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## Early relational experience: A foundation for the unfolding dynamics of parent-child socialization

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### Abstract

Psychologists have long tried to understand why trajectories of socialization in individual parent–child dyads can be distinct, leading to adaptive or maladaptive developmental outcomes. In this article, we elucidate origins of those differences by examining the subtle yet enduring implications of early parent–child relationships in longitudinal studies of low- and high-risk families, using correlational and experimental designs, and multiple measures. Those relationships are key for socialization because they can alter cascades from children’s biologically based difficult temperament to parents’ negative control to negative children’s outcomes, as demonstrated by social-learning theories. We suggest that those cascades unfold only in parent–child dyads whose early relationships lack positive mutuality and security. Such relationships set the tone for adversarial cascades. In contrast, early mutually positive, secure relationships initiate cooperative, effective socialization and defuse risks of negative cascades. Parents’ and children’s internal representations of each other may explain how such divergent sequelae unfold.

### Keywords

Parent-child relationships; attachment; temperament; internal working models; longitudinal studies; socialization

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Why do some children embrace parental influence and embark on adaptive, positive developmental trajectories toward prosocial, internalized, rule-abiding conduct, and robust social competence, whereas others reject and resent parental influence and enter maladaptive paths toward callousness, disregard for conduct rules and others’ feelings, antisocial behavior, and impoverished competence? For nearly three decades, our laboratory has sought to understand the mechanisms of socialization that explain the origins of these differences.

Those divergent paths are a long-standing targets of research in social development, and many prominent scholars, inspired mostly by social-learning theories, produced a large and rich body of rigorous research. That research, supported by robust evidence and tested in increasingly sophisticated analyses, highlighted a common path to behavior problems that emphasizes a range of “negative socialization forces.” The child’s difficult temperament was identified as a starting point, triggering a negative, adversarial cycle of parental harsh

discipline and child resentment. Difficult children elicited increasingly negative parental control, and that negative control, in turn, led to disruptive, antisocial child outcomes – aggression, opposition, delinquency, rule breaking, and other conduct problems (Dadds & Salmon, 2003; Dishion & Patterson, 2006; Lipscomb et al., 2011; Lorber & Egeland, 2011; Scaramella & Leve, 2004).

Whereas we accepted the key premise and findings of that research, we felt that its portrayal of development was incomplete, due to the dominant emphasis on negative, adversarial processes and transactions between the parent and child and the underestimation of “positive socialization forces.” Accounting for such positive factors may considerably add to our understanding of divergent developmental trajectories. We capitalized on the science of positive relationships that gained prominence in the 1980s, informed by research on communal orientation in social psychology, reciprocity constructs in parenting, and perhaps most strongly, attachment theory (Bowlby, 1969/1982; Maccoby & Martin, 1983). Those perspectives inspired a dyadic concept of Mutually Responsive Orientation (MRO) – a close, mutually cooperative, affectively positive relationship that emerges in some parent-child dyads (Kochanska, 1997). MRO was conceptualized as encompassing multiple dimensions, including the parent’s and the child’s willing responsiveness to each other, shared positive affect, and the closely related concept of security of attachment. We have shown, and many laboratories have replicated, multiple positive developmental effects of early MRO. It proved particularly helpful in elucidating why some children embrace parental socialization influences and eagerly internalize parental values and standards, and some reject them, entering a path toward disregard for rules and a broad spectrum of disruptive, antisocial conduct.

The integration of our model with the social-learning approach was particularly fruitful. Specifically, we proposed that the maladaptive cascade from the child’s difficulty to the parent’s negative, harsh control to the child’s antisocial outcomes, described so aptly by social-learning researchers, would unfold only in parent-child dyads that had failed to develop a foundation of a positive relationship in infancy, and whose early relationships reflected an impoverished MRO or insecure attachment. We expected an early suboptimal or insecure relationship to set the stage for negative cascades by serving as a “catalyst” for future parent-child mutually resentful, negative dynamics, with the parent and child growing increasingly negative and adversarial, undermining ultimate socialization outcomes. In contrast, we expected that a foundation of a positive early relationship, indexed by MRO and/or secure attachment, would offset or defuse the unfolding of this negative sequence. In those dyads, difficult children would not provoke parental forceful discipline, and forceful discipline, even when deployed, would not be “toxic,” in that it would not lead to child antisocial outcomes. In those dyads, we expected socialization to become a mutually positive, cooperative parent-child enterprise.

Our conceptual model is in Figure 1. The solid black lines depict the constructs we have measured and relations we have tested. The figure represents a static snapshot, with the parent-child relationship assessed in the first years, parental control typically measured following its onset in toddler years, and future outcomes in preschool years and beyond. However, the process should be seen as dynamic, unfolding over time, with repeated

assessments that reflect the developmentally changing nature of the constructs. For clarity, the figure only depicts the negative cascade, but the studied constructs are continuous; for example, parent-child relationships can range from low to high on mutuality and security, and children's outcomes can range from rejection to the willing embrace of parental socialization.

## REVIEW OF STUDIES

The model capitalizes on evidence collected in studies in our laboratory at the University of Iowa: the Parent-Child Study (community mothers and children, assessed from infancy to early school age), the Family Study (community mothers, fathers, and children, assessed from infancy to adolescence), and the Play Study (high-risk, low-income mothers of toddlers). In the Play Study, the dyads entered at toddler age and were randomly assigned to an experimental intervention aimed at improving their mutually cooperative relationship through responsive, child-oriented play or a play-as-usual condition. Broad assessments were obtained at baseline, immediately after the intervention, 6 months later, and when the children were age 7.

All studies adopted a multi-trait, multi-method approach. The timing of assessments of all constructs ranged broadly, from the first few months of life to preadolescence, providing us with multiple developmental windows. The key measures of the early parent-child relationships encompassed observations of various aspects of MRO (e.g., mutual responsiveness, shared positive affect, synchronous, coordinated routines) in lengthy naturalistic interactions and parent-child attachment organization (the latter typically in the Strange Situation Paradigm), starting as early as the first year.

Child difficulty, a notoriously broad concept, was operationalized at multiple levels, targeting biobehavioral characteristics that pose parenting challenges and increase risk for behavior problems. The measures included observations of angry, irritable, emotionally negative, uninhibited, hard-to-manage temperament, low concern about transgressions, routine genetic markers of risk for behavior problems (5-HTTLPR, short allele), and physiological measures of autonomic hypo-reactivity (low skin conductance). Occasionally, we combined behavioral and biological markers into "behavioral risk" composites.

Beginning with the toddler age, when parental control emerges, we observed maternal (and in Family Study, also paternal) negative control in lengthy naturalistic discipline contexts, in which the parent directed the child to perform an unwelcome chore (toy cleanup) or to refrain from touching attractive, but off-limits objects and toys. Multiple observational codes of parents' behavior and affect captured negative control styles. Child outcomes included a broad range of observations of children's regard for rules, internalized, self-regulated behavior, and age-appropriate clinical instruments, reports from parents and teachers, and self-reports that assessed those characteristics.

### Review of findings.

In several analyses, we tested the proposed moderating effects of the early parent-child relationship (either MRO or attachment security) in simple models that examined its effect

on the link between two of the three key constructs (for example, between child difficulty and parental negative control, or between negative control and child outcomes). In more comprehensive analyses that involved moderated mediation, as depicted in Figure 1, we modeled the parent-child relationship as moderating the entire path from child difficulty to parental control to child outcomes, controlling for stability of the studied constructs when feasible. The available statistical tools allowed us to test whether the relationship moderated one or both paths and to detect the indirect effect of difficult temperament on future outcomes as conditional on the quality of the early parent-child relationship. Table 1S in Supplemental materials illustrates selected findings, along with the respective references.

Overall, the findings were remarkably consistent. The converging evidence clearly supported the role of the early parent-child relationship as a moderator of the path triggered by child difficulty. Across multiple measures of child difficulty, maladaptive, negative dynamics indeed unfolded for difficult children, consistent with the social-learning models. However, we found this pattern only in insecure or suboptimal parent-child relationships. Such relationships appeared to set the stage for negative cascades and future parent-child mutually resentful dynamics, with the parent and child growing increasingly negative and adversarial, undermining ultimate socialization outcomes.

Surprisingly, in secure, optimal early relationships, we did not find such antagonistic dynamics. Difficult children did not provoke parents to use power-assertive control. Even when parents asserted power, it did not lead to antisocial outcomes in children. Instead, an early positive relationship set the tone for positive, mutually receptive, cooperative cascades (e.g., Kochanska et al., 2010).

The Play Study tested the model in an experimental design. Much research has shown that in highly stressed, low-income mothers, a negative developmental cascade—from children's difficulty to mothers' negative control to children's maladaptive outcomes—is likely to unfold. Indeed, we found an indirect effect of children's difficulty (assessed at baseline) on later behavior problems (assessed 6 months after the intervention) via maternal negative control (assessed immediately after the intervention). However, this effect occurred only in the control group. In the intervention group, consistent with our model, the cascade was defused—presumably by enhancing the cooperative relationship between the mother and the child. Thus, the processes in the intervention group resembled what we found in mutually responsive or secure dyads in our correlational work. Furthermore, the effect was specific to difficult children: Mothers in the control group used more negative control than those in the intervention group when their children were high in difficulty (Brock & Kochanska, 2016).

## LOOKING AHEAD: A NEW UNDERSTANDING OF MECHANISMS

To explain how and why such divergent cascades unfold, we draw from literatures on representation as a key mechanism of the legacy of early relationships (Bretherton & Munholland, 2008; Bugental & Johnston, 2000; Carlson, Sroufe, & Egeland, 2004; Dykas & Cassidy, 2011; Leerkes et al., 2015; Thompson, 2016). Figure 1 depicts, in gray, the proposed constructs and effects.

The parent's and the child's evolving representations of each other are the key mechanisms that explain the divergent sequelae. Those internal working models (IWMs) – explicit and implicit perceptions, expectations, and attributions, emerging over time and reflecting the history of the relationship – come to guide the parent's and the child's future interactions (Dykas & Cassidy, 2011).

Parents bring their general schemas, representations, and beliefs about relationships, parenting, and their child to the relationships with their infants. Those representations, often originating from their own early experiences, guide their parenting and influence the emerging parent-child relationship. Parents who are likely to establish insecure, suboptimal relationships with their children are also likely to form more negative, hostile, and impoverished IWMs of the child (Dykas, Ehrlich, & Cassidy, 2011; Meins, 1999; Verhage et al., 2016).

Diverse, yet conceptually synergistic literatures have focused on dimensions of parents' IWMs. Parental reflective functioning and mind-mindedness (McMahon & Bernier, 2017; Meins, 1999; Slade, 2005) refer to willingness or ability to see the child as a psychological agent with internal states that underlie behavior. Parental relational schemas reflect negative or positive, mostly implicit, affective attitudes toward the child (Sher-Censor, 2015). Parental attributions reflect the views of the child's difficult behavior as voluntary, deliberate, and intentional acts, or unintended, natural expressions of internal states (Snyder, Cramer, Afrank, & Patterson, 2005).

The parent's IWM of the child then biases or filters the parent's perception of the child's behavior, and this biased perception may account for the moderated link between child behavior and parental control. A parent who has an impoverished, negative IWM of the child is "primed" to perceive even mild forms of the child's difficult behavior as challenging and aversive. For that parent, difficult, angry, irritating, challenging, hard-to-manage characteristics easily trigger harsh, angry, affectively negative, rejecting control (Haltigan, Leerkes, Supple, & Calkins, 2014; Lorber & O'Leary, 2005; Nix et al., 1999; Scaramella & Leve, 2004; Smith, Dishion, Shaw, & Wilson, 2015). By contrast, for a parent who has a rich, reflective, positive IWM of the child, typically found in secure dyads, the same child characteristics do not trigger such coercive control; indeed, they may even elicit supportive, patient, accepting, and empathic control (Dix, 1991).

A complementary process may unfold on the part of the child. The child's IWM of the parent, originating in the very early relational experience, biases or filters the child's future perception of parental control, once discipline and control emerge at toddler age. This biased perception may account for the moderated link between parental control and child outcomes. We expect that in insecure, suboptimal relationships, the child's early-formed IWM of the parent reflects low expected responsiveness, and low confidence and trust in protection (Carlson et al., 2004; Dykas & Cassidy, 2011). Following the onset of parental control, those children are "primed" to perceive it as hostile, unfair, mean-spirited, and arbitrary (Gershoff, 2002; Grusec & Goodnow, 1994). The child then resents and rejects parental socialization messages and influence, and a mutually adversarial cascade unfolds, ultimately leading to poor developmental outcomes, particularly disruptive behavior problems. By contrast,

children with early formed positive and trusting IWMs of their parents come to view control as benevolent, fair, and well intentioned, and they willingly embrace socialization, entering a path to positive outcomes and competence – and as a result, the maladaptive cascade is “defused” (Kochanska et al., 2010; Lee et al., 2015).

Emerging methodologies promise new insights into notoriously elusive, vague, and cryptic constructs of parents’ and children’s IWMs (Cassidy, Jones, & Shaver, 2013; Sherman, Rice, & Cassidy, 2015). On the parental side, growing research has produced an array of behavioral measures derived from coding parents’ speech to their infants, interviews, speech samples, and reports. On the child’s side, promising infant cognition measures have provided insights into children’s expectations of their caregivers’ responsiveness (Johnson et al., 2010). Memory measures and narrative instruments offer windows into their IWMs of parents as negative, rejecting, hostile, and mean-spirited, or positive, warm, responsive, and trustworthy (Toth, Maughan, Manly, Spagnola, & Cicchetti, 2002).

Of note, although we share attachment scholars’ emphasis on the relative importance of early relational experience, the process whereby children and parents form their IWMs of each other continues beyond the early years. In particular, children’s IWMs almost certainly reflect developmental transformations in social information processing skills that include the level of social understanding and shared intentionality (Newton, Thompson, & Goodman, 2016).

### **Controversies, limitations, and future directions.**

The interplay between children’s biobehavioral characteristics, such as difficult temperament, and qualities of early environment, including early relationships, is complex. Developmental scholars’ conceptual and empirical accounts of such interplay vary broadly. Researchers engaged in the burgeoning, elegant, and heuristically productive work on diathesis-stress, differential susceptibility, plasticity, sensitivity to context, or more generally, temperament x environment interactions (e.g., Belsky & Pluess, 2009; Ellis, Boyce, Belsky, Bakermans-Kranenburg, & Van Ijzendoorn, 2011; Rothbart & Bates, 2006) typically model child temperament characteristics as moderators, parental socialization, including control, as the independent variable, and child outcomes as dependent variables. Some of our past work has also followed that approach. That research has cumulatively shown that for difficult children, parental socialization is especially critical in determining their future paths. Difficult children who experience suboptimal care likely embark on paths to maladaptation; but difficult children who experience high quality care can achieve outcomes as good as their easy peers, or sometimes even better.

Note that our moderated mediation model produces findings fully compatible with that notion. Difficult children who experience negative control are indeed at higher risk. However, we model child difficult characteristics as the independent variables, parental control as a mediator, child future outcomes as dependent variables, and early relationship qualities as the moderators of the entire causal path.



Whereas compatible, our model also specifies empirically testable mechanisms that link the child's difficulty with outcomes within a developmentally informed theory of socialization. We specify a causal sequence from child difficulty to parental negative control to poor outcomes, an issue rarely addressed in differential susceptibility perspectives. Perhaps most importantly, we posit that the *probability of that sequence depends on the quality of the early relationship*. A sub-optimal, insecure relationship amplifies that probability. An optimal, secure one attenuates it; in secure relationships, difficult children may, in fact, receive responsive, empathic care and control, and consequently, fare equally well or better than easy peers. Furthermore, going beyond differential susceptibility perspectives, the parent's and the child's IWMs of each other are proposed as explanatory constructs, assessed at the level of representation, that alter the links between the child's characteristics and parental control and between parental control and child outcomes.

In sum, our model can potentially complement – without contradicting – others' work. Testing multiple possible models of the interplay among early relationships, children's biologically-based characteristics, parental control, and future developmental trajectories and outcomes is an exciting and intriguing enterprise.

Our work has limits. Except for the experimental Play Study, it has been correlational. Experimental investigations of interventions targeting parents' and children's internal working models (De Winter, Bosmans, & Saleminck, 2017; Suchman et al., 2017) would strengthen the testing of our conceptual framework. As examples of experimental studies, Suchman et al. (2017) implemented an intervention designed to enhance mothers' reflective functioning, leading to more adaptive parenting and children's outcomes; De Winter et al. (2017) successfully modified children's internal working models of their mothers.

We have often controlled for stability of constructs, using earlier assessments. However, relatively modest sample sizes—ranging from 102 in the Family Study to 186 in the Play Study—prevented us from relying on analytic longitudinal models that account for stability and change in the studied constructs over time, and for correlations among them (e.g., cross-lagged panel designs with an autoregressive structure). Such models would strengthen causal inferences. Also because of the size of our samples, we typically combined insecurely attached groups. In our ongoing work, examining avoidant, resistant, and disorganized dyads separately may be revealing.

Family Study and Parent-Child Study involved community samples, in which parents and children generally had positive, harmonious relationships, negative control was infrequent, and children typically progressed toward adaptive socialization outcomes. Nevertheless, evidence of the postulated paths has been consistent across studies, ages, and measures. Future research will greatly benefit from including more high-risk families and children with elevated risks of conduct problems.

Although consistent with several bodies of literature that emphasize the role of the parent-child relationship as a context of parenting (e.g., Darling & Steinberg, 1993), this work is specifically situated within a systemic, organismic view of development, in which early relationships are key for complex future sequelae or cascades (Masten & Cicchetti, 2010).

Formed in infancy and the early years, the parent-child relationship has a distinct, privileged impact in development (Sroufe, 2005, 2016), serving a key conditional or probabilistic role by influencing complex mediation and moderation effects that ultimately lead to negative or positive outcomes. Closer collaboration and more exchanges of ideas among researchers who study relationships, temperament, parents' and children's relational information processing, and socialization may greatly benefit the field (Cassidy et al., 2013; Groh, Pasco Fearon, van IJzendoorn, Bakermans-Kranenburg, & Roisman, 2017). Such a synthesis would be heuristically productive, enhance our understanding of mechanisms underlying the enduring legacy of early relational experience, and inform research on intervention and prevention.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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## References

- Belsky J & Pluess M (2009). Beyond diathesis stress: Differential susceptibility to environmental influences. *Psychological Bulletin*, 135(6), 885–908. doi: 10.1037/a0017376. [PubMed: 19883141]
- Bowlby J (1969/1982). *Attachment and loss: Attachment (vol.1)*. (2nd ed.). New York, NY: Basic Books.
- Bretherton I, & Munholland KA (2008). Internal working models in attachment relationships: Elaborating a central construct in attachment theory. In Cassidy J & Shaver PR (Eds.), *Handbook of attachment: Theory, research and clinical application* (2nd ed., pp. 102–127). New York, NY: Guilford.
- Brock RL, & Kochanska G (2016). Toward a developmentally informed approach to parenting interventions: Seeking hidden effects. *Development and Psychopathology*, 28(2), 583–593. doi: 10.1017/S0954579415000607 [PubMed: 27063895]
- Bugental DB, & Johnston C (2000). Parental and child cognitions in the context of the family. *Annual Review of Psychology*, 51(1), 315–344. doi:10.1146/annurev.psych.51.1.315
- Carlson EA, Sroufe LA, & Egeland B (2004). The construction of experience: A longitudinal study of representation and behavior. *Child Development*, 75(1), 66–83. doi:10.1111/j.1467-8624.2004.00654.x [PubMed: 15015675]
- Cassidy J, Jones JD, & Shaver PR (2013). Contributions of attachment theory and research: A framework for future research, translation, and policy. *Development and Psychopathology*, 25(4pt2), 1415–1434. doi:10.1017/S0954579413000692 [PubMed: 24342848]
- Dadds MR, & Salmon K (2003). Punishment insensitivity and parenting: temperament and learning as interacting risks for antisocial behavior. *Clinical Child and Family Psychology Review*, 6(2), 69–86. doi:10.1023/A:1023762009877 [PubMed: 12836578]
- Darling N, & Steinberg L (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, 113(3), 487–496. DOI: 10.1037//0033-2909.113.3.487
- De Winter S, Bosmans G, & Salemink E (2017). Exploring the causal effect of interpretation bias on attachment expectations. *Child Development*, 88(1), 131–140. doi:10.1111/cdev.12587 [PubMed: 27346554]



- Dishion TJ, & Patterson GR (2006). The development and ecology of antisocial behavior in children and adolescents. In Cicchetti D & Cohen DJ (Eds.), *Developmental psychopathology* (2nd ed., Vol. 3, pp. 503–541). Hoboken, NJ: Wiley.
- Dix TH (1991). The affective organization of parenting: Adaptive and maladaptive processes. *Psychological Bulletin*, 110(1), 3–25. doi:10.1037/0033-2909.110.1.3 [PubMed: 1891517]
- Dykas MJ, & Cassidy J (2011). Attachment and the processing of social information across the life span: Theory and evidence. *Psychological Bulletin*, 137(1), 19–46. doi:10.1037/a0021367 [PubMed: 21219056]
- Dykas MJ, Ehrlich KB, & Cassidy J (2011). Links between attachment and social information processing: Examination of intergenerational processes. In *Advances in Child Development and Behavior*, 40, 51–94. Doi:10.1016/B978-0-12-386491-8.00002-5 [PubMed: 21887959]
- Ellis BJ, Boyce WT, Belsky J, Bakermans-Kranenburg MJ, & Van IJzendoorn MH (2011). Differential susceptibility to the environment: An evolutionary–neurodevelopmental theory. *Development and Psychopathology*, 23(1), 7–28. doi:10.1017/S0954579410000611 [PubMed: 21262036]
- Gershoff ET (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*, 128(4), 539–579. doi:10.1037//0033-2909.128.4.539 [PubMed: 12081081]
- Groh AM, Pasco Fearon RM, van IJzendoorn MH, Bakermans-Kranenburg MJ, & Roisman GI (2017). Attachment in the early life course: Meta-analytic evidence for its role in socioemotional development. *Child Development Perspectives*, 11(1), 2017, 70–76. doi:10.1111/cdev.12213
- Grusec JE, & Goodnow JJ (1994). Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. *Developmental Psychology*, 30(1), 4–19. doi:10.1037/0012-1649.30.1.4
- Haltigan JD, Leerkes EM, Supple AJ, & Calkins SD (2014). Infant negative affect and maternal interactive behavior during the still-face procedure: The moderating role of adult attachment states of mind. *Attachment & Human Development*, 16(2), 149–173. doi:10.1080/14616734.2013.863734 [PubMed: 24329015]
- Johnson SC, Dweck CS, Chen FS, Stern HL, Ok S-J, & Barth M (2010). At the intersection of social and cognitive development: Internal working models of attachment in infancy. *Cognitive Science*, 34(5), 807–825. doi:10.1111/j.1551-6709.2010.01112.x [PubMed: 21564237]
- Kochanska G (1997). Mutually responsive orientation between mothers and their young children: Implications for early socialization. *Child Development*, 68(1), 94–112. [PubMed: 9084128]
- Kochanska G, Woodard J, Kim S, Koenig JL, Yoon JE, & Barry RA (2010). Positive socialization mechanisms in secure and insecure parent–child dyads: Two longitudinal studies. *Journal of Child Psychology and Psychiatry*, 51(9), 998–1009. doi:10.1111/j.1469-7610.2010.02238.x [PubMed: 20406336]
- Lee Y-E, Brophy-Herb HE, Vallotton CD, Griffiore RJ, Carlson JS, & Robinson JL (2015). Do young children's representations of discipline and empathy moderate the effects of punishment on emotion regulation? *Social Development*, 25(1), 120–138. doi:10.1111/sode.12141
- Leerkes EM, Supple AJ, O'Brien M, Calkins SD, Haltigan JD, Wong MS, & Fortuna K (2015). Antecedents of maternal sensitivity during distressing tasks: Integrating attachment, social information processing, and psychobiological perspectives. *Child Development*, 86(1), 94–111. doi:10.1111/cdev.12288 [PubMed: 25209221]
- Lipscomb ST, Leve LD, Harold GT, Neiderhiser JM, Shaw DS, Ge X, & Reiss D (2011). Trajectories of parenting and child negative emotionality during infancy and toddlerhood: A longitudinal analysis. *Child Development*, 82(5), 1661–1675. doi:10.1111/j.1467-8624.2011.01639.x [PubMed: 21883160]
- Lorber MF, & Egeland B (2011). Parenting and infant difficulty: Testing a mutual exacerbation hypothesis to predict early onset conduct problems. *Child Development*, 82(6) 2006–2020. doi:10.1111/j.1467-8624.2011.01652.x [PubMed: 22026438]
- Lorber MF, & O'Leary SG (2005). Mediated paths to overreactive discipline: Mothers' experienced emotion, appraisals, and physiological responses. *Journal of Consulting and Clinical Psychology*, 73(5), 972–981. doi:10.1037/0022-006X.73.5.972 [PubMed: 16287397]

- Maccoby EE, & Martin JA (1983). Socialization in the context of the family: Parent-child interaction. In Mussen PH (Series Ed.) & Hetherington EM (Vol. Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (4th ed., pp. 1 – 102) New York: Wiley.
- Masten AS, & Cicchetti D (2010). Developmental cascades. *Development and Psychopathology*, 22(3), 491–495. doi:10.1017/S0954579410000222 [PubMed: 20576173]
- McMahon CA, & Bernier A (2017). Twenty years of research on parental mind-mindedness: Empirical findings, theoretical and methodological challenges, and new directions. *Developmental Review*, 46, 54–80, doi:10.1016/j.dr.2017.07.001
- Meins E (1999). Sensitivity, security and internal working models: Bridging the transmission gap. *Attachment and Human Development*, 1(3), 325–342. <http://dx.doi.org/1080/14616739900134181>. [PubMed: 11708230]
- Newton EK, Thompson RA, & Goodman M (2016). Individual differences in toddlers' prosociality: Experiences in early relationships explain variability in prosocial behavior *Child Development*, 87(6), 1715–1726. DOI: 10.1111/cdev.12631 [PubMed: 28262933]
- Nix RL, Pinderhughes EE, Dodge KA, Bates JE, Pettit GS, & McFadyen-Ketchum SA (1999). The relation between mothers' hostile attribution tendencies and children's externalizing behavior problems: The mediating role of mothers' harsh discipline practices. *Child Development*, 70(4), 896–909. doi:10.1111/1467-8624.00065 [PubMed: 10446725]
- Rothbart MK, & Bates JE (2006). Temperament. In Eisenberg N, Damon W, & Lerner RM (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (pp. 99–166). Hoboken, NJ, US: John Wiley & Sons Inc.
- Scaramella LV, & Leve LD (2004). Clarifying parent-child reciprocities during early childhood: The Early Childhood Coercion Model. *Clinical Child and Family Psychology Review*, 7(2), 89–107. doi:10.1023/B:CCFP.0000030287.13160.a3 [PubMed: 15255174]
- Sher-Censor E (2015). Five Minute Speech Sample in developmental research: A review. *Developmental Review*, 36, 127–155. doi:10.1016/j.dr.2015.01.005
- Sherman LJ, Rice K, Cassidy J (2015). Infant capacities related to building internal working models of attachment figures: A theoretical and empirical review. *Developmental Review*, 37, 109–141. doi: 10.1016/j.dr.2015.06.001
- Slade A (2005). Parental reflective functioning: An introduction. *Attachment and Human Development*, 7(3), 269–281. doi:10.1080/14616730500245906 [PubMed: 16210239]
- Smith JD, Dishion TJ, Shaw DS, & Wilson MN (2015). Negative relational schemas predict the trajectory of coercive dynamics during early childhood. *Journal of Abnormal Child Psychology*, 43(4), 693–703. doi:10.1007/s10802-014-9936-z [PubMed: 25208813]
- Snyder J, Cramer A, Afrank J, & Patterson GR (2005). The contributions of ineffective discipline and parental hostile attributions of child misbehavior to the development of conduct problems at home and school. *Developmental Psychology*, 41(1), 30–41. doi:10.1037/0012-1649.41.1.30 [PubMed: 15656735]
- Sroufe LA (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, 7(4), 349–367. doi:10.1080/14616730500365928 [PubMed: 16332580]
- Sroufe LA (2016). The place of attachment in development. In Cassidy J & Shaver PR (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed., pp. 997–1011). New York: Guilford.
- Suchman NE, DeCostea CL, McMahon TJ, Dalton R, Mayes LC, & Borelli J (2017). Mothering from the Inside Out: Results of a second randomized clinical trial testing a mentalization-based intervention for mothers in addiction treatment. *Development and Psychopathology*, 29(2), 617–636. doi:10.1017/S0954579417000220.
- Thompson RA (2016). Early attachment and later development: Reframing the questions. In Cassidy J & Shaver PR (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3<sup>rd</sup> ed., pp. 330–348). New York: Guilford Press.<sup>rd</sup>
- Toth SL, Maughan A, Manly JT, Spagnola M, & Cicchetti D (2002). The relative efficacy of two interventions in altering maltreated preschool children's representational models: Implications for

attachment theory. *Development and Psychopathology*, 14(4), 877–908. doi:10.1017/S095457940200411X [PubMed: 12549708]

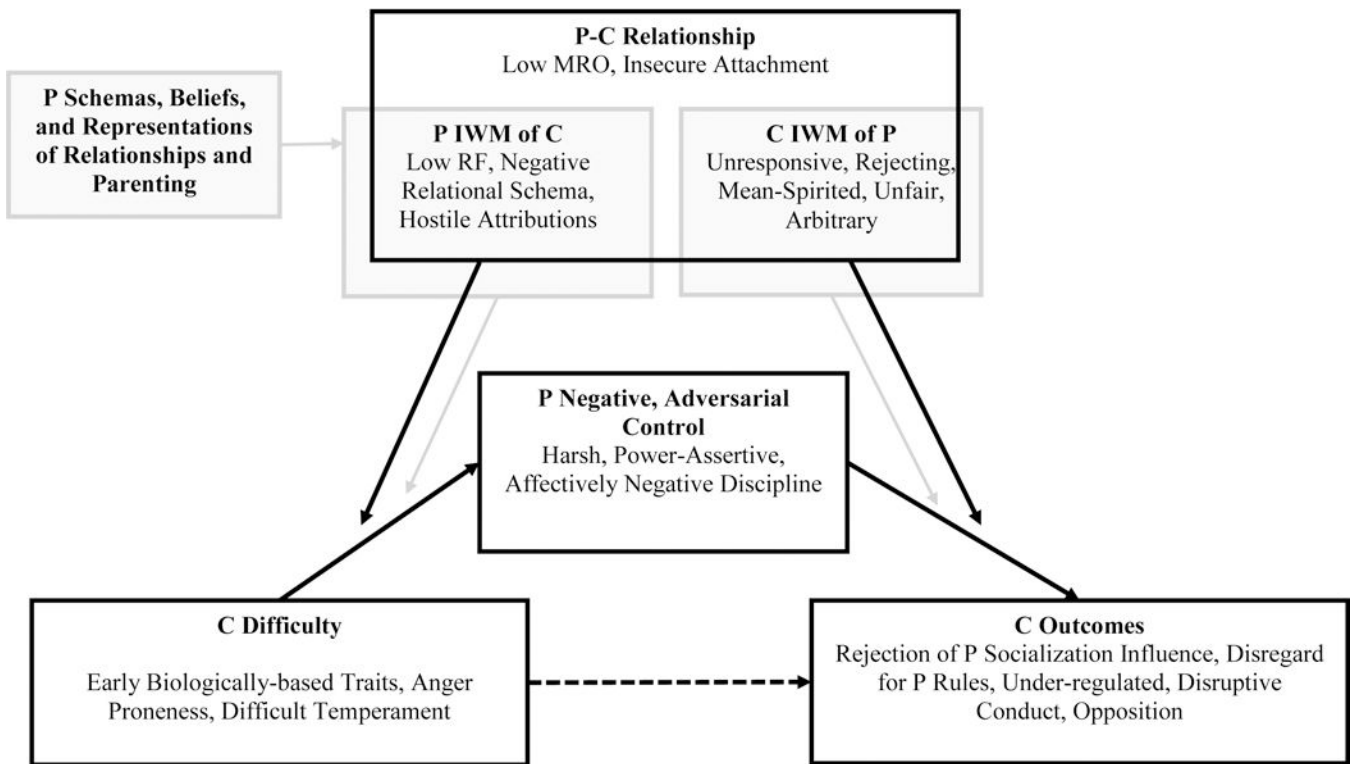
Verhage ML, Schuengel C, Madigan S, Fearon RM, Oosterman M, Cassibba R, ... & van IJzendoorn MH (2016). Narrowing the transmission gap: A synthesis of three decades of research on intergenerational transmission of attachment. *Psychological Bulletin*, 142(4), 337–366. doi: 10.1037/bul0000038 [PubMed: 26653864]

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**Figure 1.**

Conceptual model integrating the early parent-child relationship with the common maladaptive developmental path from child difficulty to parental negative control to child outcomes. MRO=Mutually Responsive Orientation. P=Parent. C=Child. IWM=Internal Working Model. RF=Reflective Functioning.

Constructs and arrows in solid black represent relations demonstrated in multiple studies. The dashed arrow represents links that generally become non-significant when the mediated path is considered. Constructs and arrows in light gray represent proposed mechanisms that may account for the moderation effects. For clarity, the focus is on the negative cascade; however, the constructs and effects should be seen as continuous. As examples, parent-child relationships can range from low on mutuality and insecure to highly mutual and secure. The parent's and child's IWMs can range from negative and hostile to positive and trusting. Children's outcomes can range from rejection to embrace of parental socialization. The moderation effects will reflect those differences.