



# Prosocial Behavior in Infancy: The Role of Socialization

Celia A. Brownell and The Early Social Development Research Lab

*University of Pittsburgh*

---

**ABSTRACT**—*Human prosocial behavior emerges in the 2nd year of life, posing challenging questions about mechanism. An increasingly common claim is that prosocial behavior in the first 3 years of life is neither a result of nor affected by socialization. In this article, we argue that early socialization plays a critical role in the developmental origins of prosocial behavior. To support this argument, we highlight conceptual perspectives and empirical evidence for influences of socialization from parents' reports, direct observation, and experimental studies. We conclude that progress in explaining the ontogenetic origins of human prosocial behavior depends on more fully specifying mechanisms of socialization in infancy as well as what and how human infants learn from their social experiences.*

**KEYWORDS**—*prosocial behavior; infants; socialization; social development*

---

Acting on behalf of others is fundamental to human morality and social organization. Prosocial behavior emerges in the 2nd year of life, raising difficult questions about mechanism: Why should children who can barely walk and talk be kind and helpful to others? In fact, toddlers are often not very kind, seeming to take pleasure in hurting others; they bite, pinch, and snatch toys or food from siblings or peers just to see them react, even expecting them to be distressed. At the same time, toddlers seem to take pleasure in helping and caring: They feed baby

siblings or family pets, offer their own comfort object to crying peers, hug injured parents, and try to assist with chores. In attempting to explain such tendencies, scholars often contrast Hobbes's brutish primitive man with Rousseau's notions of natural goodness, and claim that one or the other propensity is innate and drives early behavior. Although humans must be evolutionarily prepared to become prosocial and the effort to discover the nature of that preparation is a worthy scientific pursuit, the developmental picture is more complex than such positions suggest, and the explanations are correspondingly richer, if more challenging, to specify. In this article, we argue that socialization is a primary mechanism in the ontogenesis of prosocial behavior.

Early appearing prosocial behavior takes many forms, including helping, cooperating, sharing, informing, and comforting<sup>1</sup> (2–6), and is ubiquitous even in toddlers (7). An increasingly common claim is that prosocial behavior in the first 3 years of life is immune to the influences of socialization. For example, Bloom asserts that “there is now considerable evidence that . . . concern for others, perhaps even of morality, is part of human nature” (8, p. 349). Hamlin concludes that “some aspects of human morality are innate [and] do not appear to stem from

---

<sup>1</sup>Early forms of prosocial behavior may be distinct and uncorrelated, much as in later childhood (1). However, in this article, we consider socialization influences generally, recognizing that specific social processes may be more, or less, influential in generating some aspects of prosocial behavior than others.

---

Celia A. Brownell, University of Pittsburgh; The Early Social Development Research Lab; Jesse Drummond, University of Pittsburgh; Stuart Hammond, University of Ottawa; Sara Nichols, New York University; Geetha Ramani, University of Maryland; Emma Satlof-Bedrick, University of Pittsburgh; Margarita Svetlova, Max Planck Institute for Evolutionary Anthropology and Duke University; Whitney Waugh, University of Pittsburgh; Stephanie Zerwas, University of North Carolina, Chapel Hill.

Some of the research reported in this article was supported, in part, by Eunice Kennedy Shriver National Institute of Child Health and Human Development Awards HD055283 and HD064972 to C. A. Brownell, and National Institute of Mental Health award MH091036 to S. Campbell. Special thanks to the parents and children who volunteered to participate in the research and to the many undergraduates who assisted with data collection and coding.

Correspondence concerning this article should be addressed to Celia A. Brownell, Department of Psychology, University of Pittsburgh, 210 S. Bouquet St., Pittsburgh, PA 15260; e-mail: brownell@pitt.edu.

© 2016 The Authors

Child Development Perspectives © 2016 The Society for Research in Child Development

DOI: 10.1111/cdep.12189

socialization” (9, p. 191). Such claims assume that behaviors emerging in infancy predate socialization, as Wynn notes in asking “What altruistic behaviors . . . might we see operative even in infancy (prior to socialization)?” (10, p. 483). Similarly, Warneken and Tomasello reason that altruistic behaviors in the 2nd year of life appear independent of “parental intervention or any other form of socialization” (11, p. 28), and that “it is implausible that socialization is the main factor” in their development (12, p. 4).

We offer an alternative perspective, arguing that prosocial behavior emerges from human infants’ participation in a unique socioemotional environment; socialization effects are not restricted to later childhood, but operate from birth to generate prosociality. Newborn neural, perceptual, and emotional biases predispose the developing system to capitalize on species-typical social, emotional, and physical experiences (13). Prosociality arises from experience-expectant processes<sup>2</sup> that occur in the normative social environment as socialization builds on these general predispositions. The challenge is to specify not only the system’s starting state, but also the nature of the social input and infants’ developing responses to their social experiences. However, as long as early social experience is considered irrelevant to the emergence of prosociality, this challenge will not be taken up.

## ORGANIZING PRINCIPLES

Three principles organize our perspective. First, socialization of prosocial behavior occurs continuously via social engagement beginning at birth. Because the infant participates actively and eagerly in social and emotional exchanges, socialization encompasses more than top-down teaching or shaping processes and selected social-learning processes such as imitation. Instead, socialization includes many bidirectional social processes, some of which are quite subtle (14). Experiences in affiliative and affectively rich social and communicative interactions with parents and others, which are themselves prosocial, engage the emotions, cognitions, and behavior critical to prosocial responding, gradually giving rise to the infant’s own prosocial motives and behavior.

Second, prosocial behavior does not emerge suddenly in the 2nd year of life, but develops progressively from immature precursor forms such as showing, giving, and taking turns during social play with caregivers (15, 16). These protoforms of prosocial behavior, initially without prosocial intent, become integrated into routine interaction; in so doing, they alter the infant’s social environment, producing both new experiences and new demands while providing meaningful contexts in which

prosociality is modeled, encouraged, talked about, responded to, practiced, and nurtured. The motives, understanding, and skills for prosocial action develop as the infant transitions from prosocial behavior *with* others to prosocial behavior *for* others.

Third, because socioemotional systems interact with many other codeveloping systems through dynamic, transactional processes, explanations for the emergence of prosocial behavior need to be multifactorial, including cognitive, motor, regulatory, and neural systems as well as socialization influences. For example, as adults enlist infants and toddlers in attending to and meeting others’ needs, children acquire the action-based foundations for understanding and generating prosocial behavior themselves. Similarly, as infants observe others’ prosocial behavior during ordinary activities, games, and routines, rational constructivist processes likely contribute to their understanding of those actions. In summary, prosociality arises in and through uniquely human social engagement and social experiences beginning at birth, emerging out of infants’ shared activities and relationships with others, in interaction with other codeveloping systems. These principles are reflected in the following sections.

First, we consider the distinctive socioemotional rearing environment of the human infant and the corresponding predispositions that enable infants to exploit that environment in ways relevant to the development of prosocial behavior. Next, we discuss briefly how non-normative social environments can help identify both critical socialization experiences and the boundaries of the effects of social experience on the genesis of prosocial behavior. In the rest of the article, we present evidence for specific socialization effects in early prosociality.

## INFANT SOCIOEMOTIONAL REARING ENVIRONMENTS GROUND PROSOCIALITY

Human infants are born into, and prepared for, a social and emotional environment unique among primates.<sup>3</sup> For example, human infants are raised by more than one adult. Hrdy (20) argues that the ecology of alloparenting, in which nonparents assist in caregiving, features selective pressures that produce infants who are motivated to elicit care by appealing to and pleasing others (see also 21), and to that end, to monitor others’ goals and intentions, both of which are fundamental to emergent prosociality. A second characteristic is conditioned on the human infant’s unique physical status, such as the capacity for a stable supine posture. This frees infants’ hands from grasping to maintain support, making possible face to face communication and shared focus on objects (22). This, in turn, fosters a parent–infant relationship that nurtures human social and emotional development, including regard for others and shared action and experience. Developmental psychologists have also

<sup>2</sup>The term *experience expectant* refers to universal aspects of development that have evolved to expect or depend for their development on experiences available in all human environments; for example, the visual system depends on and requires the availability of light and patterns to develop normally.

<sup>3</sup>This section pertains only to this specific point. For treatments of larger questions about the evolution of prosocial behavior see 17–19.

proposed distinctive features of the social environment conditioned on the human infant's prolonged helplessness that demand intensive, socially engaged caregiving, with corresponding effects on socioemotional development, especially when coupled with the infant's intense urge to affiliate with others (21). Thus, the singular social, emotional, and behavioral qualities of infants and parents, as well as their interactions, ground the development of prosocial behavior.

### **NON-NORMATIVE INFANT DEVELOPMENT AND EXPERIENCES CAN ISOLATE CONTRIBUTORS TO EARLY PROSOCIALITY**

One way to disentangle the tightly bound, codeveloping systems underlying the genesis of prosociality is to study children in whom some of the constituent systems are deficient or out of sync developmentally. Such atypicalities can reveal both the critical role of social experience and the limits on its effects. For example, young children with autism lack the affiliative connections with others that are necessary for responding to normative social experiences. Correspondingly, they rarely are empathic and rarely behave prosocially (23, 24); indeed, an early marker of autism is failure to share toys with parents (25). Without strong affiliative tendencies, prosociality fails to take root.

Conversely, research capitalizing on the unusual social motives of children with Williams syndrome shows that high levels of sympathy, concern, and desire to comfort others in distress arise out of social affiliation and emotional responsiveness to others (26). At the same time, the capacity for prosocial action is constrained by limits in social understanding.

Typically developing infants may also experience non-normative social environments. Infants raised in such environments (e.g., those who experience abusive or neglectful parenting or socially depriving orphanages) are deficient in prosocial helping (27), as well as in many of the key social and emotional components of early prosociality (28).

This work shows that the foundation of other-oriented, prosocial orientation lies in affiliation and social interest together with normative social experience. At the same time, it shows that these codeveloping systems are interdependent: When early neural, emotional, or cognitive processes cannot capitalize on social participation, the growth of prosocial action goes awry. Such work is key to defining the boundaries of human social experience and the effects of socialization, outside of which prosocial behavior fails to develop or develops abnormally.

### **NORMATIVE SOCIAL EXPERIENCES IN INFANCY: PARENTS SOCIALIZE EARLY APPEARING PROSOCIAL BEHAVIOR**

All human cultures provide the appropriate experiential envelope for experience-expectant development of universal social

competencies such as prosocial behavior; parents in most cultures value and socialize helpfulness and kindness. Nevertheless, the nature of infants' social experiences with parents and others varies in amount and kind within and between cultures. When such differences translate into differences in developmental patterns or outcomes, we see evidence for the role of socialization. For example, cultural variation in communicative opportunities during interaction between caregivers and infants in the 1st year of life corresponds closely with the rate of development of communicative competence (29). With respect to prosocial behavior, the degree to which mothers in different cultures emphasize relational goals in their childrearing interactions (e.g., encouraging children to cheer up others or learn to obey parents) is associated with 19-month-olds' prosociality toward an unfamiliar adult (30).

### **Parents Encourage and Engage Children in Prosocial Action Early in Life**

Parents begin to socialize prosociality in infancy. Mothers report that they regularly communicate prosocial standards to their toddlers (31, 32). Indeed, expectations for interpersonal caring (e.g., sharing, being nice, not hurting another) are communicated more than any others, except for safety rules, and such requests increase between 13 and 30 months of age while communications about safety decline. Furthermore, parents actively encourage prosocial behavior by including toddlers in their household and caregiving activities. In recent studies, 93% of mothers reported that they encouraged their 13- to 24-month-olds to help in household routines (33), and that their 1-year-olds participated in an average of 2.7 household chores (34). These findings suggest we should investigate expectations and communications about prosociality starting in infancy.

Direct observations confirm these reports from parents. In a classic study, 18- to 30-month-olds participated enthusiastically in routines like sweeping and dusting when parents encouraged children's helpfulness while doing household chores in the laboratory (35). More recently, in home observations, parents and other family members encouraged and praised 77% of toddlers' helping efforts (34). Furthermore, children whose parents more often encouraged and praised helping early in the 2nd year became more spontaneously helpful 6 months later. Parents' encouragement of toddlers' participation in a household routine (cleanup) also related to children's willingness to help another adult in a new context (36, 37), demonstrating that prosocial actions with parents generalize beyond the dyad's own activities. Taken together, these findings indicate that autonomous prosocial behavior emerges out of shared prosocial activity with adults, and that parents' encouragement promotes its development.

### **Scaffolding Is Critical**

Scaffolding in the early development of prosocial behavior is critical, as demonstrated both correlationally and experimentally. Adults scaffold toddlers' prosocial behavior by simplifying complex tasks, encouraging children's participation, and

providing the necessary structure and direction to make it possible for even the youngest children to help, whether or not they have the intention and motivation to help.

Toddlers' helping and sharing are partly a function of the communications they receive from adults in need. For example, although children as young as 14 months will help an adult when he has dropped something or his access to a needed object is blocked (e.g., by a closed door), they rarely help on tasks that do not include a reaching gesture (6). However, following an overt reach toward the needed object, they helped 39% of the time. More explicit encouragement further increases helping. Thirteen- to 15-month-olds who were encouraged to return a dropped item to a reaching adult (*Look, she dropped something, can you help her?*) were much more likely to do so (76% helped) than toddlers of the same age who received no such encouragement (29% helped; 38). In a study that used a more nuanced, progressive series of communications about the recipient's needs and desires, 18-month-olds needed more support of this kind to help than 30-month-olds (5). Likewise, 18-month-olds needed substantial scaffolding to share toys or food with an adult playmate, whereas 24-month-olds shared more quickly and with less extensive communicative support (3, 39).

These studies manipulated an unfamiliar adult's scaffolding of toddlers' helping and sharing. To examine how parents scaffold prosociality more naturally in their young children and how it may change with development, mothers of 18- and 24-month-olds were asked to get their children to help them with a laundry-hanging task (40). Most children helped when requested, showing that mothers' efforts were effective. But the nature of parents' support of their children's helping changed over the 2nd year. Mothers of younger toddlers emphasized concrete, task-specific activities and directed their children explicitly about how to be helpful (*Get the cloth, Hand me the clothespin*), whereas mothers of older toddlers made more indirect, abstract requests that emphasized the mothers' own needs and the toddlers' role in alleviating them (*This is hard, I need your help*). Thus, adults alter their scaffolding of early prosocial behavior to correspond to children's developing understanding, motivations, and capabilities. Young children, in turn, are inclined to attend to, comply with, and ultimately appropriate such family-based joint activities and the expectations that accompany them (41).

Adults' support and scaffolding of toddlers' prosocial behavior is especially functional, perhaps even necessary, when prosociality is emergent. We do not yet know whether it supports the development of prosocial motives or the requisite social-cognitive understanding or both. Furthermore, researchers have not yet examined parents' scaffolding of protoforms of prosociality in the 1st year of life (e.g., encouraging infants' help in changing diapers, getting dressed, sharing toys and food with parents, and other early routines with prosocial content). To understand fully the emergence of prosocial behavior in the 2nd year, we must know how socialization operates in the 1st year, including socialization specific to prosocial behavior and its

precursors, as well as how the infant precursors of prosocial behavior transform over the 2nd year.

### Other Forms of Socialization

Although scaffolding has received growing attention as a contributor to early prosociality, it is not the only means by which prosocial behavior is initially socialized. Paulus (42) recently suggested two potential sources of infants' prosocial behavior in children's social environment: that prosocial action may serve as a way to affiliate with others and that the social environment may promote the understanding of emotions necessary for prosocial interventions.

Consistent with the proposal that prosocial behavior is driven partly by social and emotional motives such as affiliation, play, and pleasing and complying with others, in several studies, sensitive caregiving was associated with prosocial responsiveness in toddlers (43). In one study, 18- to 30-month-olds were more likely to engage in prosocial behavior following a period of reciprocal play with an adult than following parallel play (44). Indeed, simply showing 18-month-olds photos of affiliative actions such as hugging or holding hands made them more likely to help an adult (45). Social affiliation is apparently a powerful motivator of young children's prosociality and may mediate parents' socialization (46). However, little attention has been paid to the specific role of such affiliative processes in contributing to early prosociality.

Parents' discussion of emotions and needs with their toddlers also affects the development of prosociality, possibly through influences on understanding emotions. Parents' emotion-related discourse has been linked to toddlers' empathic concern (47), cooperative behavior with siblings (48), and helping and sharing (49). Experimentally increasing such discourse increases helping in toddlers (50), demonstrating the causal influence of this form of socialization. However, the specific means by which discourse about emotions affects prosocial behavior remains unknown. Nevertheless, this work shows that social experiences affect the emergence of prosocial behavior indirectly as well as directly, and that codeveloping systems such as understanding emotions must also be included in models of socialization.

## CONCLUSIONS

Socialization begins at birth, operates bidirectionally during routine interactions, and assumes many forms, both subtle and complex. Socialization of prosociality does not take effect only when a child is already prosocial and begins to comprehend social norms, as some have argued. Instead, social influences during infancy gradually give rise to cooperative, caring motives and behavior. Although scholars who maintain that prosocial dispositions, behaviors, or concepts are innate may not entirely rule out a role for social experience, progress in explaining the ontogenetic origins of prosociality depends on specifying more fully the socialization

mechanisms beginning in infancy. Human prosocial behavior likely evolved to be acquired by infants developing in human social environments in concert with other codeveloping systems. Consequently, some socialization mechanisms will be characterized by universal experiences within the normative childrearing context, geared to the social and emotional readiness of the infant, and generating universal, experience-expectant aspects of human prosociality. Others will be specific to prosocial behavior itself and to the particulars of the infant's family and culture, as part of the long human apprenticeship that begins at birth. The challenges that lie ahead are to characterize the role of infants' fundamental social and affiliative tendencies in the genesis of prosocial behavior; identify both general and specific socialization mechanisms in its emergence and early growth; and elucidate what and how infants learn about thinking, feeling, and behaving prosocially from the social experiences in which early development is embedded.

## REFERENCES

- Dunfield, K., Kuhlmeier, V. A., O'Connell, L., & Kelley, E. (2011). Examining the diversity of prosocial behavior: Helping, sharing, and comforting in infancy. *Infancy, 16*, 227–247. doi:10.1111/j.1532-7078.2010.00041.x
- Brownell, C. A., Ramani, G. B., & Zerwas, S. (2006). Becoming a social partner with peers: Cooperation and social understanding in one- and two-year-olds. *Child Development, 77*, 803–821. doi:10.1111/j.1467-8624.2006.00904.x
- Brownell, C., Iesue, S., Nichols, S., & Svetlova, M. (2013). Mine or yours? Development of sharing in toddlers in relation to ownership understanding. *Child Development, 84*, 906–920. doi:10.1111/cdev.12009
- Liszkowski, U., Carpenter, M., Striano, T., & Tomasello, M. (2006). 12- and 18-month-olds point to provide information for others. *Journal of Cognition and Development, 7*, 173–187. doi:10.1207/s15327647jcd0702\_2
- Svetlova, M., Nichols, S. R., & Brownell, C. A. (2010). Toddlers' prosocial behavior: From instrumental to empathic to altruistic helping. *Child Development, 81*, 1814–1827. doi:10.1111/j.1467-8624.2010.01512.x
- Warneken, F., & Tomasello, M. (2007). Helping and cooperation at 14 months of age. *Infancy, 11*, 271–294. doi:10.1080/15250000701310389
- Callaghan, T., Moll, H., Rakoczy, H., Warneken, F., Liszkowski, U., Behne, T., & Tomasello, M. (2011). Early social cognition in three cultural contexts. *Monographs of the Society for Research in Child Development, 76*(Serial No. 299), 1–142. doi:10.1111/j.1540-5834.2011.00603.x
- Bloom, P. (2014). Horrible children: The limits of natural morality. In M. Banaji & S. Gelman (Eds.), *Navigating the social world: What infants, children, and other species can tell us* (pp. 348–351). Oxford, UK: Oxford University Press.
- Hamlin, J. K. (2013). Moral judgment and action in preverbal infants and toddlers: Evidence for an innate moral core. *Current Directions in Psychological Science, 22*, 186–193. doi:10.1177/0963721412470687
- Wynn, K. (2009). Constraints on natural altruism. *British Journal of Psychology, 100*, 481–485. doi:10.1348/000712609X441312
- Tomasello, M. (2009). *Why we cooperate*. Cambridge, MA: MIT Press.
- Warneken, F., & Tomasello, M. (2014). *The developmental and evolutionary origins of human helping and sharing*. Oxford Handbooks Online. Oxford, UK: Oxford University Press. doi:10.1093/oxfordhb/9780195399813.013.007
- Karmiloff-Smith, A. (2009). From constructivism to neuroconstructivism. *Child Development Perspectives, 3*, 99–102. doi:10.1111/j.1750-8606.2009.00086.x
- Keller, H., & Kartner, J. (2013). The cultural solution of universal developmental tasks. In H. Gelfand, C. Chiu, & Y. Hong (Eds.), *Advances in culture and psychology* (Vol. 3, pp. 63–116). New York, NY: Oxford University Press.
- Brownell, C. A. (2011). Early developments in joint action. *Review of Philosophy and Psychology, 2*, 193–211. doi:10.1007/s13164-011-0056-1
- Hay, D. F., & Murray, P. (1982). Giving and requesting: Social facilitation of infants' offers to adults. *Infant Behavior and Development, 5*, 301–310. doi:10.1016/S0163-6383(82)80039-8
- Henrich, J., & Henrich, N. (2006). Culture, evolution, and the puzzle of human cooperation. *Cognitive Systems Research, 7*, 220–247. doi:10.1016/j.cogsys.2005.11.010
- Preston, S. (2013). The origins of altruism in offspring care. *Psychological Bulletin, 139*, 1305–1341. doi:10.1037/a0031755
- Tomasello, M., Melis, A. P., Tennie, C., Wyman, E., & Herrmann, E. (2012). Two key steps in the evolution of human cooperation. *Current Anthropology, 53*, 673–692. doi:10.1086/68207
- Hrdy, S. (2014). Development + social selection in the emergence of “emotionally modern” humans. In J. Decety & Y. Christen (Eds.), *New frontiers in social neuroscience* (Vol. 21, pp. 57–91). Cham, Switzerland: Springer International.
- Bowlby, J. (1969). *Attachment: Attachment and loss* (Vol. 1). New York, NY: Basic Books.
- Matsuzawa, T. (2012). What is uniquely human? A view from comparative cognitive development in humans and chimpanzees. In F. de Waal & P. Ferrari (Eds.), *The primate mind: Built to connect with other minds* (pp. 288–305). Cambridge, MA: Harvard University Press.
- Campbell, S. B., Leezenbaum, N. B., Schmidt, E. N., Day, T. N., & Brownell, C. A. (2015). Concern for another's distress in toddlers at high and low genetic risk for autism spectrum disorder. *Journal of Autism and Developmental Disorders, 45*, 3594–3605. doi:10.1007/s10803-015-2505-7
- Hobson, P., & Hobson, J. (2014). On empathy. In H. Maibom (Ed.), *Empathy & morality* (pp. 172–192). New York, NY: Oxford University Press.
- Gilley, C., & Ringdahl, J. E. (2014). The effects of item preference and token reinforcement on sharing behavior exhibited by children with autism spectrum disorder. *Research in Autism Spectrum Disorders, 8*, 1425–1433. doi:10.1016/j.rasd.2014.07.010
- Tager-Flusberg, H., & Skwerer, D. (2013). Social engagement does not lead to social cognition: Evidence from Williams Syndrome. In M. Banaji & S. Gelman (Eds.), *Navigating the social world: What infants, children, and other species can tell us* (pp. 117–123). Oxford, UK: Oxford University Press.
- Dyagileva, J., Kulinkova, A., Pavlenko, V., & Kochukhova, O. (2014, July). *EEG power correlates with level of helping behavior: Differences between family-reared & institutionalized Ukrainian*

- children. Paper presented at the International Conference on Infant Studies, Berlin, Germany.
28. Curtis, W. J., & Cicchetti, D. (2013). Affective facial expression processing in 15-month-old infants who have experienced maltreatment: An event-related potential study. *Child Maltreatment, 18*, 140–154. doi:10.1177/1077559513487944
  29. Salomo, D., & Liszkowski, U. (2013). Sociocultural settings influence the emergence of prelinguistic deictic gestures. *Child Development, 84*, 1296–1307. doi:10.1111/cdev.12026
  30. Kärtner, J., Keller, H., & Chaudhary, N. (2010). Cognitive and social influences on early prosocial behavior in two sociocultural contexts. *Developmental Psychology, 46*, 905–914. doi:10.1037/a0019718
  31. Gralinski, H., & Kopp, C. (1993). Everyday rules for behavior: Mothers' requests to young children. *Developmental Psychology, 29*, 573–584. doi:10.1037/0012-1649.29.3.573
  32. Smetana, J., Kochanska, G., & Chuang, S. (2000). Mothers' conceptions of everyday rules for young toddlers: A longitudinal investigation. *Merrill-Palmer Quarterly, 46*, 391–416. Retrieved from <http://www.jstor.org/stable/23093738>
  33. Dahl, A. (2015). The developing social context of infant helping in two U.S. samples. *Child Development, 86*, 1080–1093. doi:10.1111/cdev.12361
  34. Hammond, S., & Brownell, C. (2015, March). Using MTurk to explore young children's helping in the home. Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
  35. Rheingold, H. L. (1982). Little children's participation in the work of adults, a nascent prosocial behavior. *Child Development, 53*, 114–125. doi:10.2307/1129643
  36. Hammond, S., & Carpendale, J. (2015). Helping children help: The relation between maternal scaffolding and children's early help. *Social Development, 24*, 367–383. doi:10.1111/sode.12104
  37. Pettygrove, D. M., Hammond, S. I., Karahuta, E. L., Waugh, W. E., & Brownell, C. A. (2013). From cleaning up to helping out: Parental socialization and children's early prosocial behavior. *Infant Behavior and Development, 36*, 843–846. doi:10.1016/j.infbeh.2013.09.005
  38. Dahl, A., Satlof-Bedrick, E., Drummond, J., Waugh, W., & Brownell, C. (2015). *Encouragement and praise increase helping in infants*. Unpublished manuscript.
  39. Brownell, C. A., Svetlova, M., & Nichols, S. (2009). To share or not to share: When do toddlers respond to another's needs? *Infancy, 14*, 117–130. doi:10.1080/15250000802569868
  40. Waugh, W., Brownell, C., & Pollock, B. (2015). Early socialization of prosocial behavior: Patterns in parents' encouragement of toddlers' helping in an everyday household task. *Infant Behavior and Development, 39*, 1–10. doi:10.1016/j.infbeh.2014.12.010
  41. Paradise, R., & Rogoff, B. (2009). Side by side: Learning by observing and pitching in. *Ethos, 37*, 102–138. doi:10.1111/j.1548-1352.2009.01033.x
  42. Paulus, M. (2014). The emergence of prosocial behavior: Why do infants and toddlers help, comfort, and share? *Child Development Perspectives, 8*, 77–81. doi:10.1111/cdep.12066
  43. Spinrad, T. L., & Stifter, C. A. (2006). Toddlers' empathy-related responding to distress: Predictions from negative emotionality and maternal behavior in infancy. *Infancy, 10*, 97–121. doi:10.1207/s15327078in1002\_1
  44. Cortes Barragan, R., & Dweck, C. S. (2014). Rethinking natural altruism: Simple reciprocal interactions trigger children's benevolence. *Proceedings of the National Academy of Sciences of the United States of America, 111*, 17071–17074. doi:10.1073/pnas.1419408111
  45. Over, H., & Carpenter, M. (2009). Eighteen-month-old infants show increased helping following priming with affiliation. *Psychological Science, 20*, 1189–1193. doi:10.1111/j.1467-9280.2009.02419.x
  46. Carpendale, J. I. M., Kettner, V. A., & Audet, K. N. (2015). On the nature of toddlers' helping: Helping or interest in others' activity? *Social Development, 24*, 357–366. doi:10.1111/sode.12094
  47. Garner, P. W. (2003). Child and family correlates of toddlers' emotional and behavioral responses to a mishap. *Infant Mental Health Journal, 24*, 580–596. doi:10.1002/imhj.10076
  48. Dunn, J., & Munn, P. (1986). Siblings and the development of prosocial behaviour. *International Journal of Behavioral Development, 9*, 265–284. doi:10.1177/016502548600900301
  49. Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behavior: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy, 18*, 91–119. doi:10.1111/j.1532-7078.2012.00125.x
  50. Grazzani, I., Ormaghi, V., Agliati, A., & Brazzelli, E. (2015). How to foster toddlers' mental-state talk, emotion understanding, and prosocial behavior: A conversation-based intervention at nursery school. *Infancy, 21*, 199–227. doi:10.1111/infa.12107