

The Development of Virtuous Character

Automatic and Reflective Dispositions

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Character development is on everybody's mind. Journalists like Paul Tough (*How Children Succeed: Grit, Curiosity, and the Hidden Power of Character*) and David Brooks (*The Road to Character*) have brought character into public discourse as a foundation for educational success, personal well-being, and positive relationships. The Brookings Institution's *Character and Opportunity Project* conducts original research to understand the importance of character to economic opportunity and intergenerational social mobility.¹ Robert Putnam, of *Bowling Alone* fame, has written of the erosion of social and economic support on children's character development and its association with inequality in a book subtitled *The American Dream in Crisis*.²

In these and other discussions, the focus is as much on what Lickona and Davidson call *performance character* as on *moral character*.³ The former consists of the qualities that are necessary for excellent performance in any domain, such as perseverance, self-discipline, and conscientious effort. The latter consists of qualities underlying ethical behavior, such as integrity, justice, caring, and respect. Lickona and Davidson argue that both performance character and moral character are important, and that the qualities of virtuous character incorporate elements of both.⁴

The contributors to this contemporary interest in the development of character include philosophers, psychologists, educators, political scientists, economists, and scholars in other fields. Their contributions build on the ideas inherited from ancient and modern virtue theory. Current work on character education in school systems, for example, underscores the formal and informal ways that virtue or moral character can be fostered outside as well as within

the family.⁵ Political scientists like Putnam emphasize the broader social and economic contexts in which character is forged from experiences that extend significantly beyond tutelage, service, and personal reflection.⁶ Together, these and other perspectives contribute to a broader portrayal of the development of virtuous character than the picture of the rational, autonomous moral agent inherited from eighteenth-century Enlightenment philosophy.

Psychological theory has also contributed to this expanded portrayal. In addition to a vast empirical research literature on personality, ethical judgment, and moral motivation, psychologists have also developed a view of human behavior in which underneath the rational, reflective response tendencies are more automatic, nonreflective influences. As discussed in books like Daniel Kahneman's *Thinking, Fast and Slow*, many psychologists believe that complementing and influencing our conscious, rational reasoning processes are a range of implicit, nonconscious emotional and nonrational judgments that function outside of awareness.⁷ Cognitive biases influencing the estimation of risk, social categorization, time preference, and other processes do not determine ethical judgments by any means, but they provide a nonconscious scaffolding underlying the more reflective decisions and judgments that people consciously make. Understanding the development of virtue or moral motivation requires, therefore, considerations at two levels: automatic and reflective.

Such a view has begun to influence philosophical thinking about virtue development. In chapter 6 of this volume, for example, Nancy Snow develops the concept of goal-dependent automaticity to show how virtuous characteristics can emerge as the result of chronically accessible goals and schemas that regularly evoke desirable conduct outside of conscious awareness. A young adult striving to respond sensitively to his young child may unintentionally develop capacities for patience and reflection as a result of his habitual responsiveness to his child (Snow's "habits of the folk"), while another adult develops moral courage as the result of internalizing morally relevant mental frameworks from childhood that repeatedly and nonconsciously orient her thinking and behavior toward others (Snow's "intelligent virtue"). In each case, automatic tendencies function in concert with reflective, rational capacities to guide the development of virtuous character. In another analysis, Michael Slote argues that moral or virtuous character is nonconsciously shaped by the young child's gratitude for feeling loved by her parents or, alternatively, rage if she does not feel loved.⁸ Slote's view is consistent with contemporary attachment theory (substituting security/insecurity for gratitude/rage) and highlights the nonconscious emotional processes that can influence character development even before moral awareness has begun to emerge.⁹

The views of Snow, Slote, and their colleagues illustrate the importance of considering both automatic and reflective dispositions in the development of

virtuous character, and suggest the need for furthering this endeavor. Their views also underscore the value of multidisciplinary thinking in doing so. In this chapter, we hope to contribute to this effort by considering further perspectives on the development of automatic and reflective dispositions from developmental psychology. As discussed in a companion chapter, empirical research in child development has the potential of informing philosophical virtue ethics by testing assumptions about children and developmental processes, broadening understanding of the growth of character and personality and, at times, offering new perspectives on the development of morality.¹⁰ The earlier chapter outlined a perspective based on developmental research to propose that young children develop a “pre-moral sensibility” based on their early, non-egocentric awareness of the effects of people’s behavior on another’s feelings, goals, and needs. This pre-moral awareness is refined in parent-child interaction that enlists this intuitive conception of desirable conduct into a network of moral values and the child’s self-awareness as a moral agent.¹¹

This chapter builds on that analysis by focusing on the development of individual differences in moral character and the influence of automatic and reflective processes. It inquires into the origins of the conscious and nonconscious processes that yield differences in the development of moral character. In the section that follows, automatic processes are the focus of the discussion, particularly those associated with nurturant parental care and their consequences for young children’s developing character and orientation to others, extending the analysis of Slote and others.¹² Then in the next section, reflective processes are considered in the context of the parent-child relationship and conversation that builds on and extends the young child’s intuitive pre-moral sensibility in ways that contribute to character development, extending the analysis of Snow.¹³ Together, these processes suggest, we hope, the wealth of developmental influences that potentially contribute to differences in virtuous character and that warrant further multidisciplinary examination.

I. Automatic Dispositions: A Bioevolutionary-Developmental Perspective

A newborn enters an unknown world. Will food be plentiful or scarce? Will people be nurturant or abusive? How do I interact with them? Because survival depends on the answers to these questions (well before they can even be conceptualized), newborns are sensitive to environmental indicators of the kind of world the child has entered, and its development adapts on the basis of those signals. This is why early experiences are so important to development.

The adaptations based on early experience not only help the young infant survive after birth but also, to the extent that these environmental indicators signify enduring characteristics of the child's world, they can provide lifelong benefits.

One of the most important unknowns is this: Is the world safe or dangerous? It makes a difference whether the child has been born on the East Side or the West Bank. Whereas living in a world of danger requires the development of vigilance, self-protection, and capacities to quickly respond to threat, preparing for a life of safety promotes the development of exploratory interest, curiosity, and connections to others. Indicators of the extent to which the world is dangerous are among the most important signals that influence early biological and behavioral development, and the severity and chronicity of early experiences of stress are among the most important of these indicators.

There is growing evidence from human and animal studies that young organisms develop differently in significant ways depending on whether their early experiences are chronically stressful.¹⁴ This even begins prenatally: the developing fetus is sensitive to hormonal and other physiological indicators of maternal stress, and heightened exposure to these influences in the womb is subsequently associated with the infant's greater sensitivity and hyperreactivity to stress after birth.¹⁵ Maternal stress provides a prenatal prediction of the threats in the world into which the child will be born.

After birth, the young child's direct experience of stress becomes a central indicator of the extent of threat or danger in the environment. Studies of children who have been abused or neglected, who are living in foster care or in families with protracted marital conflict, who have a depressed mother, or who are living in poverty show that these children develop atypical biological systems of stress reactivity that are behaviorally manifested in poorer self-regulation, heightened reactivity to stress, greater vigilance, and learning and memory problems.¹⁶ These behavioral manifestations derive, in part, because heightened levels of stress hormones have widespread effects on the developing brain, affecting not only neurobiological systems of stress reactivity but also areas governing emotion, self-regulation, attention, memory, and cognitive processing.¹⁷ These behavioral effects are familiar to those who care for young children in adverse circumstances: problems with emotion regulation and difficulty concentrating or focusing thought, following instructions, or developing constructive peer relationships are common to the children in their care. These biological consequences of chronic stress, and their behavioral correlates, are especially apparent when children are young because these neurobiological systems are still early in development and thus easily influenced, and young children have fewer mechanisms for compensating for the effects of stress.

Viewed in the context of preparing for life in a dangerous world, these biological and behavioral characteristics can actually be viewed as adaptive. They are consistent, in other words, with enabling the child to react quickly and strongly to perceived threat and allocating cognitive resources to vigilance in the interests of self-protection. They are consistent with what Narvaez calls the “safety ethic” that orients toward self-protection for individuals in chronic stress.¹⁸ But there are trade-offs in these developmental adaptations. Cognitive and attentional resources devoted to detecting danger cannot as readily be devoted to learning and exploration. Threat vigilance and heightened reactivity to challenges can also undermine the development of constructive relationships with adults and peers. Moreover, these stress-related adaptations are taxing, contributing to cumulative depletion in biological functioning that may increase risk for later physical or mental health problems.¹⁹

An experimental study with nine-year-old children who experienced chronic stress illustrates these trade-offs.²⁰ A set of prototypical adult facial expressions of emotion—happy, fearful, angry, and sad—were digitally “morphed” from one expression (e.g., sadness) to another (e.g., anger) to create pictures of progressive blends of the two emotions in the face. The pictures were then randomly presented to the children, who were asked to identify the emotion in each expression. Children who had been physically abused characteristically overidentified anger in the adult expressions, describing them as angry even when there were few actual elements of anger in the face. This was not true of children of the same age with no history of maltreatment, nor did either group of children make overattributive errors with other emotions. These and other findings suggest that abused children become sensitized to signals of adult anger, possibly because vigilance for adult anger enables children to anticipate and prepare for aversive encounters with adults who have abused them in the past. But this oversensitivity to anger expressions may also help explain why maltreated children are more physically and verbally aggressive toward their peers.²¹

If chronic early stress (including family stresses associated with fairly common experiences such as poverty) contributes to behavioral dispositions to be more reactive to threat, less self-regulating, and cautiously vigilant, what does this mean for the development of virtuous character? Most developmental researchers have not systematically studied this question, nor would they expect a direct connection between these early dispositions and later character (but see Narvaez for an interesting and important exception).²² After all, although they are important, these initial developmental adaptations are not immutable. There is evidence, for example, that if young children who have grown up in adversity experience a significant change in their life circumstances—such as if an abused child subsequently experiences warm,

reliable support in a stable family—then earlier biological and behavioral adaptations to stressful conditions begin to change over time.²³ This may derive from the reversal of the epigenetic effects of early experiences through subsequent experiences that have different influences, as has been demonstrated in other species.²⁴ This is one of the benefits of the plasticity inherent in childhood development, although it can take months or years for new behavioral and biological patterns to emerge after they have initially been shaped by early experience. And it is also true that later life experiences can have their own biological and behavioral consequences which may alter the effects of early experiences, such as when adolescents encounter new and significant adversity or engage in substance abuse.²⁵

But for (most) children for whom early childhood stress foreshadows continuing conditions of adversity, these early behavioral adaptations become dispositions that can make it more difficult to develop certain virtuous characteristics. Self-discipline and self-regulation are important to the ability to privilege broader, long-term goals and values over immediate demands, but early adversity alters self-regulatory competencies and prioritizes responding preemptorily to immediate challenges.²⁶ Future time perspective and perseverance are likewise blunted when immediate demands automatically command attention. Resilience is weakened when children become chronically hyperreactive to challenging or difficult events.²⁷ The qualities of compassion and generosity may be impaired for children whose early experiences have fostered nonconscious dispositions to distrust or remain vigilant for threat from others.²⁸ The view is not that these early automatic dispositions determine character, but rather that they raise or lower the threshold for the development of qualities of virtuous character. And when the conditions causing stress for children are shared by the adults who provide care for them, the reasons for intergenerational continuities in character development are more readily apparent and the effects of the child's direct experience of stress are compounded by family experience.²⁹ As children mature and encounter opportunities to promote the cultivation of character, they may find that the effects of guidance, service, personal reflection, or other incentives run against the implicit activation of nonconscious dispositions from early experience. The dispositions may present obstacles to the development of certain qualities of virtuous character.

Adversity is not the only kind of experience, however, to “get under the skin” to influence biological and behavioral dispositions contributing to character development. Positive consequences derive from experiences of social support which can buffer the effects of stress. A large research literature documents the benefits of social support for adult physical health and psychological well-being, especially to individuals who are in stressful circumstances.³⁰ The perception that others are with you in your coping efforts has been associated

with physical healing, greater emotion regulation, diminished stress reactivity, and more constructive coping with difficulty.³¹ Moreover, in a manner complementary to how chronic stress affects multiple biological systems that have behavioral consequences, there is increasing evidence that social support mitigates some of these stress-related biological effects and strengthens other biological processes that are associated with self-regulation and social bonding.³²

Social support is primarily experienced by children through the reliability of the assistance provided by their caregivers. Indeed, the ability to count on the support of a nurturant adult contributes to a sense that the world is safe (rather than dangerous) because of the expectation that threats are not faced alone, and this is one way that social support helps to mitigate the effects of adversity early in life. Moreover, studies of the neurobiology of stress reactivity in young children show that the presence of a supportive adult helps to lower the child's biological stress response to challenging events.³³ In this respect, social support—like stress—also “gets under the skin” to influence biological as well as behavioral responding.

The support that young children experience in relationships with their caregivers (typically parents) is conceptualized in developmental research as the security of attachment. Because young children depend so significantly on adult caregivers to provide protection and nurturance, they develop emotional attachments to those adults as part of the motivational system for obtaining this support.³⁴ When caregivers are reasonably responsive and helpful, according to attachment researchers, young children develop secure attachments that are manifested (in both research and everyday contexts) as reliance on the adult, especially when the child is stressed, and the capacity to comfortably explore in nonthreatening situations because the adult's presence confers a sense of security and confidence.³⁵ Because some caregivers are not reliably responsive, however, other young children instead develop insecure attachments, which can be seen in various ways, including the child's inability to derive security or comfort from the adult's company, or the child's independence from the adult and apparent self-reliance, or even disorganized kinds of behaviors.³⁶ The security of attachment thus reflects the young child's implicit confidence in the adult as a source of support which, in turn, motivates exploration and learning rather than cautious self-protection.

Attachment theorists believe that the developmental consequences of a secure or insecure attachment extend significantly beyond the parent-child relationship to influence children's relationships with peers and other adults, as well as children's self-concept and beliefs about people and how to interact with them. This derives not only from the social and emotional skills that children acquire from parent-child interaction but also, and more fundamentally,

from how the security of attachment influences children's developing personality and implicit understanding of the self and the social world (represented, in attachment theory, as young children's "internal working models" of self and others). Many of these outcomes are nonconscious: young children's trust in others' good will, beginning with parents and extending provisionally to others, is implicit in how securely attached children interact socially, just as wariness of others and uncertainty are implicit in the social behavior of insecurely attached children.³⁷

An extensive research literature on the correlates and consequences of the security of attachment largely confirms these theoretical expectations.³⁸ Young children with secure attachments have been found to develop more positive and constructive relationships with peers and adults compared to children with insecure attachments. They also develop more positive self-concept, greater capacities for self-regulation (especially emotion regulation), growth in early moral awareness, and an understanding of other people that includes enhanced emotion understanding, better skills at social problem-solving, and less distrust and suspicion of others.³⁹ These are, in many cases, overlapping outcomes: children's implicit expectations for other people influence how they interact with them and the relationships they develop.

This is illustrated in a recent study on children's peer relationships. The security of mother-infant attachment was assessed when children were age 2 (based on home observation), and then ratings of children's peer conflict were obtained at age 4 ½ and when children were in kindergarten and first grade.⁴⁰ Most children show declining peer conflict during this period, but children who were securely attached to their mothers at age 2 showed a steeper decline and lower rates of peer conflict in first grade. Furthermore, children also responded to a social problem-solving assessment at age 4 ½ involving a series of stories involving social problems (e.g., how to get access to a desirable toy that another child has) in which the child was asked to identify potential solutions. Children who were securely attached at age 2 showed a greater number of socially competent solutions to these problems at 4 ½, and children with strong social problem-solving skills also showed steeper declines in peer conflict.

The characteristics associated with a secure attachment include greater capacity for self-regulation, emotion understanding, developing moral awareness, self-confidence, and more positive regard for others. And although it is difficult to view these characteristics in children as virtues (but see chapter 5 by Swanton in this volume for an argument that virtue must be regarded in developmentally graded forms), they may provide implicit influences as well as explicit forms of understanding that support the growth of mature virtuous characteristics. There is evidence, for example, that similar positive attributes are observed in the adult behavior of children who were securely attached,

although the enduring influence of early security of attachment depends on subsequent experiences that either help to maintain or, instead, to alter early developed characteristics.⁴¹ Nevertheless, attachment theorists concur with Slote—although for somewhat different reasons—that early experiences of supportive parental care confer a variety of nonconscious, automatic dispositions, many of them emotional in nature, that influence personality development and help to orient young children toward others in ways that are relevant to the growth of virtuous character.⁴²

This bioevolutionary-developmental formulation proposes, then, that rather than entering the world as *tabulae rasae*, very young children are equipped by evolution with sensitivity to signals in the environment that convey critical information about the world into which the child has been born, and that are relevant to survival.⁴³ The most important of these signals concerns the reliability and sensitivity of parental care and its effectiveness in buffering the sources of stress that may also be part of the newborn's world. These signals provoke developmental adaptations that are both biological and behavioral, designed to prepare the child for living in the world and for interacting with other people who may be solicitous, threatening, or disinterested. These adaptations contribute to dispositions toward others and how to interact with them that nonconsciously orient the child toward others in ways that are relevant to the development of character, and that also contribute to other skills (such as self-regulation, resilience, persistence) that are important to the development of virtue. These early influences do not determine the future course of virtuous character, but rather contribute automatic response tendencies that may make the future development of virtuous character easier or more difficult.

II. Reflective Dispositions: A Social-Constructivist View

Virtuous character develops through rational, reflective processes that last a lifetime. The realization of mature virtues in adulthood implies developmental processes, although classic virtue ethics in the Aristotelian tradition characterizes the elements of virtuous conduct in such a manner that it is, albeit with remarkable exceptions, an adult realization.⁴⁴ Even so, non-Aristotelians such as Swanton, drawing on the work of Jennifer Welchman and Michael Slote, argues in chapter 5 that children also have their own “excellences *qua* child” that should not be disregarded simply because they are not comparable to those of a mature adult.⁴⁵ This leads her to question: how do we understand virtues in children? A satisfactory response to this question requires

multidisciplinary inquiry into the development of character, identity, and moral awareness in children.

In an earlier paper, one of us proposed that this developmental process begins surprisingly early, in young children who have been traditionally portrayed as egocentric in their social understanding and self-interested in their moral awareness.⁴⁶ Contrary to these views, current research on young children shows that they early develop a nonegocentric understanding of the intentionality and goal-directedness of people's behavior, the meaning and significance of others' feelings, and the associations between desires, intentions, and emotions (e.g., that people feel sad when they do not get what they desire or seek). This knowledge builds on toddlers' acute observations of the behavior of people around them, together with their growing experience of their own actions as goal-directed and the compelling emotions associated with their own desires (as any parent can attest). Furthermore, as young children become proficient at comprehending the goals underlying peoples' actions, they become increasingly capable of contributing to the achievement of those goals (*shared intentionality*), such as by picking up a pencil that an adult accidentally dropped when writing.⁴⁷ More significantly, they also begin evaluating the actions of third parties who help or hinder others from accomplishing their goals.⁴⁸ There is growing research evidence that young preschool-age children reward those who assist, punish those who hinder, and offer benefits to those who were previously victimized by a hinderer when given the opportunity to do so.⁴⁹ Together with their sensitivity to peoples' feelings, these evaluations constitute the basis for a premoral sense of right or desirable conduct based on its consequences for others' goals, feelings, and desires, and which may provide the basis for later judgments of fairness, equity, and even simple justice.⁵⁰

This premoral sensibility gradually becomes enlisted into moral awareness and the development of character as adults naturally enlist these sensitivities into their formal and informal moral guidance. This developmental formulation is constructivist⁵¹ in a similar manner to how virtue theory provides a constructivist account of adult virtue: virtue emerges from an interaction of social guidance with the individual's self-initiated construction of understanding from experience. The development of virtuous character is contingent on the developing capabilities of the individual and the conceptual catalysts of society: neither alone is sufficient.

Although traditional moral development theories have focused on parents' moral tutelage on occasions of child misconduct, such as the discipline encounter, this is not the primary forum of moral guidance in young children's experience.⁵² Young children are emotionally aroused by conflict with parents over misbehavior and less capable than older children of cognitively focusing on the parents' moral instruction in this context, and thus less able to

comprehend a generalizable moral lesson.⁵³ Instead, research focuses on several other conceptual catalysts in the early years that each build on the young child's premoral sensibility.

First, the cooperative mutuality of the parent-child relationship provides motivational foundations for desirable conduct that, over time, may become habitual in children and contribute to the development of mental schemas and self-understanding that underlie virtuous character. In a formulation drawing from the ideas of attachment theory discussed earlier, Kochanska proposes that early moral development—which she calls *conscience*—is founded on the growth of a mutually responsive orientation between parent and child that sensitizes the child to the reciprocal obligations of close relationships.⁵⁴ Young children are accustomed to the one-way assistance of others caring for them, of course. But as they become increasingly expected and capable of contributing to others' needs (such as in household tasks and compliance with rules) their motivation for doing so derives, at least in part, from the responsiveness of caregivers to their own needs. In support of this view, several studies have confirmed the association of positive mutual responsiveness in home observations of parents and their toddlers with laboratory measures of children's moral conduct several years later as they enter school.⁵⁵

Stated differently, once young children comprehend an adult's solicitude in terms of shared intentionality—the adult is participating in achieving what the child needs and wants—the child is motivated by this helpful responsiveness to reciprocate by responding constructively to parental requests (i.e., to be a helper rather than a hinderer). Over time, this disposition is likely to become habitual and integrated into the child's conception of how to behave in relationships, and it may also develop into a more generalized disposition toward other people. With increasing age, of course, children also become capable of reflecting in increasingly sophisticated ways about why constructive responsiveness to others' goals and needs is a desirable quality of relationships. At the same time, however, they are developing a more automatic, nonconscious orientation of responding helpfully to others' needs as this orientation is habitually evoked at home. This would perhaps be an example of the kind of "habits of the folk" in child development that Snow offers as an illustration of the growth of virtuous character through goal-directed automaticity.⁵⁶

It is important to note that this developmental formulation emphasizes the positive incentives in the parent-child relationship for the growth of moral awareness and virtuous character. This is by contrast with traditional conceptualizations of children's moral compliance arising from fear of punishment or loss of parental love, and provides a different avenue for understanding the influence of the parent-child relationship as a forum for the construction of positive values and virtuous dispositions toward others.

Second, although moral tutelage in the discipline encounter may be challenging for young children to comprehend in the heat of the moment, there are other contexts in which parents and young children converse about desirable and undesirable conduct. Sometimes this occurs when they are talking about the day's events—reviewing what happened and why—which can occur as meals are prepared, as daily routines are conducted, or en route to a destination. Developmental researchers have focused on these prosaic conversations as important forums for the early development of social and emotional understanding and influential in the development of a young child's autobiographical memory and sense of self.⁵⁷ One reason for their interest is that the semantic content and narrative structure of an adult's conversational discourse help to organize the young child's representations of events in memory and contributes detail and context to those representations. These conversations typically concern events of interest to the child who is thus likely to be receptive to the adult's recounting and interpretations. Not surprisingly, therefore, another reason for researchers' interest is that early parent-child conversations become forums in which parental attributions, judgments, and values are also implicitly conveyed to the child.

A short conversation recorded by Dunn and Brown between a 21-month-old and his mother in the kitchen of their London flat illustrates this:⁵⁸

CHILD: Eat my Weetabix. Eat my Weetabix. Crying.

MOTHER: Crying, weren't you? We had quite a battle. "One more mouthful,

MICHAEL: And what did you do? You spat it out!

CHILD: (pretends to cry)

The mother's sequential reporting of events and causal representation of the outcome (i.e., the child's crying) provide her son with a coherent and memorable account of the morning's confrontation. At the same time, the mother incorporates into her event representation some implicit evaluations of responsibility for the outcome that are likely to be different from her son's recollection of having to eat unappetizing breakfast cereal (as anybody who has sampled Weetabix can attest). Her son, rather than the mother herself, is responsible for the confrontation by refusing to cooperate with her reasonable request. And although it is impossible to know how influential the contents of a single mother-child conversation can be, considerable research indicates that how mothers recount everyday events with their young children over time has a significant influence on children's autobiographical memory and their social and emotional understanding.⁵⁹ These conversations may also be important to developing moral awareness and the growth of character.

In a study by Laible and Thompson, mothers and their four-year-old children were asked to converse about the child's good behavior and misbehavior

in the recent past.⁶⁰ Later, children were independently observed in an assessment of conscience development (drawn from Kochanska's research) that appraised their ability to remain compliant with a maternal request in her absence. Many aspects of mother-child conversation about the child's behavior were coded from transcripts. The two that were most strongly associated with the child's later cooperative conduct were the frequency of the mother's references to people's feelings or intentions, and the mother's moral evaluative statements (such as describing behavior as "a nice thing to do"). The frequency of the mother's references to rules and to the consequences of behavior (such as rule violation) were also coded, but these bore no relation to the child's compliance. These findings were substantively replicated in a longitudinal study in which the conversations of mothers with their 2 ½-year-olds were recorded during lab episodes involving compliance and conflict, and measures of the child's conscience development were obtained six months later.⁶¹ In a similar manner, the frequency of the mother's conversational references to people's feelings was strongly associated with the child's later conscience, but maternal references to rules and behavioral consequences were not. These and other studies suggest that early conscience development is associated not with the reiteration of behavioral expectations and consequences of rule violation, but rather by parent-child conversation that links desirable or undesirable conduct to human concerns—people's feelings—within a context of moral appraisal.

As conversations like these become part of the fabric of parent-child interaction in the early years, they are likely to become incorporated into children's broader understanding of desirable and undesirable conduct and, more important, *why* conduct is desirable or not. They do so by making behavioral expectations and their justification more explicit, providing children with a foundational structure not only of desired behavior but also of attributions and judgments supporting such behavior. The scope of these conversations concerning children's actions also helps them organize, recognize, and remember how such evaluations can be self-relevant. When parents evaluate behavior in morally relevant ways—such as with reference to human concerns like feelings and needs—they contribute to the construction of the child's rational framework for understanding desirable or undesirable conduct and the child's further reflection on these reasons. When parents instead justify their behavioral evaluations in other ways—such as in terms of conformity to rules or self-interested concerns—the child's appraisals are less likely to incorporate concern for the welfare of others and related moral considerations.

Lapsley and Narvaez and Thompson have proposed further that as these everyday event representations repeatedly activate generalizable standards

for evaluating behavior, these standards gradually become chronically accessible schemas that nonconsciously guide behavior.⁶² These standards become, in a sense, implicit in how children think about their actions and those of others. As a consequence, some children develop easily activated nonconscious moral schemas that cause them to appraise everyday situations in morally relevant ways and that guide their conduct. For other children, moral schemas are not as readily activated in everyday situations because the standards they have internalized are justified in different ways. In each case, the content and quality of parent-child conversations about the child's experiences become part of the basis for the development of rational, conscious moral reflection as well as "going underground" to influence the implicit moral or nonmoral schemas that are nonconsciously activated in everyday situations.

Third and finally, parent-child conversations also influence the development of autobiographical memory and, in so doing, how the child perceives herself. As illustrated in the Weetabix vignette above, the parental evaluations incorporated into shared recall of the child's recent experiences have implications for the child's self-awareness. This is important because moral identity—the construction of a sense of self around moral values—is an important foundation for moral behavior and the development of character.⁶³ It has early origins. Young children in the preschool years vary in the extent to which they perceive themselves in moral ways or not when interview procedures appropriate for their age are used or parents are interviewed about their responses to misbehavior.⁶⁴ Differences in this early "moral self" are associated with young children's conscience development and with other indicators of developing character: children for whom it is important to do the right thing and feel regret about wrongdoing are more likely to cooperate with parents and they subsequently show greater emotional health, prosocial behavior, and peer acceptance when rated by parents and teachers.⁶⁵

In light of how much young children internalize the ways they are regarded by parents, and the influence of parent-child conversations on autobiographical memory, it would not be surprising to find that the development of the "moral self" is influenced by the content of these everyday conversations. In particular, the parent's use of morally evaluative statements situates behavior in a moral context that contributes to the child's developing sense of self as an actor making morally relevant decisions and judgments. As these ways of perceiving the self as a moral actor become habitually evoked over time, they may contribute to the development of nonconscious schemas related to the growth of virtuous character in a manner similar to what Snow (chapter 6 in this volume) calls "intelligent virtue." This is a topic for further research.

III. Concluding Comments

One of the contributions of psychology to current thinking about the development of virtuous character is an awareness of the multifaceted influences on character and their early origins. We have sought to outline some of these influences that contribute to automatic and reflective processes relevant to the development of character, but we readily acknowledge that this analysis only touches the surface of a much more searching inquiry. We concur, however, with Swanton's (chapter 5 in this volume) argument that virtue should be regarded relative to the age of the actor and believe that, when perceived in this light, a wealth of important developmental questions are evoked that can lead to greater insight about how people become virtuous.

One of the other contributions of psychology to current thinking about virtuous character is the realization of how deeply people can be divided within themselves. This analysis underscores that nonconscious and conscious influences on the development of character need not be harmonious, and indeed, they are often dissonant. The effects of early experiences, particularly if they are aversive, may conflict with the higher motivations promoted by moral tutelage, self-reflection, and service, and constitute a source of enduring conflict within the individual. This is, in a sense, the internal struggle that itself shapes moral growth and also, in the end, the development of virtuous character.

Notes

1. <http://www.brookings.edu/about/centers/ccf/character-opportunity-project>.
2. R. D. Putnam, *Our kids: The American dream in crisis* (New York: Simon & Schuster, 2015).
3. T. Lickona & M. Davidson, *Smart and good high schools* (Washington, DC: Character Education Partnership, 2005).
4. Lickona and Davidson, *Smart and good*.
5. See, e.g., P. M. Brown, M. W. Corrigan, & A. Higgins-D'Alessandro, editors, *The handbook of prosocial education, Vols. 1 and 2* (New York: Roman & Littlefield, 2012).
6. Putnam, *Our kids*.
7. D. Kahneman, *Thinking, fast and slow* (New York: Farrar, Straus and Giroux, 2011).
8. M. Slote, "The roots of empathy," in *Cultivating virtue: Perspectives from philosophy, theology, and psychology*, ed. N. E. Snow (New York: Oxford University Press, 2015): 65–86.
9. R. A. Thompson, "Attachment theory and research: Precipitous and prospect," in *Oxford handbook of developmental psychology, Vol. 2: Self and others*, ed. P. Zelazo (New York: Oxford University Press, 2013): 191–216.
10. R. A. Thompson, "The development of virtue: A perspective from developmental psychology," in *Cultivating virtue: Perspectives from philosophy, theology, and psychology*, ed. N. E. Snow (New York: Oxford University Press, 2015): 279–306.
11. Thompson, "Development of virtue."
12. Slote, "Roots of empathy."
13. See Snow, chapter 6 in this volume.

14. See R. A. Thompson, "Relationships, regulation, and early development," in *Handbook of child psychology and developmental science (7th ed.)*, Vol. 3: *Social and emotional development*, ed. R. M. Lerner (New York: Wiley, 2015): 201–246 for a review.
15. T. F. Oberlander, J. Weinberg, M. Papsdorf, R. Grunau, S. Misri, & A. M. Devlin, "Prenatal exposure to maternal depression, neonatal methylation of human glucocorticoid receptor gene (NR3C1) and infant cortisol stress responses," *Epigenetics* 3 (2008): 97–106.
16. R. A. Thompson, "Stress and child development," *The Future of Children* 24 (2014): 41–59; Thompson, "Relationships."
17. Y. M. Ulrich-Lai & J. P. Herman, "Neural regulation of endocrine and autonomic stress responses," *Nature Reviews Neuroscience* 10 (2009): 397–409.
18. D. Narvaez, *Neurobiology and the development of human morality: Evolution, culture, and wisdom* (New York: W. W. Norton, 2014).
19. A. Danese & B. McEwen, "Childhood experiences, allostasis, allostatic load, and age-related disease," *Physiology & Behavior* 106 (2012): 29–39.
20. S. D. Pollak & D. J. Kistler, "Early experience is associated with the development of categorical representations for facial expressions of emotion," *Proceedings of the National Academy of Sciences* 99 (2002): 9072–9076.
21. B. Klimes-Dougan & J. Kistner, "Physically abused preschoolers' responses to peers' distress," *Developmental Psychology* 26 (1990): 599–602.
22. Narvaez, *Neurobiology*.
23. See, e.g., M. Dozier, E. Peloso, E. Lewis, J. P. Laurenceau, & S. Levine, "Effects of an attachment-based intervention on the cortisol production of infants and toddlers in foster care," *Development and Psychopathology* 20 (2008): 845–859; P. A. Fisher, M. Stoolmiller, M. R. Gunnar, & B. O. Burraston, "Effects of a therapeutic intervention for foster preschoolers on diurnal cortisol activity," *Psychoneuroendocrinology* 32 (2007): 892–905; P. A. Fisher, M. J. Van Ryzin, & M. R. Gunnar, "Mitigating HPA axis dysregulation associated with placement changes in foster care," *Psychoneuroendocrinology* 36 (2011): 531–539.
24. E.g., F. A. Champagne & M. J. Meaney, "Transgenerational effects of social environment on variations in maternal care and behavioral response to novelty," *Behavioral Neuroscience* 121 (2007): 1353–1363.
25. L. J. Van der Knaap, H. Riese, J. J. Hudziak, M. M. Verbiest, F. C. Verhulst, A. J. Oldehinkel, & F. V. A. van Oort, "Adverse life events and allele-specific methylation of the serotonin transporter gene (SLC6A4) in adolescents: The TRAILS study," *Psychosomatic Medicine* 77 (2015): 246–255; V. Nieratschker, A. Batra, & A. J. Fallgatter, "Genetics and epigenetics of alcohol dependency," *Journal of Molecular Psychiatry* 1 (2013): 1–6.
26. C. Blair & C. C. Raver, "Child development in the context of adversity: Experiential canalization of brain and behavior," *American Psychologist* 67 (2012): 309–318; D. A. Hackman & M. J. Farah, "Socioeconomic status and the developing brain," *Trends in Cognitive Sciences* 13 (2008): 65–73.
27. G. W. Evans & P. Kim, "Childhood poverty and young adults' allostatic load: The mediating role of childhood cumulative risk exposure," *Psychological Science* 23 (2012): 979–983.
28. S. D. Pollak, "Mechanisms linking early experience and the emergence of emotions: Illustrations from the study of maltreated children," *Current Directions in Psychological Science* 17 (2008): 370–375.
29. R. A. Thompson & R. Haskins, "Early stress gets under the skin: Promising initiatives to help children facing chronic adversity," *The Future of Children Policy Brief* Spring (2014): 1–7.
30. R. A. Thompson & R. Goodvin, "Social support and developmental psychopathology," in *Developmental psychopathology (3rd ed.)*, ed. D. Cicchetti (New York: Wiley, 2015).
31. R. A. Thompson, "Social support and child protection: Lessons learned and learning," *Child Abuse & Neglect* 41 (2015): 19–29; Thompson & Goodvin, "Social support."
32. C. E. Hostinar, R. Sullivan, & M. Gunnar, "Psychobiological mechanisms underlying the social buffering of the hypothalamic-pituitary-adrenocortical axis: A review of animal models and human studies across development," *Psychological Bulletin* 140 (2014): 256–282.

33. M. R. Gunnar & B. Donzella, "Social regulation of the cortisol levels in early human development," *Psychoneuroendocrinology* 27 (2002): 199–220.
34. J. Cassidy, "The nature of the child's ties," in *Handbook of attachment (2nd ed.)*, ed. J. Cassidy & P. R. Shaver (New York: Guilford, 2008): 3–22.
35. Thompson, "Attachment theory."
36. Cassidy, "Child's ties."
37. R. A. Thompson, "Attachment-related mental representations: Introduction to the special issue," *Attachment & Human Development* 10 (2008): 347–358.
38. See R. A. Thompson, "Early attachment and later development: Familiar questions, new answers," in *Handbook of attachment (2nd ed.)*, eds. J. Cassidy & P. R. Shaver (New York: Guilford, 2008): 348–365; Thompson, "Attachment theory."
39. Thompson, "Early attachment"; Thompson, "Attachment theory."
40. H. A. Raikes, E. A. Virmani, R. A. Thompson, & H. Hatton, "Declines in peer conflict from preschool through first grade: Influences from early attachment and social information processing," *Attachment & Human Development* 15 (2013): 65–82.
41. E.g., L. A. Sroufe, B. Egeland, E. Carlson, & W. Collins, *The development of the person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood* (New York: Guilford, 2005); R. A. Thompson, "The legacy of early attachments," *Child Development* 71 (1) (2000): 145–152.
42. Slote, "Roots of empathy."
43. See also S. C. Stearns, *The evolution of life histories* (Oxford, UK: Oxford University Press, 1992).
44. For a discussion of exceptions to this, see R. Hursthouse, *On virtue ethics* (Oxford, UK: Oxford University Press, 1999): 143–145. Aristotle acknowledges that children can have underdeveloped or immature virtues in *The Politics*, Book I, chapter 13 (1260a–b) where he discusses (albeit briefly) the virtues of rulers, subjects, men, women, slaves—and children.
45. Swanton, chapter 5 in this volume; J. Welchman, "Virtue ethics and human development: A pragmatic approach," in *Virtue ethics, old and new*, ed. S. M. Gardiner (Ithaca, NY: Cornell University Press, 2005): 142–155; and M. Slote, *Goods and virtues* (New York: Clarendon, 1983).
46. Thompson, "Development of virtue"; see also R. A. Thompson, "Whither the pre-conventional child? Toward a life-span moral development theory," *Child Development Perspectives* 6 (2012): 423–429.
47. F. Warneken, F. Chen, & M. Tomasello, "Cooperative activities in young children and chimpanzees," *Child Development* 77 (2006): 640–663.
48. J. K. Hamlin, K. Wynn, P. Bloom, & N. Mahajan, "How infants and toddlers react to antisocial others," *Proceedings of the National Academy of Sciences* 108 (50) (2011): 11931–11936.
49. Thompson, "Preconventional child"; M. Tomasello & A. Vaish, "Origins of human morality and cooperation," *Annual Review of Psychology* 64 (2013): 231–255.
50. Thompson, "Development of virtue."
51. The term "social-constructivist" carries diverse meanings in multidisciplinary forums. In this context, I intend it in the sense that it is used by developmental psychologists—specifically, that knowledge is actively constructed by the child in collaborative activity with others—drawing on the ideas of Piaget, Vygotsky, and their followers. I do not enter into philosophical debates here between realists and constructivists.
52. J. E. Grusec & J. J. Goodnow, "Impact of parental discipline methods on children's internalization of values: A reconceptualization of current points of view," *Developmental Psychology* 30 (1) (1994): 4–19.
53. R. A. Thompson, "The development of the person: Social understanding, relationships, self, conscience," in *Handbook of child psychology (6th ed.)*, Vol. 3: *Social, emotional, and personality development*, ed. W. Damon & R. M. Lerner (New York: Wiley, 2006): 24–98.
54. G. Kochanska, "Mutually responsive orientation between mothers and their young children: A context for the early development of conscience," *Current Directions in Psychological Science* 11 (6) (2002): 191–195.

55. G. Kochanska, N. Aksan, & A. L. Koenig, "A longitudinal study of the roots of preschoolers' conscience: Committee compliance and emerging internalization," *Child Development* 66 (6) (1995): 1752–1769; G. Kochanska & K. Murray, "Mother-child mutually responsive orientation and conscience development: From toddler to early school age," *Child Development* 71 (2) (2000): 417–431.
56. See Snow's chapter in this volume.
- AQ: Specify chapter 6?
57. R. Fivush, "Maternal reminiscing style and children's developing understanding of self and emotion," *Clinical Social Work Journal* 35 (2007): 37–46; K. Nelson & R. Fivush, "The emergence of autobiographical memory: A social cultural developmental theory," *Psychological Review* 111 (2004): 486–511; R. A. Thompson, "Conversation and developing understanding: Introduction to the special issue," *Merrill-Palmer Quarterly* 52 (2006): 1–16.
58. J. Dunn & J. Brown, "Relationships, talk about feelings, and the development of affect regulation in early childhood," in *The development of emotion regulation and dysregulation*, ed. J. Garber & K. Dodge (Cambridge: Cambridge University Press, 1991): 97.
59. Fivush, "Maternal reminiscing"; Thompson, "Conversation."
- AQ: Please confirm edit.
60. D. J. Laible & R. A. Thompson, "Mother-child discourse, attachment security, shared positive affect, and early conscience development," *Child Development* 71 (5) (2000): 1424–1440.
61. D. J. Laible & R. A. Thompson, "Mother-child conflict in the toddler years: Lessons in emotion, morality, and relationships," *Child Development* 73 (4) (2002): 1187–1203.
62. D. K. Lapsley & D. A. Narvaez, "Social-cognitive approach to the moral personality," in *Moral development, self, and identity*, ed. D. K. Lapsley & D. Narvaez (Mahwah, NJ: Erlbaum, 2004): 189–212; D. Narvaez & D. K. Lapsley, "Moral identity, moral functioning, and the development of moral character," in *Moral judgment and decision making*, ed. D. M. Bartels, C. W. Bauman, L. J. Skitka, & D. L. Medin (San Diego: Elsevier Academic Press, 2009): 237–274; and Thompson, "Development of the person."
63. S. A. Hardy & G. Carlo, "Identity as a source of moral motivation," *Human Development* 48 (3) (2005): 232–256.
64. Kochanska, "Mutually responsive orientation."
65. G. Kochanska, J. L. Koenig, R. A. Barry, S. Kim, & J. E. Yoon, "Children's conscience during toddler and preschool years, moral self, and a competent, adaptive developmental trajectory," *Developmental Psychology* 46 (5) (2010): 1320–1332.

Bibliography

- Blair, C., & C. C. Raver. "Child development in the context of adversity: Experiential canalization of brain and behavior." *American Psychologist* 67 (2012): 309–318.
- Brooks, D. *The road to character*. New York: Random House, 2015.
- Brown, P. M., M. W. Corrigan, & A. Higgins-D'Alessandro, editors. *The handbook of prosocial education, Vols. 1 and 2*. New York: Roman & Littlefield, 2012.
- Cassidy, J. "The nature of the child's ties." In *Handbook of attachment (2nd ed.)*, edited by J. Cassidy & P. R. Shaver, pp. 3–22. New York: Guilford, 2008.
- Champagne, F. A., & M. J. Meaney. "Transgenerational effects of social environment on variations in maternal care and behavioral response to novelty." *Behavioral Neuroscience* 121 (2007): 1353–1363.
- Danese, A., & B. McEwen. "Childhood experiences, allostasis, allostatic load, and age-related disease." *Physiology & Behavior* 106 (2012): 29–39.
- Dozier, M., E. Peloso, E. Lewis, J. P. Laurenceau, & S. Levine. "Effects of an attachment-based intervention on the cortisol production of infants and toddlers in foster care." *Development and Psychopathology* 20 (2008): 845–859.
- Dunn, J., & J. Brown. "Relationships, talk about feelings, and the development of affect regulation in early childhood." In *The development of emotion regulation and dysregulation*, edited by J. Garber & K. Dodge, pp. 89–108. Cambridge: Cambridge University Press, 1991.

- Evans, G. W., & P. Kim. "Childhood poverty and young adults' allostatic load: The mediating role of childhood cumulative risk exposure." *Psychological Science* 23 (2012): 979–983.
- Fisher, P. A., M. Stoolmiller, M. R. Gunnar, & B. O. Burraston. "Effects of a therapeutic intervention for foster preschoolers on diurnal cortisol activity." *Psychoneuroendocrinology* 32 (2007): 892–905.
- Fisher, P. A., M. J. Van Ryzin, & M. R. Gunnar. "Mitigating HPA axis dysregulation associated with placement changes in foster care." *Psychoneuroendocrinology* 36 (2011): 531–539.
- Fivush, R. "Maternal reminiscing style and children's developing understanding of self and emotion." *Clinical Social Work Journal* 35 (2007): 37–46.
- Grusec, J. E., & J. J. Goodnow. "Impact of parental discipline methods on children's internalization of values: A reconceptualization of current points of view." *Developmental Psychology* 30 (1) (1994): 4–19.
- Gunnar, M. R., & B. Donzella. "Social regulation of the cortisol levels in early human development." *Psychoneuroendocrinology* 27 (2002): 199–220.
- Hackman, D. A., & M. J. Farah. "Socioeconomic status and the developing brain." *Trends in Cognitive Sciences* 13 (2008): 65–73.
- Hamlin, J. K., K. Wynn, P. Bloom, & N. Mahajan. "How infants and toddlers react to antisocial others." *Proceedings of the National Academy of Sciences* 108 (50) (2011): 11931–11936.
- Hardy, S. A. & G. Carlo. "Identity as a source of moral motivation." *Human Development* 48 (3) (2005): 232–256.
- Hostinar, C. E., R. Sullivan, & M. Gunnar. "Psychobiological mechanisms underlying the social buffering of the hypothalamic-pituitary-adrenocortical axis: A review of animal models and human studies across development." *Psychological Bulletin* 140 (2014): 256–282.
- Hursthouse, R. *On virtue ethics*. Oxford, UK: Oxford University Press, 1999.
- Kahneman, D. *Thinking, fast and slow*. New York: Farrar, Straus and Giroux, 2011.
- Klimes-Dougan, B., & J. Kistner. "Physically abused preschoolers' responses to peers' distress." *Developmental Psychology* 26 (1990): 599–602.
- Kochanska, G. "Mutually responsive orientation between mothers and their young children: A context for the early development of conscience." *Current Directions in Psychological Science* 11 (6) (2002): 191–195.
- Kochanska, G., N. Aksan, & A. L. Koenig. "A longitudinal study of the roots of preschoolers' conscience: Committee compliance and emerging internalization." *Child Development* 66 (6) (1995): 1752–1769.
- Kochanska, G., J. L. Koenig, R. A. Barry, S. Kim, & J. E. Yoon. "Children's conscience during toddler and preschool years, moral self, and a competent, adaptive developmental trajectory." *Developmental Psychology* 46 (5) (2010): 1320–1332.
- Kochanska, G., & K. Murray. "Mother-child mutually responsive orientation and conscience development: From toddler to early school age." *Child Development* 71 (2) (2000): 417–431.
- Laible, D. J., & R. A. Thompson. "Mother-child discourse, attachment security, shared positive affect, and early conscience development." *Child Development* 71 (5) (2000): 1424–1440.
- Laible, D. J., & R. A. Thompson. "Mother-child conflict in the toddler years: Lessons in emotion, morality, and relationships." *Child Development* 73 (4) (2002): 1187–1203.
- Lapsley, D. K., & D. A. Narvaez. "Social-cognitive approach to the moral personality." In *Moral development, self, and identity*, edited by D. K. Lapsley & D. Narvaez, pp. 189–212. Mahwah, NJ: Erlbaum, 2004.
- Lickona, T., & M. Davidson. *Smart and good high schools*. Washington, DC: Character Education Partnership, 2005.
- Narvaez, D. *Neurobiology and the development of human morality: Evolution, culture, and wisdom*. New York: W. W. Norton, 2014.
- Narvaez, D., & D. K. Lapsley. "Moral identity, moral functioning, and the development of moral character." In *Moral judgment and decision making*, edited by D. M. Bartels, C. W. Bauman, L. J. Skitka, & D. L. Medin, pp. 237–274. San Diego: Elsevier Academic Press, 2009.

- Nelson, K., & R. Fivush. "The emergence of autobiographical memory: A social cultural developmental theory." *Psychological Review* 111 (2004): 486–511.
- Nieratschker, V., A. Batra, & A. J. Fallgatter. "Genetics and epigenetics of alcohol dependency." *Journal of Molecular Psychiatry* 1 (2013): 1–6.
- Oberlander, T. F., J. Weinberg, M. Papsdorf, R. Grunau, S. Misri, & A. M. Devlin. "Prenatal exposure to maternal depression, neonatal methylation of human glucocorticoid receptor gene (NR3C1) and infant cortisol stress responses." *Epigenetics* 3 (2008): 97–106.
- Pollak, S. D. "Mechanisms linking early experience and the emergence of emotions: Illustrations from the study of maltreated children." *Current Directions in Psychological Science* 17 (2008): 370–375.
- Pollak, S. D., & D. J. Kistler. "Early experience is associated with the development of categorical representations for facial expressions of emotion." *Proceedings of the National Academy of Sciences* 99 (2002): 9072–9076.
- Putnam, R. D. *Our kids: The American dream in crisis*. New York: Simon & Schuster, 2015.
- Raikes, H. A., E. A. Virmani, R. A. Thompson, & H. Hatton. "Declines in peer conflict from preschool through first grade: Influences from early attachment and social information processing." *Attachment & Human Development* 15 (2013): 65–82.
- Slote, M. *Goods and virtues*. New York: Clarendon, 1983.
- Slote, M. "The roots of empathy." In *Cultivating virtue: Perspectives from philosophy, theology, and psychology*, edited by N. E. Snow, pp. 65–86. New York: Oxford University Press, 2015.
- Sroufe, L. A., B. Egeland, E. Carlson, & W. Collins. *The development of the person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood*. New York: Guilford, 2005.
- Stearns, S. C. *The evolution of life histories*. Oxford, UK: Oxford University Press, 1992.
- Thompson, R. A. "The legacy of early attachments." *Child Development* 71 (1) (2000): 145–152.
- Thompson, R. A. "The development of the person: Social understanding, relationships, self, conscience." In *Handbook of child psychology (6th ed.)*, Vol. 3: *Social, emotional, and personality development*, edited by W. Damon & R. M. Lerner, pp. 24–98. New York: Wiley, 2006.
- Thompson, R. A. "Conversation and developing understanding: Introduction to the special issue." *Merrill-Palmer Quarterly* 52 (2006): 1–16.
- Thompson, R. A. "Attachment-related mental representations: Introduction to the special issue." *Attachment & Human Development* 10 (2008): 347–358.
- Thompson, R. A. "Early attachment and later development: Familiar questions, new answers." In *Handbook of attachment (2nd ed.)*, edited by J. Cassidy & P. R. Shaver, pp. 348–365. New York: Guilford, 2008.
- Thompson, R. A. "Whither the pre-conventional child? Toward a life-span moral development theory." *Child Development Perspectives* 6 (2012): 423–429.
- Thompson, R. A. "Attachment theory and research: Precipice and prospect." In *Oxford handbook of developmental psychology*, Vol. 2: *Self and others*, edited by P. Zelazo, pp. 191–216. New York: Oxford University Press, 2013.
- Thompson, R. A. "Stress and child development." *The Future of Children* 24 (2014): 41–59.
- Thompson, R. A. "The development of virtue: A perspective from developmental psychology." In *Cultivating virtue: Perspectives from philosophy, theology, and psychology*, edited by N. E. Snow, pp. 279–306. New York: Oxford University Press, 2015.
- Thompson, R. A. "Relationships, regulation, and early development." In *Handbook of child psychology and developmental science (7th ed.)*, Vol. 3: *Social and emotional development*, edited by R. M. Lerner, pp. 201–246. New York: Wiley, 2015.
- Thompson, R. A. "Social support and child protection: Lessons learned and learning." *Child Abuse & Neglect* 41 (2015): 19–29.
- Thompson, R. A. & R. Goodvin. "Social support and developmental psychopathology." In *Developmental psychopathology (3rd ed.)*, edited by D. Cicchetti. New York: Wiley, 2015.
- Thompson, R. A., & R. Haskins. "Early stress gets under the skin: Promising initiatives to help children facing chronic adversity." *The Future of Children Policy Brief* Spring (2014): 1–7.

- Tomasello, M., & A. Vaish. "Origins of human morality and cooperation." *Annual Review of Psychology* 64 (2013): 231–255.
- Tough, P. *How children succeed: Grit, curiosity, and the hidden power of character*. New York: Houghton Mifflin Harcourt, 2012.
- Ulrich-Lai, Y. M., & J. P. Herman. "Neural regulation of endocrine and autonomic stress responses." *Nature Reviews Neuroscience* 10 (2009): 397–409.
- Van der Knaap, L. J., H. Riese, J. J. Hudziak, M. M. Verbiest, F. C. Verhulst, A. J. Oldehinkel, & F. V. A. van Oort. "Adverse life events and allele-specific methylation of the serotonin transporter gene (SLC6A4) in adolescents: The TRAILS study." *Psychosomatic Medicine* 77 (2015): 246–255.
- Warneken, F., F. Chen, & M. Tomasello. "Cooperative activities in young children and chimpanzees." *Child Development* 77 (2006): 640–663.
- Welchman, J. "Virtue ethics and human development: A pragmatic approach." In *Virtue ethics, old and new*, edited by S. M. Gardiner, pp. 142–155. Ithaca, NY: Cornell University Press, 2005.