their actions, whether under supervision or independently (Kochanska & Thompson, 1997). The earliest theories of moral development have necessarily included the formation of conscience as a central moral construct, and interest in moral conscience development has been renewed in the past few decades (Killen & Smetana, 2014). There is significant contemporary theory and research devoted to conceptual, social, and temperament contributions to conscience development in early childhood that differs from more traditional theories (Thompson, 2014). Traditional psychoanalytical, behavioral, and cognitive theories of conscience development viewed young children to be egocentric in their cognitions with their moral judgments and conduct originating from relational and emotional dependency on parental authority and example, rewards, and consequences (Bandura, 1991; Freud, 1935; Kohlberg, 1969; Piaget, 1932; Skinner, 1971).

While traditional moral theories emphasized discontinuity between early childhood and later development (e.g., Kohlberg's pre-conventional versus conventional), contemporary theories of conscience development see early childhood experiences and concepts laying the foundation for later moral understanding and are the building blocks to lifespan conscience development (Thompson, 2014). Today, the integration of social, emotional, and cognitive processes, the bidirectional influences of parents and children, children's individual temperaments, and their social, emotional, and conceptual capacities, form a wholistic view of the continuity of conscience development from early childhood onward (Thompson, 2014). Contemporary theories of conscience development focus more on children's conceptual and emotional capacities and recognize that young children are capable of cognitive insights and emotional perceptions (Thompson, 2014). Recent theories explore relational rules and domains

of social interaction, roles of moral emotions (e.g., empathy, guilt) in motivation, children's theory of mind, and attachment theory (Eisenberg, 2000; Harris, 2006; Killen, 2007; Smetana, 2006; Thompson, 2014; Turiel, 1998, 2006). Parental influence on young children's conscience development is understood less through authority and more through the concepts of mutual responsiveness, shared interactions and understanding, and security of attachments (Thompson, 2014). Contemporary researchers view young children as socially sensitive to the feelings and perspectives of others and possessing insight into the obligations inherent in social relationships (Thompson, 2014). Young children possess early capacities for conscience, moral conduct (i.e. behavior), moral emotions, and moral self-concept (Hamlin & Van de Vondervoort, 2018; Kochanska & Aksan, 2006). Individual differences in early emotionality and affect are central to, and can predict, children's moral development and their moral sense of self (Emde & Buschbaum, 1990; Kochanska, Koenig, et al., 2010). The current study adopts the same nature and nurture approach that presumes that both family socialization and biological makeup (e.g., temperament) have major influences on children's emerging moral conscience.

Foundation and Organization of Early Conscience

In their study on self-regulation in early childhood, Kochanska and Aksan (2006) describe moral conscience as an autonomous inner guidance system. Very young children have rich consciences and early conscience development consists of three interrelated domains: (a) moral conduct (i.e., behavior), (b) moral emotions, and (c) moral self (cognition) (Kochanska & Aksan, 2006).

Moral Conduct. Moral conduct reflects a child's executive capacity to self-regulate, to refrain from prohibited acts, to engage in behavior compatible with internalized rules, moral standards, and prosocial actions (e.g., helping, sharing, cooperation), and to complete tasks

without surveillance—all autonomously and independent of external controls (Aksan & Kochanska, 2005; Kochanska & Aksan, 2006). Moral conduct and emotions emerge early (prior to the second birthday) and these two domains have been found to be moderately coherent in defining latent conscience in early moral development—the domains are consistent across situations and are longitudinally stable (Aksan & Kochanska, 2005; Kochanska & Aksan, 2006).

Moral Emotions. Moral emotions (e.g., empathy and guilt) are complex, other-oriented, and distinctively different from basic emotions like fear or sadness (Eisenberg, 2000; Malti, 2016). Moral emotions are further defined as moral affects such as concern, care, empathy, guilt or discomfort subsequent to wrongdoing that act as motivational engines for moral development (Kochanska & Aksan, 2006; Kochanska et al., 2002). Infants are predisposed to the emotional expressions of others and young children exhibit genuine concern and are responsive to the welfare of others (Hamlin & Van de Vondervoort, 2018; Malti, 2016; Trevarthen & Aitken, 2001). Developmentally, children increasingly understand that moral transgressions elicit stronger emotions than social-conventional events and they develop mental boundaries that differentiate these two domains (Arsenio & Lemerise, 2004; Malti & Ongley, 2014). While very young children are able to distinguish between moral and social-conventional matters, they may not yet connect their concern for others' perspectives with their own moral emotions or reasoning until later in their development (Wainryb et al., 2005). Affective and cognitive processes are necessary to moral judgments and moral emotions and cognitions become increasingly coordinated with age (Ball et al., 2017; Decety et al., 2012). Cognitively, children increase their moral understanding though social interactions and affectively they grow in empathy for others, or experience guilt based on the consequences of their actions, as they become aware that moral transgressions have a negative effect on others (Malti, 2016; Malti &

Keller, 2010). Theory of mind is associated with moral criterion judgments and becomes present in typical development when children are about 3 years of age (Ball et al., 2017; Malti, 2016). Theory of mind is involved in moral emotions in that children who understand that others have differing perspectives are also able to empathize with others and feel guilt over harmful behaviors in morally salient situations (Malti, 2016).

Empathy. Empathy is an affective emotional response that stems from the perception of another's emotional state or condition similar to what the other person is feeling and that also evokes concern for the other (Eisenberg et al., 1989; Eisenberg et al., 2014). Empathy for the distress of others is one of the earliest organizing elements of young children's moral development (Ball et al., 2017; Hoffman, 2000; Turiel, 2015). Children as young as 2 years of age demonstrate cognitive, emotional, and behavioral capacities to interpret and affectively experience the physical and psychological states of others and are able to respond by alleviating discomfort in others (Zahn-Waxler & Radke-Yarrow, 1990). Preschoolers who have better understanding of others' emotions and cognitions tend to demonstrate more mature moral reasoning and sympathy for others (Ball et al., 2017; Dunn et al., 2000; Lane et al., 2010). By the age of 3 years, children respond more empathetically when a person has legitimate cause (i.e., serious harm versus inconvenience) and by 4–5 years of age, children who are more empathic demonstrate advanced inferences of others' thoughts, emotions, and intentions (Ball et al., 2017; Findlay et al., 2006; Hepach et al., 2013). Empathy and guilt are linked in that guilt is heightened as a child responds empathically to cues of distress in another person combined with a cognitive awareness of the child's responsibility for the distress of that other person (Hoffman, 1978; Thompson & Hoffman, 1980).

Guilt. In young children, guilt is a self-evaluative and self-conscious moral emotion experienced as distress in anticipation of, or following, misbehavior or wrongdoing (Eisenberg, 2000; Kochanska, 1991; Zahn-Waxler, 2000). Moral guilt is socially adaptive by helping the person to react to wrongdoings in constructive and repentant ways and by prompting reparation for harm done (Hoffman, 2000; Tangney et al., 2007). Children experience more intense feelings of guilt in the context of severe transgression (e.g., physical or psychological harm) than by omissions of prosocial duties (e.g., etiquette) and guilt influences children's understanding of the prescriptive nature of moral norms of fairness and caring (Malti & Keller, 2010; Ongley & Malti, 2014). As cognitive coordination and theory of mind develops in preschool-aged children, guilt feelings emerge as young as 3 years of age and is positively associated to moral self; children who display more guilt are less likely to violate rules of moral conduct (Kochanska et al., 2002; Malti, 2016). By the age of 7 years, children understand why they should feel sad for moral transgressions and why they feel good for successfully inhibiting desire to break moral norms as affective experiences and cognitive coordination skills in moral contexts increase (Malti, 2016).

Moral emotions relative to temperament and socialization. Both temperament and socialization may contribute to individual differences in empathic concern for others and guilt arousal (Zahn-Waxler & Radke-Yarrow, 1990; Kochanska et al., 2002). Children with lower trait fearfulness and higher levels of callous-unemotional traits (i.e., low fear, low sensitivity to punishment) may be more difficult to socialize and the interactions of temperament and socialization may explain deficiencies in observed guilt and overall conscience development (Cornell & Frick, 2007; Kochanska et al., 2002). Temperamentally, behaviorally inhibited and fearful children exhibit higher levels of guilt and empathy with less tendency to violate rules than uninhibited and less fearful children (Kochanska et al., 2002; Cornell & Frick, 2007). In older

children (aged 10–14 years), those with a stronger predisposition to guilt scored lower on antisocial behavior while children with lower guilt and empathy scores were associated with higher levels of antisocial behaviors (Baron et al, 2018). In one study of conscience as a regulatory function, delinquent juvenile offenders demonstrated lower levels of empathic capacity and were less prone to experiencing of shame and guilt (Schalkwijk et al., 2016). Young children's temperamental effortful control is positively associated with their tendency to experience guilt and to employ empathic responding while preventing aggressive trajectories in toddlerhood (Eisenberg et al., 2007; Kochanska et al., 2009; Rothbart et al., 1994; Valiente et al., 2004). From a socialization perspective on moral emotions, maternal power-assertive and inconsistent discipline has been associated with lower levels of guilt and empathy while higher levels of authoritarian parenting were associated with higher levels of guilt in uninhibited children (Kochanska, 1991; Kochanska et al., 2002; Cornell & Frick, 2007).

Moral Self (Cognition). The moral self is the child's increasing cognitive understanding of moral rules and standards of conduct, and of the consequences that moral violations have for the self and for others (Kochanska & Aksan, 2006). Researchers have found that infants as young as three to six months of age are able to evaluate the actions of others and are attracted to caring and helpful individuals while avoiding antisocial individuals (Hamlin et al., 2007, 2010). By the age of three years, children are cognizant of concepts of right and wrong, and the feelings associated with those concepts increase children's self-awareness (Emde et al., 1987; Kochanska, Koenig, et al., 2010). Cognitively, as children increasingly participate in social interactions, they begin to distinguish between their own perspectives and those of others (Malti, 2016). Although often limited by competing self-interest until around the age of 4 years, children with more advanced cognitive and affective abilities to differentiate psychological harm versus physical

harm may have more mature judgments about abstract moral harms (Birch & Billman, 1986; Dunn et al., 2000; Wainryb & Brehl, 2006). As children grow, their earlier self-understanding and autobiographical memory are linked to the emergence of a sense of moral self or identity, which becomes the source of their moral motivation and behavior (Hardy & Carlo, 2005; Kochanska, Koenig, et al., 2010; Nucci, 2004; Thompson et al., 2006).

Pathways to Moral Conscience Development

There are multiple pathways to the development of moral conscience in children with two main influences being socialization of the child within the family and child temperament (e.g. fearfulness and effortful control) (Hoffman, 1983; Kochanska, 1997a; Kochanska & Aksan, 2006; Rothbart et al., 1994). In a study of mothers and preschool children (aged 2 to 3 years), both maternal socialization and children's temperament predicted future conscience development (Kochanska, 1997a; Kochanska et al., 1997; 2007; Kochanska & Kim, 2014). A precursor to early conscience formation is measured by children's committed compliance to parental wishes (Eisenberg et al., 2016; Kochanska et al., 2001, 2007). Committed compliance is defined as behavior that demonstrates children eagerly following maternal directives in a self-regulated way and embracing mothers' agendas and values while adopting them as their own (Kochanska, 2002a; Kochanska et al., 2001). Socialization of the child within the family consists of the style of parenting and discipline, and a mutually responsive orientation—the reciprocal and positive quality of the parent–child relationship (Kochanska, 1997b; Kochanska & Aksan, 2006). The current study focuses specifically on fathers to examine the same pathways to children's moral conscience development by way of socialization (fathers' parenting style and father–child mutual reciprocity) and child temperament (fearfulness and effortful control). A discussion of these variables follows.

Parenting Styles. Darling and Steinberg (1993) define parenting styles as a grouping of attitudes toward a child and communicated to the child creating an emotional climate in which parent behaviors are expressed. Parental behaviors include parenting practices (specific, goal-directed behaviors in performing parental duties) and non-goal-directed parental behaviors (e.g., gestures, variable tones of voice, spontaneous emotional expressions) (Darling & Steinberg, 1993). Parenting style is best conceptualized as a parental characteristic that alters the efficacy of parental socialization efforts by moderating parenting practices and changing a child's openness to socialization (Darling & Steinberg, 1993). The concept of parenting style is broadly accepted today in child developmental research given its longitudinal applications because the parental control element becomes more salient as children get older (Pleck, 2010).

While earlier concepts of parenting style were heuristic devices to describe components of the parenting sphere (e.g., parent–child emotional relationship, parent practices and behaviors, parent belief systems), it was Baumrind (1966, 1971) who first merged the emotional and behavioral processes anchored in the parents' belief systems to reconceptualize parenting style and define it as a characteristic of the parent and not of the parent–child relationship (Darling & Steinberg, 1993). Baumrind's (1971) three dimensions of parenting styles were described as three types of parental control—authoritative, authoritarian, and permissive. Maccoby and Martin (1983) reconfigured parenting style along the two dimensions of warmth–responsiveness and demandingness (control): (a) authoritative (warm, responsive/restrictive, demanding), (b) authoritarian (rejecting, unresponsive/restrictive, demanding), (c) permissive (warm, responsive/permissive, undemanding), and (d) neglectful (unresponsive, undemanding).

Parenting styles and discipline strategies that are gentle, sensitive, responsive, inductive, and that de-emphasize the assertion of power, tend to enhance the child's willingness to embrace

parental values and cooperate with parental expectations for moral behavior (Kochanska, 2002b; Kochanska & Aksan, 2006; Kochanska et al., 2003). Some aspects of other parenting styles may contribute to moral conscience, for example, the high behavioral expectations of authoritative parents may contribute to child conscientiousness (Baumrind, 1967). On the other hand, the lack of regulation and low parental demands on behavior of permissive parenting may result in poorer self-control which is not conducive to moral conscience development (Baumrind, 1967; Kochanska & Kim, 2014; Rothbart et al., 1994). Parents who endorse an authoritative parenting style construct moral knowledge by explicitly explaining reasons for rules, explaining why some behaviors are expected while others are wrong, and by appropriately responding to moral violations; thereby stimulating their children's ability to cognitively reflect on their actions (Smetana, 1999). Because an authoritative parenting style has been suggested to contribute more robustly to moral conscience development, the present study focuses on fathers' authoritative parenting style (APS).

Mutually Responsive Orientation. While parent–child relationships have been studied uni-directionally at the individual level (e.g. parent attributes and child attributes separately) it is also important to consider the interactive aspects of these dyadic relationships and bi-directional effects. Mutually responsive orientation (MRO) is best described as shared cooperation and shared positive affect between a parent and child, and is measured by a composite of qualities observed in dyadic naturalistic interactions and as reported by parents (Kochanska & Murray, 2000). MRO, founded in secure attachment and in a positive, trusting, cooperative, and reciprocal parent–child relationship, is important to children's internalization of morality and conscience development (Kochanska et al., 2005; Kochanska & Murray, 2000). A mutually

responsive parent–child orientation is one that is reciprocal, trusting, and demonstrates evidence of shared cooperation, responsiveness, and dyadic positive affect (Aksan et al., 2006).

MRO consists of two components: mutual responsiveness and shared affective positivity (Kochanska et al., 2005). Mutual responsiveness promotes trust, security, mutual bonding, a sense of agency and efficacy, empathy, and expectations of reciprocity (Kochanska et al., 2005). Shared affective positivity can be described as "mutually experienced pleasurable, smoothly flowing activities infused with positive emotion" between parents and their children" (Kochanska et al., 2005, p. 20). A mutually responsive and positive orientation between mothers and their children has been shown to foster the development of conscience in young children (Kochanska, 2002b; Kochanska et al., 2005).

In particular, of the three components of children's moral conscience (moral conduct, moral emotion, and moral cognition), early mother–child MRO has a direct, unmediated effect on moral emotion (Kochanska et al., 2005). MRO was also found to mediate moral conduct and moral cognition by promoting the child's enjoyment of interactions with the mother while MRO influenced moral conduct by enhancing committed compliance (Kochanska et al., 2005). Further, MRO between mothers and children predicted conscience development serially from infancy through to toddlerhood and further to preschool and early school ages (e.g. 5 years) (Kochanska, 1997b; Kochanska, 2002b, Kochanska et al., 1999; Kochanska & Murray, 2000; Laible & Thompson, 2000).

Child Temperament. Child temperament is defined as constitutionally-based individual differences in reactivity and self-regulation in response to changes in external and internal environments, and influenced over time by heredity, maturation, and experience (Rothbart, 2007; Rothbart & Bates, 1998). Reactivity refers to emotional reactions (e.g., fear, guilt), motor

reactions (e.g., cardiac, galvanic), and more general tendencies (e.g., negative emotionality) while self-regulation includes processes such as effortful control oriented toward modulating reactivity (Rothbart, 2007; Rothbart & Bates, 1998). Dimensions of child temperament that correlate to moral conscience development include the inhibitory aspects of fearfulness (passive, reactive inhibition) and effortful control (the ability to voluntary, willfully, and vigilantly inhibit, activate, or modulate attentional and behavioral control) (Eisenberg et al., 2016; Kochanska & Aksan, 2006; Kochanska et al, 1997, 2007; Rothbart et al., 2001; Rothbart & Bates, 1998).

For children with a fearful temperament, the anxious arousal experienced upon transgressing should act to suppress future transgressions, and fearful, reactive inhibition may underlie moral emotions of guilt (Damasio, 1994; Kochanska, 1993). Fearful children tend to score higher on different conscience measures (Asendorpf & Nunner-Winkler, 1992; Kochanska, 1995; Rothbart et al., 1994).

Effortful control emerges in the second year of life and refers to the child's ability to voluntarily control dominant responses in favor of less dominant responses (Kochanska & Aksan, 2006; Kochanska & Kim, 2014; Rothbart & Bates, 1998). Effortful control also includes tasks of executive functioning (e.g., planning, error detection, information integration) that are necessary to choosing how to behave (Eisenberg et al., 2016). As a trait, effortful control is grounded, in part, in children's underlying biological, neural, physiological, and genetic substrates (Posner & Rothbart, 2007), but is also partly a product of the parent–child relationship—especially positive dyadic qualities such as attachment and mutual responsiveness (Kochanska & Kim, 2014; Kochanska et al., 1997). The temperamental trait of effortful control has been increasingly found to play an important role in overall social-emotional development including negative emotionality, empathy-related responding, social competence or

maladjustment, and specifically in moral conscience development (Eisenberg et al., 2016; Kochanska & Kim, 2014). Children's effortful control in early years is strongly linked to moral conduct and cognition, moral self, rule-compatible internalization, the tendency to experience guilt, and also predicts early school-age conscience (Kochanska & Kim, 2014; Kochanska & Knaack, 2003; Kochanska et al, 1997; Rothbart et al., 1994).

Interactions of Parenting and Child Temperament. Broadly speaking, child temperament is a known moderator of the effects of parenting style on children's externalizing and internalizing behaviors, and exposure to more positive parenting reduces behavior problems in children with difficult or unadaptable temperaments (Gallitto, 2015). Interactions between parenting and child temperament are complex and certain parental influences have different effects for children of various temperaments (Collins et al., 2000). In moderation models, it has been found that, child fearfulness significantly moderates the impact of parenting and for fearful children, mothers' gentle discipline that de-emphasizes power capitalizes on optimal anxious arousal to promote internalization of parental messages, moral conduct, and conscience development (Dienstbier, 1984; Hoffman, 1983; Kochanska, 1991, 1993, 1995, 1997a; Kochanska & Aksan, 2006). Fearless children do not experience internal discomfort upon transgressions and do not reach an optimal level of anxious arousal (Dienstbier, 1984). Therefore, a focus on a child's positive motivation and a mutually responsive and cooperative orientation with the mother is an alternative mechanism to conscience development in fearless children (Kochanska, 1993; Maccoby, 1983; Maccoby & Martin, 1983). For relatively fearless toddlers and children, mothers' gentle discipline is less effective while mother–child positive relationship and mutual responsive orientation promotes conscience development and predicted future successful socialization outcomes in mother–child dyads (Kochanska, 1995, 1997a;

Kochanska et al., 2007). In a longitudinal study of the interaction between mothers' parenting and child temperament in preschool children (2 to 5 years old) mothers' reasoning and explanation in positive "do" command contexts predicted later moral conduct in fearful, anxious, and non-impulsive children while mothers' redirection and commands in "don't" contexts predicted moral behavior in less fearful and less regulated children. (Augustine & Stifter, 2015). In one mixed longitudinal parenting study of very young children (7 months to 38 months) results revealed that dyadic mother–child positive relationships significantly predicted a willing stance in relatively fearless children while no similar moderator effect was found for fathers (Kochanska et al., 2007). In the same study, for relatively fearful children, fathers' power assertion had a significant negative slope on children's rule compatible behavior (Kochanska et al., 2007).

There are processes known to occur between children's temperamental effortful control and parent–child relationships in the development of moral conscience. Higher parent–child MRO for both parents is correlated to higher child effortful control scores and greater internalization of conduct rules (Kochanska & Kim, 2014). Children's effortful control is shown to mediate the links between mothers' warmth and sensitivity and low power assertion with children's future committed compliance with mothers' directives and successful internalization of moral conduct rules (Kochanska, 2002a; Kochanska & Kim, 2014; Kochanska & Knaack, 2003; Spinrad et al., 2012). Moderated mediation has also been demonstrated whereby effortful control mediated the relationship between MRO and preschool children's internalization of conduct rules, while parent–child MRO predicted effortful control and internalization and also moderated the relationship between the two (Kochanska & Kim, 2014). Further, the moderated mediation model indicated that variations in effortful control were less consequential in highly

optimal mutually positive relationships than in suboptimal relationships and this finding was consistent across both mother–child and father–child dyads (Kochanska & Kim, 2014).

Few studies have considered the moderating effects of children's effortful control on parenting in the development of conscience. There is little knowledge of the interactions of children's temperament with fathers' parenting style and father–child dyadic relationships on overall moral conscience outcomes. The current study is intended to further investigate moderation effects of child temperament on fathers' authoritative parenting and mutually responsive orientations with their children.

Gender Differences[1]

Moral development researchers have generally indicated moderate to significant gender differences in young children. On the broader scope of moral reasoning, early researchers theorized that females were qualitatively different than males in being more care-oriented (concern for wellbeing of others and relationships) while males were found to be more justice-oriented (impartial, detached objectivity focused on abstract principles) (Gilligan, 1982). In later studies and meta-analyses, researchers found no evidence of gender differences in care versus justice reasoning in responses to standard hypothetical moral dilemmas with both sexes using a mix of both types of judgments; however, in discussions of real-life dilemmas, moderate gender differences did align with Gilligan's theory (Jaffee & Hyde, 2000; Walker & Frimer, 2009). In a later study of children (age 7 to 12 years) who completed moral dilemma narratives, older girls

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[1] The new edition of the APA publication manual (2020) recommends that gender be differentiated from biological sex. At the time the data set used for this study was collected, the term "gender" was employed synonymous to biological sex. The data was collected in dichotomous categories of fathers/boys and mothers/girls as equivalent to biological males and females respectively. Similar categories and language were also used in many of the supporting studies cited. Therefore, the language used throughout this study is consistent with the data collected and research cited.

were found to be more care-oriented and older boys more justice-oriented, but only towards their opposite-sex peers (Milanowicz & Bokus, 2013). While overall gender effects in moral reasoning may be negligible, Walker and Frimer (2013) do acknowledge that gender may still be an important variable in specific aspects of moral functioning such as moral emotions or character development.

While few studies using measures of moral conscience development in young children have specifically investigated gender differences (Killen & Smetana, 2014), earlier researchers have demonstrated gender to be related to early conscience development (Kochanska & Aksan, 1995; Kochanska et al., 1995; Laible & Thompson, 2000). Gender effects for preschool children are significant to marginally significant in favour of girls in measures of committed compliance to maternal requests, internalized moral conduct, and moral self, while boys were more oppositional to maternal requests to do or not do an action (Kochanska 2002a; Kochanska et al., 2001; Kochanska, Woodard, et al., 2010). Girls consistently show higher levels of prosocial and reparative behaviors motivated by feelings of responsibility for others (Zahn-Waxler, 2000). Researchers have reported gender differences in moral emotions contributing to conscience development with preschool through early school-aged girls scoring significantly higher on measures of positive affect (Olino et al., 2013), guilt, and empathy (Kochanska, 1997b; Kochanska et al., 2002; Zahn-Waxler, 2000).

Individual differences in young children's temperament also reflect gender differences in conscience development. Inhibition (i.e., effortful control) contributes to internalized moral conduct with girls scoring significantly higher than boys on measures requiring effortful control in children who were toddler to early school age (Kochanska, 1993; Kochanska et al., 1997).

Fearfulness, another temperamental trait that contributes to conscience, measures higher in young girls than boys (Olino et al., 2013).

The Present Study

Studies of parental contributions to children's moral development historically have been mother-centric. As a result, there is scant literature examining fathers and their children's moral development. In particular, there is little research that has examined fathers' parenting styles or father–child mutually responsive relationships relative to the development of moral conscience in their children. Further, we do not know whether the moderating effects of temperament and socialization found in studies with mothers will be replicated with fathers and there has been little inquiry that explores the moderating effects of the interactions of child temperament and father socialization on moral conscience development. The current study investigates the contributions of fathers' authoritative parenting style, positive father–child mutually responsive relationships, and the moderating effects of children's temperamental fear and effortful control on moral conscience development in preschoolers. Specifically, the present study employs an explanatory correlational design examining associations and using hierarchical multiple regression to explore four questions; to what extent is the variance in children's moral conscience explained by: (1) fathers' report of authoritative parenting style (APS)? (2) a positive mutually responsive orientation (MRO) as observed between fathers and children? (3) the interaction between fathers' reports of children's trait fearfulness with each of fathers' APS and father–child MRO variables? (4) the interaction between fathers' reports of children's trait effortful control with each of fathers' APS and father–child MRO variables?

Hypotheses

For the first two questions, given findings in the literature of the effects of maternal gentle discipline and positive mutual parent–child orientation on child moral development, it is hypothesized that fathers' APS and father–child MRO will partially explain the variance in children's moral conscience development. Most mother-focused studies have found positive relationships between these aspects of socialization and children's moral conscience.

On the third and fourth questions, there is substantial evidence of child temperament as a moderator of the effects of parenting on children's moral behavior and conscience (Augustine & Stifter, 2015; Gallitto, 2015; Kochanska, 1993, 1995, 1997a, 2002a; Kochanska et al., 2007; Kochanska & Kim, 2014), however, most studies focused on mother–child dyads. Current theory and research results demonstrate that the interaction between mothers' parenting (e.g., gentle discipline, warmth, and low power assertion) and children's higher trait fearfulness contributes positively to children's conscience development (Kochanska & Aksan, 2006; Kochanska et al., 2007). Child fearfulness significantly moderated the impact of mothers' gentle discipline (for fearful children) and mother–child positive mutually responsive relationships (for fearless children) on outcomes of internalization of parental messages, willing stance toward parents, and rule-compatible behavior (Dienstbier, 1984; Hoffman, 1983; Kochanska, 1991, 1995, 1997a; Kochanska & Aksan, 2006; Kochanska et al., 2007). One investigation of father–child dyads found father–child power assertion negatively predicted children's rule-compatible behavior in fearful children (Kochanska et al., 2007). As to the third question specifically, based on findings of maternal studies, it is hypothesized that children's higher trait fearfulness in interaction with fathers' APS may explain the variance in children's moral conscience more so than the interaction with MRO. For the child temperament factor of effortful control, while some studies

have found mother–child MRO mediates child effortful control and moral development outcomes (Kochanska et al., 2005; Kochanska & Kim, 2014), there appears to be little research in literature that has considered effortful control as a moderator of parenting variables on moral conscience outcomes. For the fourth question, given the mediational findings of MRO and effortful control in maternal studies, it is hypothesized that children's effortful control interacting with father–child MRO may explain a greater extent of children's moral conscience variance than the interaction between effortful control and father's APS.

The overarching aim of the present study is to contribute to literature on fathers' contributions to children's moral conscience development based on the theory and previous findings in studies of mother–child moral developmental research.

Method

Participants

For the overall data collection, fifty-nine families, including father, mother, and child, were recruited in a large Western-Canadian city through (a) day cares, (b) word of mouth, and (c) advertisements in a local magazine and on parenting Internet message boards. Due to the nature of the current study, only father and child procedures are described in this section. Upon initial recruitment, 59 father–child dyads met the criteria for the current study composed of 30 boys and 29 girls between 25 and 50 months old (M = 32.75 mos., SD = 5.78 mos.). Families identified their ethnic backgrounds as Caucasian-Canadian (86.4%), mixed (8.5%), Asian-Canadian (3.4%), and East Asian-Canadian (1.7%) and the great majority of parents were married (88%), followed by common-law (10%) and separated (2%). In terms of education, 80% of the parents had university or college degrees, the remaining were evenly divided between partial college or university, a trade or technology certificate, and a high school diploma or

General Educational Development (GED). Overall, the mothers had 4.9% more post-secondary education (i.e., university, college, trade training) than the fathers in the study. Finally, 73% of the families reported incomes of over $69,000 while the remaining families reported earning under $69,000. One year later at follow-up, 55 of the original families participated (27 girls and 28 boys) between 38 and 59 months old (M = 46.1, SD = 6.1). Four families dropped out, one family moved to another province, a participant child in one family did not speak English and was not able to complete tasks, and two families opted out of the follow-up portion of the study.

Procedures

A detailed proposal of the larger study's purpose, methodology, consent process, and potential harms was prepared for and accepted by the University of Alberta's Research Ethics Board (Project No. PRO00000074). As no new measures were included and no new data were collected, the current study was included under the larger study's ethics approval. Parents were provided with a consent form and an information letter explaining the study, potential future uses of the data (i.e., student theses projects), and the expected time commitment. Fathers and mothers independently completed questionnaire packages and play tasks with their children. The questionnaire packages included a simple demographics questionnaire asking the parents questions about relevant participant information, such as the child's age, birth date, and gender, family's ethnic background and household income, as well as parents' relationship status, and levels of education. The parents each independently also completed the *Parenting Styles and Dimensions Questionnaire* (PSDQ; Robinson et al., 2001) self-report about themselves and their spouse designed to capture Baumrind's (1971) three main styles of parenting. Families were provided with a $25 gift certificate to a bookstore store as a token of appreciation upon

completion of their questionnaire packages. For the purposes of the current study, only fathers' questionnaires about themselves were included in the data.

Play Task

Parents engaged in play, teaching, and emotions cards tasks with their child in their homes and only the play task between fathers and their child was relevant to the current study. A team of research assistants (RA) were trained to complete the data collection and the training consisted of lab and practice sessions for implementing the standardized protocol and procedures of the study (e.g., administering the task instructions, setting up tasks, when and how to prompt child). The presentation of the three tasks and parent gender order were varied and rotated. Children were videotaped playing with each parent separately for 15 minutes during two visits. Parents and children were instructed with the following script, "For this task I am interested in seeing how young children of different ages play and interact. Here are some toys for the two of you to play with. I'll be in the next room if you need me, and I will let you know when your playtime is done." The RA placed a farm set and amusement park toys in front of the dyad and left the room for 15 minutes. The RA returned after the allotted time to end the play task. A pair of graduate students coded the play task for parent–child mutuality using an adapted version of the *Mutually Responsive Orientation Scale* (Aksan et al., 2006). For the purposes of the current study, only the father–child interactions were included for this thesis.

Parent Reports and Research Observations

One year later, parents independently completed a short form abbreviated 94-item version of the *Children's Behavior Questionnaire* (CBQ-SF; Putnam & Rothbart, 2006; Rothbart et al., 1994, 2001) about their children. For the purposes of the current study, only fathers' questionnaires about their children were included in the data. The children participated with a

research assistant in a narrative task from the *MacArthur Story Stem Battery* (MSSB; Bretherton et al., 1990). The families received a $50 gift certificate after participating in the follow-up portion of the original study.

Narrative Task. The MSSB is comprised of 14 story stems representing a variety of potentially conflicting situations or dilemmas a child may encounter in everyday life. The larger study utilized five of the main stories plus warm-up and wrap-up stories while the current study only utilized three of the five main stories (see Appendix A), and specific themes are shown in Table 1. The RA built rapport with the child participant before beginning the task in a quiet area. Once the child was more comfortable with the RA, other family members were asked to leave the room, and the RA gave the preschooler the task instructions, "Now we're going to tell stories together. I will begin each story and then ask you to finish it." The story characters were introduced to the participant. The toy characters included an older sibling (Susan/George), a younger sibling (Jane/Bob), and a friend (Laura/Dave) matched in gender to the participant child. Other characters included a mother, father, grandfather, and a dog, as well as toy props such as a chair, couch, television, table, soccer ball. The RA began with a warm-up story to get the child comfortable with playing with the toys and ensured the child understood the task before moving on. For example, in the Spilled Juice narrative, the RA and child set up the toy table, pitcher of juice, and family around the table. The RA began the story by acting out with the toys and saying, "Here's the family drinking their juice. [Susan/George] gets up and reaches across the table and uh-oh! [She/he] spilled the juice all over the floor! Show and tell me what happens now." The child then continued the story however he or she wanted. There were several prompts the RA used if the child did not address the main idea of the story, for instance, "What happens with [Susan/George] spilling the juice?" or "Did anything else happen?" The RA did not give the

child suggestions about what to say and did not interfere with the story telling, only repeating what the child said for the camera to make sure, as much as possible, it was properly understood. When an appropriate pause in the story arose, the RA asked the child, "Is that the end of your story?" and, if the child responded positively, they continued onto the next story. Completion time of the three narratives used in the current study ranged in length from 2 min. 41 sec. to 12 min. 22 sec., with the average length of task at 6 min. 40 sec. (*SD* = 2 min. 5 sec.). Story-telling abilities, verbal as compared to non-verbal responses, and comfort with the task varied from child to child.

Measures

Parenting Styles

Fathers independently completed an abbreviated 32-item version of the *Parenting Styles and Dimensions Questionnaire* (PSDQ; Robinson et al., 2001). The PSDQ measures fathers' self-reports of their own parenting practices relative to their young children (under 12 years of age) using a 5-point Likert scale and responses ranged from Never (1) to Always (5). Examples of items included: "[I] scold and criticize when our child's behavior doesn't meet our expectations; and [I] give our child reasons why rules should be obeyed." The PSDQ was developed by Robinson et al. (2001) using Structural Equation Modeling and a sample of 1,900 mothers and fathers of preschool children. The instrument consists of three subscales: authoritative subscale (15 items), authoritarian subscale (12 items), and permissive subscale (5 items). The means of the items of each subscale were calculated to arrive at the scores for each subscale. Robinson et al. (2001) reported the following internal consistency reliabilities (Cronbach *alphas*) for parent reports: .86 (authoritative), .82 (authoritarian), and .64

(permissiveness). Cronbach *alphas* for father self-reports for the present study were: .83 (authoritative), .69 (authoritarian), and .71 (permissiveness).

Mutually Responsive Orientation

Two graduate-level research assistants coded parent–child mutuality during the play task using an adapted version of Aksan and colleagues (2006) *Mutually Responsive Orientation Scale* (see Appendix B). Coding began at the 5-minute point, after the dyad was more accustomed to the camera and set up most of the toys, and ended at 10 minutes, to avoid coding the child's potential fatigue with the task. MRO consists of four subscales attempting to describe the mutual relationship in a dyad: Coordinated Routines, Harmonious Communication, Mutual Cooperation, and Emotional Ambiance. In the original coding scheme, MRO is coded on a scale from 1 (very untrue of the dyad, very low MRO, poor relationship) to 5 (very true of the dyad, very high MRO, excellent relationship) for each context (e.g., all of play) taking into consideration the four dimensions listed above. The overall study coded 3 of the 4 dimensions (Harmonious Communication, Mutual Cooperation, and Emotional Ambiance) that were relevant to the play task on the 1 to 5 scale recommended (Aksan et al., 2006). As defined by that coding scheme, Harmonious Communication is smooth, effortless interaction and communication with high levels of intimacy and connection. Mutual Cooperation describes the ability of the dyad to follow each other's roles with little resistance, engage in and respond to subtle influences, maintain low levels of conflict, and demonstrate being psychologically in tune with each other. Finally, Emotional Ambiance describes how the dyad resolves negative affect, engages in positivity and warmth, and shows negative or positive affect and displays of affection. Construct validity was extensively investigated and it was determined that the MRO scale was correlated with, but distinct from, individual parent and child responsiveness and positive affect, that the scale

adequately fit the model according to confirmatory factor analysis, and it was demonstrated that the four subscales measured a single unifying construct (Aksan et al., 2006). The Cronbach's *alpha* for the MRO average for the father–child dyads was high for both the overall study on the three dimensions that were coded (.86) and for the subset of the same dimension that were investigated in the present study (.82).

Observer Agreement. Following a period of training, practice, and discussion over the coding scheme and video contents for the overall study, two graduate students coded 31% of the videos for agreement, achieving intraclass correlations (ICC) interrater reliability of .80 (Harmonious Communication), .82 (Mutual Cooperation), and .96 (Emotional Ambiance). Inter-rater reliability (IRR) analysis is used to determine how well coders provide similar ratings (i.e. how much of the variance in observed scores is due to variance in true scores of subjects after removing variance due to measurement error between coders) (Novick, 1966; Hallgren, 2012). Intraclass correlation coefficient (ICC) is suitable to use, as in this study, for ordinal measures and in designs where a subset of participants was rated by two coders with the remainder of the subjects rated by one coder (McGraw & Wong, 1996; Shrout & Fleiss, 1979).

Child Temperament

Fathers independently completed a short form abbreviated 94-item version of the *Children's Behavior Questionnaire* (CBQ-SF; Putnam & Rothbart, 2006; Rothbart et al., 1994, 2001). The CBQ-SF measures fathers' reports of child temperament for their children aged 3 to 8 years. Fathers were asked to rate their children on a 7-point Likert scale with responses ranging from 1 (extremely untrue of your child) to 7 (extremely true of my child). Examples of items include: "[My child] Gets angry when told s/he has to go to bed; and [My child] Prefers quiet activities to active games." The CBQ-SF was developed and evaluated from the standard CBQ

by Putnam and Rothbart (2006) using data from 468 parents of young children. The instrument includes five domains of temperament: positive emotion, negative emotion, motivation, activity level, and attention. There are fifteen dimensions within these domains: Activity Level, Anger/Frustration, Approach/Positive Anticipation, Attentional Focusing, Discomfort, Soothability, Fear, High Intensity Pleasure, Impulsivity, Inhibitory Control, Low Intensity Pleasure, Perceptual Sensitivity, Sadness, Shyness, and Smiling/Laughter. Putnam and Rothbart (2006) reported internal consistency reliabilities (Cronbach *alphas*) across two studies. Study 1 used items extracted from the standard CBQ and resulted in 11 out of 15 scales exhibiting alphas over .70, 14 alphas over .65, and only one scale alpha (Sadness = .62) was below .65. In Study 2 the short form items were administered directly (rather than extracted) and resulted in 11 out of 15 scales exhibiting alphas over .70, 14 alphas over .60, and only one scale alpha undesirably lower (Sadness = .46). Additionally, when data sets were divided by race and socioeconomic status (SES), internal consistency for the short form scales was more optimal in Caucasian samples and those with better SES, while alphas were less optimal in both African-American samples and those with lower SES (Putnam & Rothbart, 2006).

For the current study, based on previous research on child temperament as a moderator between parent socialization and child moral conscience outcomes, two subdomains of child temperament were extracted from the CBQ-SF father reports—child fearfulness and effortful control. Consistent with previous studies (Kochanska, 1997a), three scales were combined to calculate the father-reported child fearfulness score ($\alpha = .75$): shyness (6 items), fearfulness (6 items), and discomfort (6 items). The broad dimension of effortful control as outlined by Rothbart (2007), was calculated from a combination of scores for four scales ($\alpha = .82$):

attentional focus (6 items), inhibitory control (6 items), perceptual sensitivity (6 items), and low-intensity pleasure (8 items).

Moral Conscience Outcomes

MacArthur Story Stem Battery. The *MacArthur Story Stem Battery* is a performance task in which children are observed while they complete narrative story stems. The moral narratives of the MSSB are all stories that reflect values from the child's point of view whereby the child chooses his/her view of events and possible choices of action (Emde, 2003). Story stems include narratives of the moral nature of daily life and are dilemmas in which the child must choose between two conflicting demands of characters important in the child's life (e.g., parents, siblings, friends) (Emde, 2003). While many moral development research paradigms have relied on maternal inputs, the hypothetical dilemmas of the MSSB allow for the child to respond independent of parents. Because the child is a distinct respondent, shared method variance due to direct maternal influence in multiple measures is minimized (Aksan & Goldsmith, 2003). The content of children's story completions reflects moral orientations (Buchsbaum & Emde, 1990; Kochanska, 1991) and align with cognitions that are relevant to social conflict and moral emotions (e.g., guilt, empathy) (Aksan & Goldsmith, 2003). Buchsbaum and Emde (1990) found that children as young as three years were able to articulate coherent stories about moral rules, reciprocity, empathy, and internalized prohibitions. Their responses related to their conceptions and cognitions of their moral self (Emde & Buchsbaum, 1990). These precursor studies found preliminary face validity for story stem completion in that, at the lowest age boundary, children 36 to 37 months in age could produce relevant and comprehensible resolutions to moral dilemmas (Bretherton & Oppenheim, 2003). MSSB coding approaches to the child's interpretation and completion of stories with a moral focus are

evaluated by: (1) whether the moral issue presented in the stem was addressed or resolved in a meaningful way, and (2) whether the child enacted attachment themes during moral stories or vice versa (Bretherton & Oppenheim, 2003). Of the five story stems completed during the data collection, three story stems were selected for the current study based on moral content, as identified by Robinson and Mantz-Simmons (2003), that allowed for degrees of compliance, reparation, honesty, empathy, parental attachment, and resistance to temptation or selfishness (Spilled Juice, Mom's Headache, and Cookie Jar). Given the degree of moral content, these three particular story stems are appropriate for assessing and coding moral conscience outcome variable.

Moral Conscience Score. A coding scheme to measure moral conscience was adapted for the current study from coding procedures found in the moral development literature (see Appendix C). Moral conscience was measured through coding of observed moral conduct (positive and negative), moral emotions (guilt and empathy), and moral self/cognition (Eisenberg et al., 2006; Kochanska, 2002a; Kochanska & Aksan, 2006; Kochanska et al., 2005; Kochanska, Koenig, et al., 2010; Zahn-Waxler & Radke-Yarrow, 1990). Additionally, the moral conscience schema was supplemented with coding criteria adapted from the MSSB (Bretherton et al., 1990) for meaningful resolution of the dilemma, degree of reparation, and moral representation. Specifically, moral conduct was coded for observations of positive moral behavior (e.g., following requests, rule-compatible behavior, actions such as helping or sharing, regulating oneself, resisting transgression, truth-telling) and negative moral behavior (e.g., breaking rules, transgressing from parental expectations, aggression, escalation of conflict, dishonesty, excuse-making, self-serving actions). Negative conduct scores were reverse-coded for calculating the overall moral conscience score. Moral emotions were coded for observations of guilt (e.g., verbal

expression of confession, self-blame, apology and non-verbal cues like gaze aversion, bodily tension, affective discomfort after transgression) and observations of empathy (e.g., verbal and non-verbal expressions of concern, care and affection). Moral self was coded for observations of cognitive moral understanding and motivation (e.g., sensitivity to violations of standards, concern for others' wellbeing, feelings, wrongdoing, relationship with others), observations of meaningful resolution of the moral dilemma (e.g., reparation), and the child's moral representation through expression of how he/she ought, or has permission, to behave. The five main scales were measured by coding, on a scale of 1 to 5, the incidence, frequency, and overall quality of individual criteria as they occurred in each story stem completion.

Observer Agreement. Similar to the MRO observations, a graduate student and a senior undergraduate research assistant trained, practiced, and discussed the moral conscience coding scheme by observing a number of videos and, subsequently, adjusted the scheme for any codes that required clarification and coherence. After training, the moral conscience variable was measured using a 5-point Likert-type ordinal scale with two coders independently coding across a randomly selected subset of subjects (n = 16; 29% of overall sample) with remaining observations rated by a single coder. IRR for coding of the moral conscience items was assessed using a two-way mixed, consistency, single-measures intraclass correlation coefficient (ICC) (McGraw & Wong, 1996; Shrout & Fleiss, 1979). ICC assessed the degree that coders provided consistency in their ratings on the moral conscience coding scheme. The resulting ICC of moral conscience factors were in the excellent range: positive conduct = 0.98, negative conduct = 0.97, empathy = 0.95, guilt = 0.94, and self/cognition = 0.96, indicating that coders had a high degree of agreement and suggesting that these items were similarly rated across coders (Cicchetti, 1994). The high ICC suggests that only a minimal amount of measurement error was introduced

by independent coders, the statistical power for subsequent analyses is not substantially reduced, and the ratings are suitable to use for hypothesis testing in the current study.

Reliability. A preliminary data screen of the five factors of the moral conscience measure resulted in a moderate Cronbach's alpha (α = .78) and correlations for all factors were between an acceptable level (.41 to .86) with the exception of the Guilt factor (–.16 to .19) which appeared not to be a good fit (Table 2). The Guilt factor was removed, and the reliability analysis was run on remaining factors resulting in a much-improved internal reliability (α = .87). Principal factor analysis (FA) was conducted on the remaining four moral conscience factors with orthogonal rotation (varimax). The Kaiser-Meyer-Olkin measure (KMO = .74) is between middling to meritorious (Kaiser & Rice, 1974) and verifies the sampling adequacy for the analysis. Bartlett's sphericity was significant ($p < .001$) and only 33% of non-redundant residuals had absolute values greater than .05 and is well below the 50% cut-off. Given the results of the reliability and factor analyses, the moral conscience scores were calculated as a composite of the factors of positive and negative conduct, empathy and moral self, while the guilt factor was excluded.

Results

Data for the analyses included scores from all measures from fathers and children (PSDQ, MRO, CBQ-SF, Moral Conscience) across both collection time points. All analyses were run using SPSS version 24. All analyses were conducted using a significance level of α = .05. The assumptions for multiple linear regression were all assessed and none were found to be violated. The sample size and number of predictors were adequate given an expected medium effect for the regression analysis (Cohen et al., 2003; Field, 2018). The assumption of independence of observations (i.e. residuals) was satisfied in checking the Durbin-Watson

statistic for the models. Histograms, P-P plots and scatterplots of the residuals were examined and found to meet the assumptions of normality, linearity, and homoscedasticity. The assumption of multicollinearity was not found to have been violated after a scan of the correlation matrices revealed no large associations ($r > .80$) between independent variables, and the collinearity statistics of VIF and tolerance were also found to be within acceptable values. An examination of the residuals was completed to check for potential bias in the models due to the influence of outliers. Case diagnostics indicated more than 95% of the cases had standardized residual values within ± 2, Cook's distances, average leverage values, Malahanobis distances, DFBeta, and covariance ratios were well within limits and no extreme outliers were identified.

Descriptives

Descriptive statistics were conducted at the overall group level for (1) the main explanatory variables (APS and MRO), (2) the moderator variables (child fearfulness and effortful control), and (3) the moral conscience outcome variable. Means, standard deviations and ranges for these variables were calculated and reported in Table 3. There was broad variability in the range of fathers' APS and father–child MRO scores as well as on the measures of children's temperamental fearfulness and moral conscience indicating that the sample was relatively typical, although temperamental effortful control ($M = 5.15$) was slightly higher on the 7-point scale. In terms of parenting styles, fathers rated themselves more highly as authoritative ($M = 3.80$) as compared to authoritarian ($M = 1.67$) or permissive ($M = 2.12$). Consistent with previous studies on preschool-aged children, there was a statistically significant gender difference in favour of girls on the overall moral conscience outcome $F(1, 53) = 10.44$, $p = .002$. At the factor level for moral conscience, outcomes for girls were significantly higher than boys on measures of positive moral conduct $F(1, 53) = 8.83$, $p = .004$, empathy $F(1, 53) = 5.13$, $p =$

.028, and moral self/cognition $F(1, 53) = 16.55$, $p < .001$. There was no significant gender difference for negative moral conduct and boys scored only slightly higher than girls on observed negative behaviors. As previously noted, the guilt factor was excluded from the overall moral conscience score. Also consistent with prior studies, girls were rated higher than boys on fathers' reports of effortful control and fearfulness, but not significantly.

Correlations

Intercorrelations between certain child characteristics (gender, age at follow-up, length of time to complete the moral conscience task) and the moral conscience outcome were explored and are reported in Table 4. The Pearson correlation for gender revealed a statistically significant and moderate positive association between children's gender and the moral conscience outcome. Children's age at follow-up had a statistically significant and moderate positive correlation to father–child MRO scores $r(55) = .31$, $p = .017$ and a small positive correlation trending toward significance with children's effortful control $r(53) = .26$, $p = .060$. Length of task was not significantly correlated to moral conscience scores. Intercorrelations among the measures were analyzed and are reported in Table 5. There was a statistically significant positive association between fathers' report of children's effortful control and observations of moral conscience outcomes. There were also small positive associations found between children's effortful control and both father's APS and father–child MRO approaching significance and Cohen's (1988) lower moderate correlation threshold ($r = .30$).

Hierarchical Multiple Linear Regressions

Hierarchical multiple linear regression is used in explanatory analyses to test for significance of the contributions of independent variables to the variance in the outcome variable and allows for testing of interactions with moderator variables (Keith, 2006). Hierarchical

multiple regression also allows for control of child gender and age variables based on prior research indicating significant gender and age effects (Keith, 2006; Kochanska, 1997b, 2002a; Kochanska et al., 1997, 2002; Kochanska, Woodard, et al., 2010; Olino et al., 2013). As neither the APS or MRO variable has theoretically been shown to be more important over the other in contributing to moral conscience development in the literature, a temporal ordering of the explanatory variables was used (i.e., the fathers' APS construct develops prior to the MRO between fathers and children) for the hierarchical regression analyses. Temporal order is commonly used as a criterion for precedence when entering variables sequentially and parent variables may be deemed to exist prior to the birth of a child or before a parent–child dyadic relationship exists (Keith, 2006).

Fathers' APS and Father–Child MRO

A preliminary hierarchical multiple linear regression analysis was run to determine how much variance in children's moral conscience was explained by fathers' APS and father–child MRO (Questions 1 and 2). Control variables of gender and age were entered at Step 1 followed by APS and MRO at Steps 2 and 3 respectively. Findings are presented in Table 6. Gender and age together accounted for 18% of the variance in moral conscience in Step 1 and the model was significant $F(2, 52) = 5.69$, $p = .006$. The addition of the fathers' APS at Step 2 only accounted for a further 1% of the moral conscience variance and did not significantly improve the model $F(3, 51) = 4.07$, $p = .011$. Father–child MRO was added at Step 3 and did not account for any further variance in moral conscience and did not improve the overall model $F(4, 50) = 3.00$, $p = .027$. Although the final model was statistically significant overall, a review of the regression coefficients found that only gender made a significant contribution $\beta = .38$, $t(50) = 2.93$, $p =$

.005. There was insufficient statistical evidence to support the claim that fathers' APS and MRO significantly explained the variance in children's moral conscience outcomes.

Child Temperament Moderators

A series of hierarchical multiple linear regressions were run to explore the moderation effects of child temperament on the relationship between fathers' APS and MRO variables and children's moral conscience outcomes (Questions 3 and 4). Each moderator (child fearfulness and effortful control) was investigated independently with each of the explanatory variables (APS and MRO). Gender and age variables were entered at Step 1, followed by each explanatory variable and the moderator entered at Step 2 and the interaction term entered at Step 3. The explanatory and moderator variables were transformed using grand mean centering prior to running the regression analyses to ensure the coefficients for the lower-order effects were interpretable (Keith, 2006). Follow-up simple slopes analyses of significant interaction effects were performed using the Hayes (2018) PROCESS (v. 3.1) tool in SPSS with gender and age covaried.

Child Fearfulness. Findings for the child fearfulness moderator (Question 3) are presented in Tables 7 and 8. Gender and age together explained 18% of the variance in moral conscience in Step 1 for both regressions and was statistically significant $F(2, 50) = 5.55$, $p = .007$. The first regression was run to investigate the moderation effects of child fearfulness between fathers' APS and children's moral conscience. The addition of the fathers' APS and child fearfulness at Step 2 only accounted for a further 3% of the moral conscience variance and did not significantly improve the model $F(4, 48) = 3.19$, $p = .021$. The APS x fearfulness interaction term was added at Step 3 and accounted for an additional 7% of the variance in moral conscience which was statistically significant and improved the overall model $F(5, 47) = 3.60$, p

= .008. A review of the regression coefficients in the final model revealed that while gender made a significant contribution $\beta = .38$, $t(47) = 3.01$, $p = .004$ the APS x fearfulness interaction term was also statistically significant $\beta = -.28$, $t(47) = -2.09$, $p = .042$. This model supports the claim that child fearfulness moderated the relationship between fathers' APS and children's moral conscience outcome.

A second regression was run to likewise test the moderation effects of fearfulness on the relationship between father–child MRO and moral conscience. With gender and age controlled in Step 1 the addition of MRO and fearfulness at Step 2 only accounted for a further 2% of the moral conscience variance and did not significantly improve the model $F(4, 48) = 2.94$, $p = .030$. The MRO x fearfulness interaction term added at Step 3 did not account for any additional variance in moral conscience and the overall model was not statistically significant $F(5, 47) = 2.31$, $p = .059$. A review of the regression coefficients in the final model showed only gender made a significant contribution $\beta = .39$, $t(47) = 2.94$, $p = .005$. There was insufficient statistical evidence to support the claim that child fearfulness moderated the relationship between father–child MRO and children's moral conscience outcome.

Given the significance of the interaction term for fathers' APS and fearfulness in the first regression, follow-up analysis of significant interaction effects for levels of child fearfulness was performed using the Hayes (2018) PROCESS (v. 3.1) tool in SPSS with gender and age covaried and conditional effects are presented in Table 9 and Figure 1. The significant moderation effect of children's fearfulness on the relationship between fathers' APS and children's moral conscience was conditional. When child fearfulness was low, there was a significant positive relationship between fathers' APS and moral conscience. At mean levels of child fearfulness

there was a non-significant positive relationship between APS and moral conscience and at high levels of fearfulness there was a non-significant negative relationship.

Child Effortful Control. Findings for the children's effortful control moderator (Question 4) are presented in Tables 10 and 11. Gender and age explained 18% of the variance in moral conscience in Step 1 for both regressions and was statistically significant $F(2, 50) = 5.55$, $p = .007$. A regression was run to investigate the moderation effects of effortful control between fathers' APS and children's moral conscience. The addition of the APS and effortful control at Step 2 accounted for an additional 7% of the moral conscience variance, but did not significantly improve the model $F(4, 48) = 3.96$, $p = .007$. The APS x effortful control interaction term added at Step 3 explained no additional variance in moral conscience and, while the final overall model remained statistically significant, it was not improved $F(5, 47) = 3.11$, $p = .017$. A review of the regression coefficients in the final model revealed that gender made a significant contribution $\beta = .34$, $t(47) = 2.58$, $p = .013$ and the effortful control coefficient was trending toward significance $\beta = .24$, $t(47) = 1.74$, $p = .089$ while the interaction term was not significant. This model did not support any moderation effect by children's effortful control on the relationship between fathers' APS and children's moral conscience outcome.

Another regression was run to test the moderation effects of effortful control between father–child MRO and moral conscience. With gender and age controlled in Step 1 the addition of MRO and effortful control at Step 2 accounted for a further 6% of the moral conscience variance, but did not significantly improve the model $F(4, 48) = 3.82$, $p = .009$. The MRO x effortful control interaction term added at Step 3 accounted for a further 5% variance in moral conscience trending toward significance. The overall model was statistically significant $F(5, 47) = 3.89$, $p = .005$. In the review of the regression coefficients of the final model, gender made a

significant contribution $\beta = .33$, $t(47) = 2.58$, $p = .013$, the effortful control coefficient was significant $\beta = .32$, $t(47) = 2.39$, $p = .021$ while the interaction term approached significance $\beta = -.24$, $t(47) = -1.84$, $p = .072$.

Given the significant direct effect of effortful control and the marginal significance of the interaction term with MRO in the overall model, follow-up analysis was performed for levels of effortful control using the Hayes (2018) PROCESS (v. 3.1) tool in SPSS with gender and age covaried. Conditional effects are presented in Table 12 and Figure 2. When child effortful control was high or at mean level, there appeared to be a non-significant negative relationship between MRO and moral conscience, while at low levels of effortful control there was a non-significant positive relationship between MRO and moral conscience.

Discussion

The purpose of this study was to explore the contributions of fathers' authoritative parenting style, father–child positive mutually responsive orientation, and the interactions with children's temperament (i.e., fearfulness and effortful control) toward explaining variance in children's moral conscience development. The current study expands on previous studies of maternal contributions to children's moral development by exploring fathers' contributions through incorporating fathers' evaluations of their parenting style and of their children's temperament along with researcher observations of father–child mutuality and children's responses to moral dilemmas.

In running preliminary analyses, gender arose as a variable that needed to be controlled consistent with findings in previous studies with girls rating higher than boys in observed measures of moral conscience (Kochanska, 2002a; Kochanska, Woodard, et al., 2010). Also consistent with earlier studies, at the factor level for moral conscience, girls scored significantly

higher than boys in observed measures of positive moral conduct, empathy, and moral self/cognition (Kochanska, 2002a; Kochanska, Woodard, et al., 2010). There are multiple developmental differences between girls and boys in early childhood. Girls mature at a faster rate and reach cognitive milestones earlier than boys and often outperform boys in language, fine motor, and social skills in preschool to early school years (Eliot 2010; Halpern 1997; Meland et al., 2015). Given these early developmental differences, moral conscience development may also be impacted for the same reasons, however, more research is required in this area.

Fathers' Authoritative Parenting Style

The first question of the current study, based on previous studies that focused primarily on maternal APS qualities, was what extent fathers' APS contributes to children's moral conscience development. It was hypothesized that fathers' APS would partially explain the variance in children's moral conscience development. In the preliminary regression model, fathers' ratings of their APS did not significantly explain variance in children's moral conscience. Parents who engage an APS via warmth, responsiveness, firm limits, and expectations assist their children to construct moral knowledge through explanation of rules and behavioral expectations, and by responding to moral transgressions appropriately and consistently (Kochanska, 2002b; Kochanska & Aksan, 2006; Kochanska et al., 2003; Smetana, 1999). There is a possibility that certain qualities of other parenting styles may contribute to the influence of fathers' parenting on children's moral conscience. Given the complex integrative nature of moral development, it may be that while no direct effects of fathers' APS on moral conscience was evident in this study, that for children of differing temperaments, different parenting styles may promote conscience more effectively (Kochanska, 1993). In this participant group, it was also unknown whether mothers were the primary caregivers and whether the

amount of time mothers spent with their children may have contributed more to children's moral conscience development than fathers who had less time or involvement. Further investigation of other parenting styles, the time fathers spend with their children and the depth of their involvement, and the unique and shared parenting contributions of mothers may be warranted.

Father–Child Mutually Responsive Orientation

The second question of this study was to explore to what extent dyadic father–child MRO contributed to children's moral conscience outcome. It was hypothesized that father–child MRO would partially explain the variance in children's moral conscience development. In the preliminary regression model of the current investigation, ratings based on observations of positive father–child MRO did not significantly explain variance in children's moral conscience. Previous researchers demonstrated that early positive MRO between mothers and children (i.e., shared positive affect and cooperation which promotes trust, bonding, empathy and expectations of reciprocity) had effects on children's moral conscience and predicted specific aspects of moral conscience development from infancy through early school years (Kochanska, 1997b, 2002b; Kochanska et al., 1999, 2005; Kochanska & Murray, 2000; Laible & Thompson, 2000). One other study found that father–child dyadic positive relationships also predicted a more willing stance to cooperate in discipline contexts for very young children (Kochanska et al., 2007). Similar to APS, it is not known whether the non-significant regression is due to the quantity of time fathers were involved with their preschool-aged children in building dyadic rapport.

Moderation Effects of Child Temperament

Previous findings support the theoretical model of the interplay of child temperament and socialization in the development of moral conscience (Hoffman, 1983; Kochanska, 1991, 1995, 1997a; Kochanska et al., 2007). For children with varying degrees of temperamental fearfulness,

the moderation model is supported for explaining and predicting the effect of maternal discipline style (Dienstbier, 1984; Hoffman, 1983; Kochanska, 1993, 1995, 1997a) and mother–child positive orientation (Kochanska, 1995, 1997a; Kochanska et al., 2007; Maccoby & Martin, 1983) on moral conscience development. While there are several studies that have investigated the mediational effects of maternal socialization variables (i.e., parenting, MRO) between child effortful control and moral development outcomes (Kochanska & Kim, 2014), there is a dearth of research of the moderator effects of effortful control on the relationship between socialization variables and children's moral conscience. Further, there are few studies that have investigated the moderation models for child temperament and the variables of fathers' parenting styles and father–child dyadic relationship in explaining children's moral conscience.

Child Fearfulness

The third question of the present study explored the moderating effects of fathers' reports of child fearfulness on relationships between moral conscience outcomes and fathers' APS and father–child MRO respectively. It was hypothesized that children's higher trait fearfulness in interaction with fathers' APS would explain the variance in children's moral conscience more so than the interaction with MRO. The findings supported these expectations and showed that the interaction between fathers' APS and child fearfulness was significant in explaining moral conscience while there was no significant moderation effect of fearfulness on the relationship between MRO and moral conscience. Further, the moderation effect of fearfulness was conditional in that a positive relationship between APS and moral conscience only emerged in children with low levels of fearfulness. When child fearfulness was at mean levels, there was a non-significant positive relationship between fathers' APS and moral conscience, but at high levels of fearfulness there was a non-significant negative relationship. For children with varying

degrees of temperamental fearfulness, the moderation model was supported in prior research to explain and predict both maternal discipline style (Dienstbier, 1984; Hoffman, 1983; Kochanska, 1993, 1995, 1997a) and mother–child MRO (Kochanska, 1995, 1997a; Kochanska et al., 2007; Maccoby & Martin, 1983) on moral conscience. However, results of the conditional moderator effects of fearfulness in the current study are quite opposite from studies that found for more fearful children that certain qualities of APS (e.g., mothers' warmth, gentle discipline) de-emphasized power and capitalized on optimal anxious arousal promoting conscience development (Dienstbier, 1984; Hoffman, 1983; Kochanska, 1991, 1995, 1997a; Kochanska & Aksan, 2006). One previous study found that father–child power assertive discipline predicted a significant negative effect on rule-compatible behavior in more fearful children (Kochanska et al., 2007). This would suggest that fathers' warmth and gentle discipline combined with firm limits should also promote moral conscience in more fearful children while results of the current study instead found this effect only for children low in fearfulness. It is unknown what it is about fathers' APS that influenced a positive moral conscience outcome in fearless children in the current study.

Prior studies have also found that for more fearless children, there was less internal discomfort or anxious arousal upon transgressing and mothers' warmth and gentle discipline was less effective while MRO plays a greater role (Dienstbier, 1984; Kochanska, 1993; Kochanska et al., 2007; Maccoby, 1983; Maccoby & Martin, 1983). In the present study, contrary to prior research with mothers, there was no similar conditional moderator effect for child fearlessness on the relationship between father–child MRO and moral conscience. Further questions are raised as to qualitative or quantitative differences in the relationships between fathers and young children as compared to mothers. The results raise some interesting questions about the complementary

role that fathers' and mothers' parenting styles and dyadic relationships may play for children of differing fearful temperaments and these findings warrant further study.

Child Effortful Control

The fourth question of the present study explored the moderating effects of fathers' reports of child effortful control on relationships between moral conscience outcomes and fathers' APS and father–child MRO respectively. It was hypothesized that children's effortful control interacting with father's APS would explain a smaller extent of children's moral conscience variance while the interaction with MRO would contribute more.

As anticipated, the findings did not support any significant moderation effect of children's effortful control on the relationship between fathers' APS and children's moral conscience. Additionally, the interaction of effortful control with father–child MRO trended toward significance and contributed more to moral conscience variance than the interaction between effortful control and APS. Conditionally, at high or mean levels of child effortful control, there appeared to be a non-significant negative relationship between father–child MRO and moral conscience, while at low levels of effortful control there was a positive relationship trending toward significance. This finding infers that children who have low effortful control may benefit from a positive and mutually responsive relationship with their fathers that benefits moral conscience development. Effortful control has been shown to mediate the link between MRO and children's internalization of conduct rules while MRO moderates the relationship between effortful control and rule internalization (Kochanska & Kim, 2014). Given that the result in the current study was not statistically robust, the relationship between children's effortful control, father–child MRO, and moral conscience development may lend itself more fully to the mediated-moderation model of Kochanska and Kim (2014) and is a route for further

investigation. The present results also revealed that children's effortful control made a significant direct contribution to moral conscience. Correlations showed a significant positive association between child effortful control and moral conscience and a weaker positive relationship between effortful control and both APS and MRO. Previous findings in the literature have indicated that children's effortful control in early childhood is longitudinally stable and makes a positive contribution to conscience in early childhood (Kochanska & Knaack, 2003; Kochanska et al., 1997). The results of the current study indicating the direct positive effects of children's effortful control on moral conscience are consistent with the literature.

Moral Conscience

One finding within the study raised an interesting question—the lack of guilt as contributing factor to the overall child moral conscience score in this participant group. The guilt factor did not register toward the moral conscience composite score as was anticipated based on previous findings and the known criteria for coding it (Kochanska, 1991; Kochanska et al., 2002). In observed responses to the moral story stems, the typical signs of guilt for moral transgressions (i.e., verbal expressions of confession, self-blame, apology, or non-verbal cues such as gaze aversion, bodily tension, affective discomfort) were not frequently present in this participant sample. As other parenting styles were not considered in this study, perhaps practices that involve inconsistent discipline, that tend to de-emphasize guilt, or that attempt to eliminate any anxious arousal deemed detrimental to self-esteem (e.g., helicopter parenting) may be contributing factors (Cornell & Frick, 2007; Kochanska, 1991; Kochanska et al., 2002). Another possibility is that given that the age of the participant children was approximate to when theory of mind begins to develop, the children may not fully understand the impact of their moral transgressions on others (Ball et al., 2017; Malti, 2016). This probability is less likely, however,

as results of prior studies demonstrated that preschool children do understand the impact of transgressions (Kochanska et al., 2002; Malti, 2016) and, even within the present study, participants were able to indicate and articulate a cognitive understanding of what they did wrong and what they ought to have done. It may be possible that guilt feelings and expressions were either just not present in the sample or were not as salient given the third-person enactment of the story stems with figurines as opposed to moral paradigms involving real people. This may be a consideration for future investigations of moral conscience that incorporate story stems.

Limitations, Future Considerations, and Conclusion

One limitation of the present study is that the participants were demographically homogenous. The majority reported they were Caucasian in married two-parent (father and mother) families with higher education and income levels within academic settings. As such, findings may not account for differences in the independent variables and moral conscience outcomes in the broader population where family demographics and child-rearing practices may be quite different. A second limitation is that the current study only examined fathers' authoritative parenting style and while the qualities of this style were most supported in literature as optimally supporting children's moral conscience development, those findings were primarily from maternal studies. Data analyses for this study also found that father participants rated themselves more highly in the authoritative category than they did in the authoritarian and permissive parenting style categories. These findings do not mean that the other parenting styles, as they pertain to fathers, do not contribute to children's moral development—only that the question of the contribution of fathers' other parenting styles remains to be answered. Third, the focus of the study was based specifically on fathers' contributions to moral conscience development and did not parse out mothers' and fathers' shared parenting contributions nor did it

examine correlations to mothers' assessment of fathers' parenting or of children's temperament. This remains another area of potential future research. Fourth, the data collected from participant families did not include questions or assessments of how much time each parent typically spends with their children and how they are involved in parenting (e.g., whether it was the fathers or mothers who primarily worked outside the home, who was responsible for various aspects of parenting or discipline). While findings of this study were relatively insignificant in terms of the direct contribution of fathers' authoritative parenting and father–child MRO, it is possible that this may be a phenomenon of the quantity and quality of time participant fathers spent with children day-to-day. Finally, the data for this study was extracted from data sets and measures of a broader study designed for other areas of research and, therefore, the present thesis was limited in scope to the pool of participants recruited and to the measures and tasks that were previously completed. This is especially true of the story stem selections that had been completed by another researcher and from which only three could be extracted that fit the requirements of moral paradigms for the present study. To produce a more robust examination of children's moral conscience development, it would be beneficial to incorporate observational measures of father–child interactions in moral scenarios or a broader array of moral story stems and tasks that tap more specifically into moral conduct, emotions, and cognitions.

Regardless of the limitations of this study, because of the small amount of literature presently dedicated to fathers and moral development, the findings suggest that a broader study of fathers' unique contributions to children's moral development remains to be investigated. Future research may also incorporate fathers' and mothers' unique and dyadic parenting contributions to moral conscience development in consideration of children's temperamental trait contributions. Previous research often measured specific singular components of moral

conscience as outcomes (e.g., internalization of rule-compatible behavior, receptive willing stance toward parents) (Kochanska, 1995, 1997a; Kochanska et al., 2007). The present study is one of the first to adapt and incorporate moral conduct, moral emotions, and moral cognition factors from various studies into one composite score as a singular measure of children's moral conscience (Bretherton et al., 1990; Eisenberg et al., 2006; Kochanska, 2002a; Kochanska & Aksan, 2006; Kochanska et al., 2005; Kochanska, Koenig, et al., 2010; Zahn-Waxler & Radke-Yarrow, 1990). Future researchers may benefit from incorporating or enhancing this composite adaptation score as a more fulsome measure.

To conclude, moral development is integral to children's formation of an internal moral self in order that they may grow in virtue to function and to flourish within their relationships and in the greater society. Understanding how fathers may contribute directly to, and promote, their children's moral conscience in interaction with children's own traits and temperaments provides yet another pathway to socialization practices that may enhance moral development. The present study was inspired by a global resurgence and renewed interest in moral development research and literature (Lapsley & Carlo, 2014). It is hoped that the findings and limitations of this study open more avenues to further research in an effort to achieve a broader understanding of fathers' contributions to the important and necessary development of children's moral conscience.

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Tables

Table 1

Themes Represented in Select Stories of the MacArthur Story Stem Battery

Story	Theme
Spilled Juice	Accident vs. punishable act (reaction of authority)
Mom's Headache	Empathy with mother, compliance with mother or friend, resisting temptation
The Cookie Jar	Honesty, compliance with rules vs. loyalty & empathy to sibling

Note. Adapted from "The MacArthur Story Stem Battery: Development, administration, reliability, validity, and reflections about meaning," by I. Bretherton and D. Oppenheim, in R. N. Emde, D. P. Wolf, and D. Oppenheim (Eds.), *Revealing the Inner Worlds of Young Children: The MacArthur Story Stem Battery and Parent Child Narratives* (pp. 55–80), 2003, Oxford University Press.

Table 2

Inter-Item Correlation Matrix of Moral Conscience Measure

Factors	1	2	3	4	5
1. Positive conduct	—	.62***	.64***	–.16	.86***
2. Negative conduct		—	.41***	.19	.51***
3. Empathy			—	.07	.73***
4. Guilt				—	.02
5. Moral Self					—

Note. Time 2 *(n* = 55). *α* = .78 (*α* = .87 with Guilt factor removed). ***$p < .001$.

Table 3

Means and Standard Deviations for Variables

Measure	*n*	*M*	*Range*	*SD*
Explanatory variables (Time 1)	59			
Father APS		3.80	2.80–5.00	0.47
Father–child MRO		3.92	2.56–4.89	0.53
Moderator variables (Time 2)	55			
Child fearfulness		3.84	2.28–5.39	0.68
Child effortful control		5.15	3.63–6.44	0.53
Outcome variable (Time 2)	55			
Child moral conscience[a]		2.83	1.17–4.92	0.79

Note. [a] Composite score excluding guilt factor

Table 4

Pearson Correlations Among Child Characteristics and Moral Conscience Outcome

Variable	1	2	3	4
1. Gender	—	−.01	.01	.41**
2. Age[a]		—	−.02	.13
3. Length of task			—	.11
4. Child moral conscience				—

Note. [a] Time 2 (Mean age = 46 months, $n = 55$). ** $p < .01$.

Table 5

Pearson Correlations Among Father and Child Measures

Variable	*n*	1	2	3	4	5
Explanatory[a]	59					
1. Father APS		—	.09	–.15	.24†	.20
2. Father–child MRO			—	.04	.25†	.12
Moderator[b]	53					
3. Child fearfulness				—	.03	–.09
4. Child effortful control					—	.34*
Outcome[b]	55					
5. Child moral conscience						—

Note. [a] Time 1 (Mean age = 33 months); [b] Time 2 (Mean age = 46 months).

†$p < .10$. *$p < .05$.

Table 6

Linear Model of the Contributions of Fathers' Authoritative Parenting Style and Father–Child Mutually Responsive Orientation to Children's Moral Conscience (*n* = 55)

Explanatory variable	β	R^2	ΔR^2	$R^2_{Adjusted}$	F_{change}
Model 1		.18	.18	.15	5.69**
Gender	.40**				
Age at Time 2	.12				
Model 2		.19	.01	.15	<1
Gender	.38**				
Age at Time 2	.11				
APS	.12				
Model 3		.19	.00	.13	<1
Gender	.38**				
Age at Time 2	.11				
APS	.12				
MRO	.02				

**$p < .01$.

Table 7

Linear Model of Child Fearfulness Interaction Between Fathers' Authoritative Parenting Style and Children's Moral Conscience (*n* = 53)

Explanatory variable	β	R^2	ΔR^2	$R^2_{Adjusted}$	F_{change}
Model 1		.18	.18	.15	5.55**
Gender	.39**				
Age at Time 2	.14				
Model 2		.21	.03	.14	<1
Gender	.38**				
Age at Time 2	.14				
Father APS	.12				
Child fearfulness	–.10				
Model 3		.28	.07	.20	4.36*
Gender	.38**				
Age at Time 2	.06				
Father APS	.14				
Child fearfulness	–.05				
APS x fearfulness	–.28*				

†$p < .10$. *$p < .05$. **$p < .01$.

Table 8

Linear Model of Child Fearfulness Interaction Between Father–Child Mutually Responsive Orientation and Children's Moral Conscience (*n* = 53)

Explanatory variable	β	R^2	ΔR^2	$R^2_{Adjusted}$	F_{change}
Model 1		.18	.18	.15	5.55**
Gender	.39**				
Age at Time 2	.14				
Model 2		.20	.02	.13	<1
Gender	.40**				
Age at Time 2	.15				
Father–child MRO	.02				
Child fearfulness	–.12				
Model 3		.20	.00	.11	<1
Gender	.39**				
Age at Time 2	.15				
Father–child MRO	.02				
Child fearfulness	–.12				
MRO x fearfulness	–.01				

†$p < .10$. *$p < .05$. **$p < .01$.

Table 9

Follow-up PROCESS analysis: Moderation Conditional Effects on Fathers' Authoritative Parenting and Children's Moral Conscience in Children Differing in Fearfulness (*n* = 53)

	Fear	*Effect (b)*	*SE*	*t*	*p*
Low level fearfulness	–.69	.84	.37	2.25	.029*
Mean level fearfulness	.00	.22	.21	1.07	.291
High level fearfulness	.69	–.40	.35	–1.12	.266

*$p < .05$.

Table 10

Linear Model of Child Effortful Control Interaction Between Fathers' Authoritative Parenting Style and Children's Moral Conscience (*n* = 53)

Explanatory variable	β	R^2	ΔR^2	$R^2_{Adjusted}$	F_{change}
Model 1		.18	.18	.15	5.55**
Gender	.39**				
Age at Time 2	.14				
Model 2		.25	.07	.19	2.12
Gender	.34*				
Age at Time 2	.08				
Father APS	.09				
Child effortful control	.24†				
Model 3		.25	.00	.17	<1
Gender	.34*				
Age at Time 2	.08				
Father APS	.08				
Child effortful control	.24†				
APS x effortful control	–.02				

†$p < .10$. *$p < .05$. **$p < .01$.

Table 11

Linear Model of Child Effortful Control Interaction Between Father–Child Mutually Responsive Orientation and Children's Moral Conscience (n = 53)

Explanatory variable	β	R^2	ΔR^2	$R^2_{Adjusted}$	F_{change}
Model 1		.18	.18	.15	5.55**
Gender	.39**				
Age at Time 2	.14				
Model 2		.24	.06	.18	1.89
Gender	.35**				
Age at Time 2	.09				
Father–child MRO	–.02				
Child effortful control	.26†				
Model 3		.29	.05	.22	3.40†
Gender	.33*				
Age at Time 2	.10				
Father–child MRO	–.06				
Child effortful control	.32*				
MRO x effortful control	–.24†				

†$p < .10$. *$p < .05$. **$p < .01$.

Table 12

Follow-up PROCESS analysis: Moderation Conditional Effects on Father–Child Mutually Responsive Orientation (MRO) and Children's Moral Conscience in Children Differing in Effortful Control (*n* = 53)

	Effortful Control	*Effect (b)*	*SE*	*t*	*p*
Low level effortful control	–.54	.28	.26	1.08	.287
Mean level effortful control	.00	–.11	.20	–.53	.600
High level effortful control	.54	–.50	.32	–1.56	.126

Figures

Figure 1

Conditional Effects of Child Fearfulness on Fathers' Authoritative Parenting and Children's Moral Conscience

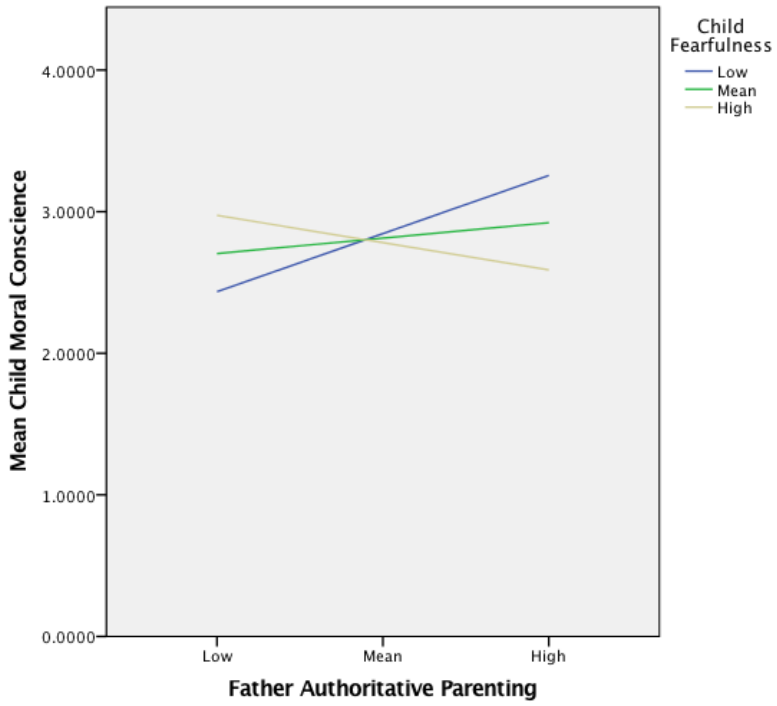
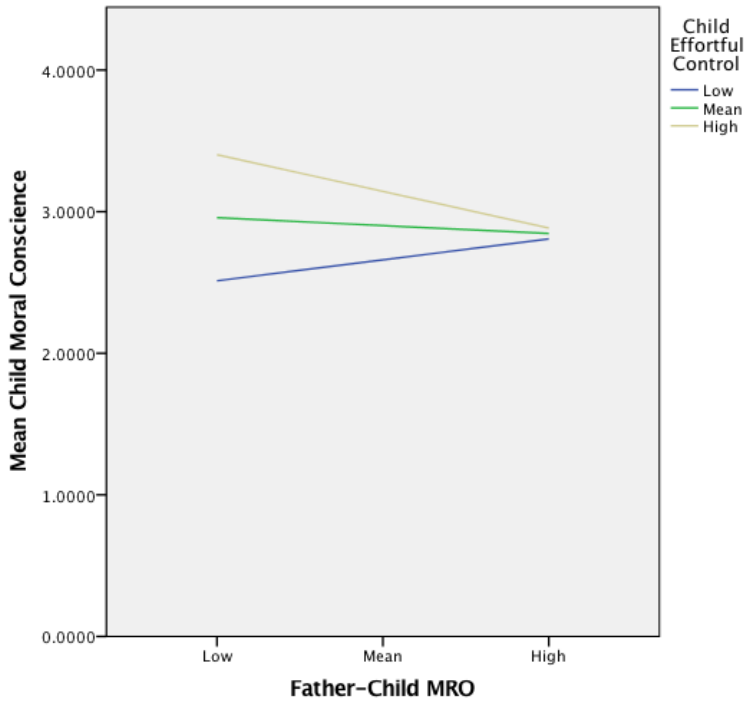


Figure 2

Conditional Effects of Child Effortful Control on Father–Child MRO and Children's Moral Conscience



Appendix A: MacArthur Narrative Coding System

General Protocol Information:

- Establish rapport first for about 10 min. (or as needed)
- Find quiet area
- Ask family members to leave the room
- Place limits on story length, don't allow child to go to excessive lengths
- If unsure of ending, ask, "Is this the end?"
- Clarify vague responses: e.g. "He got punished" as who punished whom so transcriber knows
- Older siblings, younger siblings, and friends used should be of the same gender as the child
- If child interrupts your part of the story, say "I'll tell the beginning, and you get to finish it"
- If unsure of who says it, say: "Who in the story says that?"

START

I: **Now we're going to tell stories together. I will begin each story and then ask you to finish it.**

INTRODUCTION OF FIGURES

M= Mother figure

F= Father figure

G = Grandfather figure

C1= Older brother/sister (Susan/George)

C2= Younger brother/sister (Jane/Bob)

C3= Friend

D= Dog (Barney)

I= Interviewer

I**: Look who we have here** [*bring out the family*]. **Here's our family. This is grandpa, this is mom, this is dad, this is the big sister/brother and her/his name is Susan/George, and this is the little sister/brother and her/his name is Jane/Bob and this is their dog and his name is Barney.** [*Show the figures as you name them*]

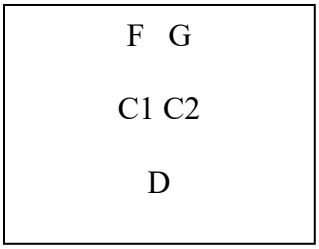
I: **Who do we have here?** [*Get child to name each family member, with help if necessary*]

WARM-UP TASK: THE BIRTHDAY

Props: Table, birthday cake

Characters: All family characters, including dog (but not friends and other non-family characters)

Child



Interviewer

I: **You know what? It is Susan/George's birthday and Mom made her/him this beautiful cake** [*bring out cake*]. **It's time for the party!**

M: **Come on Grandma, Dad, Jane/Bob and Susan/George, it's time to celebrate Susan's/George's birthday.**

I: **Can you get the family ready at the table?**

I: **Show me and tell me what happens now**

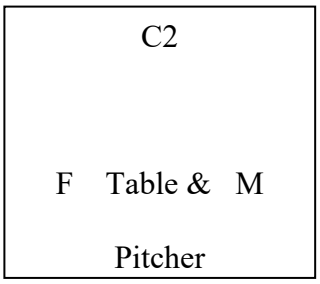
*** Let child play with figures or tell a story yourself if child is in need of help. Remember that demonstrations/leading prompts should NOT be used for the remaining stories. They can only be used for this warm-up task***

STORY #1: SPILLED JUICE

Props: Table, pitcher

Characters: Mother (M), father (F), older sibling (C1), younger sibling (C2)

Child



Interviewer

I: **The family is thirsty and they are going to have some juice. Now put the family around the table so they can have some juice** [*wait until figures are placed*].

Here's the family drinking their juice. Susan/George gets up and reaches across the table and uh-oh! She/he spilled her/his juice all over the floor [*make child spill the pitcher onto the floor so that it is visible to the child*].

I: **Show me and tell me what happens now.**

Prompts if needed:

- If child does nothing about the juice:

I: **What happens about Susan/George spilling the juice?**

- If child only picks up the pitcher and stops:

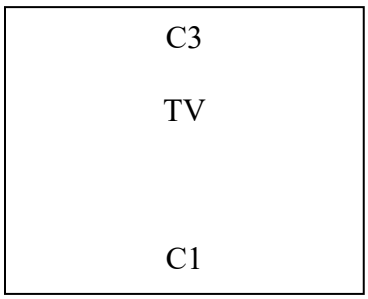
I: **Did anything else happen?**

STORY #3: MOM'S HEADACHE

Props: Couch, television, armchair

Characters: Mother (M), older sibling (C1), friend (C3)

Child



Interviewer

I: [*Set out objects as illustrated, name each as you set them up*]. **We have a couch, a TV, and a chair.**

I: **Mom and Susan/George are sitting and watching TV** [*mom turns to child*]

M: **Oh Susan/George, I have such a headache! I just have to turn this TV off and lie down!** [*Mom gets up and turns the TV off*]. **Susan/George, can you find something quiet to do for a while?**

C1: **Ok Mom, I'll read a book** [*Mom lies down on the couch and Susan/George remains in chair and reads a book*]

I: [*Ding-dong make doorbell sound*] **It's Susan/George's friend Laura/Dave!**

C3: **There's this really neat show on TV, can I come in and watch with you?**

I: **Show and tell me what happens next.**

Prompts:

- If Susan/George or friends doesn't turn on the TV:

C3: **Oh come on! I know you'll really like it!**

- If Susan/George or friend turns on the TV:

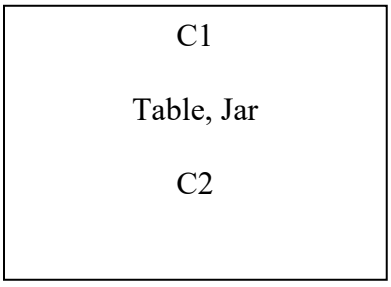
M: **I have such a headache** [*Expressing mild pain*]

STORY #13: THE COOKIE JAR

Props: Table, jar

Characters: Mother (M), Father (F), Older sibling (C1), Younger sibling (C2)

Child



Interviewer

I: **Susan/George and Jane/Bob are in the kitchen. Jane/Bob sees the cookie jar and she/he takes a cookie.**

C1: **Mom said NO cookies!**

C2: **Please don't tell Mom and Dad about it!** [*Dramatic voice*]

I: **You know what, HERE COME MOM AND DAD!!** [*Emotion in voice*]

I: **Show and tell me what happens now.**

Prompt:

- If nothing is said about the cookie that was taken:

M & F: **Who ate those cookies?** [*Emotion in voice*]

Note. Adapted from *MacArthur Story-Stem Battery*, by I. Bretherton, D. Oppenheim, H. Buchsbaum, R. Emde, and The MacArthur Narrative Group, 1990, Unpublished Manual.

Appendix B: Mutually Responsive Orientation Scale

The following items are rated on a scaled from 1 to 5 for each context of interest (e.g., item 1 is rated at a 3/5 for the clean-up context). Coders did not know which item belonged to which dimension while coding. Original kappa from the study cited below was .72; Cronbach's alpha = .92

Harmonious Communication

The Harmonious Communication subscale measures the extent to which both verbal and nonverbal aspects of communication flow smoothly.

3. Interaction flows smoothly, is harmonious.

5. Communication flows effortlessly and has a connected back-and-forth quality.

6. Dialogue promotes intimacy and connection.

7R. Dyad participates in very little or no communication.

Mutual Cooperation

The Mutual Cooperation subscale measures the extent to which the dyad effectively resolves potential sources of conflict and the extent to which partners are open to each other's influence.

4R. Dyad is unable to accept roles (e.g., frequent autonomy struggles and/or resistance).

8. Subtle influences are sufficient for cooperation.

9. Parent and child adopt a receptive, willing stance toward each other's influence.

10R. Conflicts escalate, get out of hand.

12. Parent and child are psychologically in tune with each other.

Emotional Ambiance

The Emotional Ambiance subscale measures the extent to which the dyad enjoys an emotionally positive atmosphere indicating clear pleasure in each other's company.

11. Dyad effectively addresses occurrences of distress and negative affect.

13. Overall emotional ambiance is positive and warm.

14R. Dyad engages in clear bouts of negative affect.

15. Dyad engages in clear bouts of joy.

16. There are natural displays of affection.

17. Expressions of affection are a source of pleasure for both.

Note. The item numbers refer to each item's position on the coding sheet, and *R* indicates a reversed item. Adapted from "Mutually responsive orientation between parents and their young children: Toward methodological advances in the science of relationships," by N. Aksan, G. Kochanska, and M. R. Ortmann, 2006, *Developmental Psychology*, *42*(5), pp. 833–848. https://doi.org/10.1037/0012–1649.42.5.833

Appendix C: Moral Conscience Coding Scheme

Moral Conduct (Positive):

- Appears to follow rules/indication of rule-compatible behavior/internalized conduct/resists transgression _____
- Helping _____
- Truth-telling _____

Positive Moral Conduct Code (1–5) _____

Moral Conduct (Negative):

- Breaks rules or transgresses from parental/norm expectations _____
- Aggression/atypical negative responses _____
- Escalation of conflict _____
- Dishonesty/tattling/lying/excuse-making/avoidance _____
- Self-serving or selfish behavior _____

Negative Moral Conduct Code (1–5) _____ (reverse code)

Moral Emotions (Guilt):

- Verbal expressions of confession/self-blame/apology _____
- Gaze aversion _____
- Bodily tension _____
- Affective discomfort after transgression _____

Moral Emotions (Guilt) code (1–5) _____

Moral Emotions (Empathy):

- Verbal expressions of concern or care _____
- Non-verbal facial/physiological responses (shows affection/concern/care) _____

Moral Emotions (Empathy) code (1–5) _____

Moral Self/Moral Cognition:

- Sensitivity to violations of standards _____
- Concern about others' wrongdoing/wellbeing _____
- Concern about feelings of or relationship with parents/others _____
- Moral issue resolved in a meaningful way _____
- Reparation is made _____
- Moral Representation (child expresses how he/she "ought" or has "permission" to behave) _____

Moral Self/Moral Cognition code (1–5) _____

Note. Adapted from a compilation of several studies on moral conscience factors (Bretherton et al., 1990; Eisenberg et al., 2006; Kochanska, 2002a; Kochanska & Aksan, 2006; Kochanska et al., 2005; Kochanska, Koenig, et al., 2010; Zahn-Waxler & Radke-Yarrow, 1990).