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Theoretical Implications of a Joint Look at Early Prosocial and Aggressive Tendencies

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If we wanted to determine whether human nature is good or evil, it would have been convenient if infants were either mostly prosocial or mostly aggressive. If infants seemed mostly prosocial, by, say, routinely helping others, we might infer that humans are fundamentally good. If instead infants seemed mostly aggressive, by constantly hitting, biting, or kicking others, we might infer that humans are fundamentally evil. In fact, segregated bodies of research in developmental psychology lend support to both of these contradictory impressions. One literature centers on infants' remarkable tendencies, evident by the first birthday, to help others and prefer helpful characters (Hamlin, 2013; Warneken, 2015). Another literature documents young children's propensity for aggression, showing that the average child uses physical aggression more often in the first three years of life than in any later period (Dodge et al., 2006; Tremblay, 2010). Like the proverbial blind men who defined an elephant by whichever feature they happened to examine—the trunk, the tusk, or the ear—naïve readers might come away thinking of infants as either prosocial or aggressive, depending on which literature they happened to read. What happens to our questions and answers, then, when we take a joint look at infants' prosocial and aggressive tendencies?

The landmark monograph, [Prosocial and Aggressive Behavior: A Longitudinal Study](#) by Hay and colleagues (2021) forces us to take such a joint look at infants' helpful and harmful actions. For decades, Hay and her collaborators have been among the few teams to do pioneering research on both prosocial and aggressive behaviors in infancy (for overviews, see Hay, 2005; Hay & Cook, 2007). Their new monograph traces the development of prosocial and aggressive tendencies from six months to seven years of age through a large, longitudinal study. The findings on both general age trends and individual differences are so rich, and so clearly summarized by the authors, that we will not recite them in detail here.

We focus our commentary on theoretical implications of two facts about the early development of prosocial and aggressive tendencies, which are drawn from Hay and colleagues (2021) and other recent work (see Dahl, 2019). The two facts are that (1) most infants become increasingly likely to help as well as to hit others in the first two years of life and that (2) neither helping nor hitting are, at first, guided by stable concerns with others' wellbeing. These two facts goad our field to rethink our questions—and answers—about the ontogeny of morality.

In our discussion we use definitions that differ slightly from those used by Hay and colleagues. The terms we use refer to a narrower set of behaviors and make few motivational assumptions. We do this because, as we argue below, the same helpful or harmful behavior comes to serve different functions over the course of early development. To document this change, it is useful to identify a behavior without fixing the motives that drive that behavior (see Dahl, 2019). We use the term *helping* to refer to acts of instrumental helping: acts that, if completed successfully, would promote the goal of another person (Dahl, 2015; Dahl & Paulus, 2019; Warneken, 2015). Young children help peers and adults in a variety of ways, in homes and laboratories, by handing back out-of-reach objects, putting toys away after a play session, or cleaning up (Dahl, 2015; Warneken & Tomasello, 2006; Waugh & Brownell, 2017). Helping behavior is a particularly well-studied subset of what Hay and colleagues refer to as *prosocial* behaviors in their monograph.

We use the term *forceful* behaviors to refer to acts of abrupt force applied to another person's body, either directly or by means of an object (Dahl, 2016, 2019). This definition roughly aligns with what Hay and colleagues mean when they say aggressive behaviors, except when—in some assessments—they restrict “aggressive behaviors” to include only behaviors accompanied by anger (“angry aggressiveness”) or—in places—they expand “aggressive behaviors” to include force toward others' property (e.g., tugging on a peer's toy).

Fact 1: Infants Become Increasingly Likely to Direct Both Helpful and Forceful Behaviors Toward Others During the First Two Years

Students of helpful and forceful behaviors have long agreed on one thing: The behaviors they study increase during the first two years of life. Rudimentary forms of helping emerge during the first year of life, according to both parental reports and experimental data (Carpendale et al., 2015; Dahl, 2015; Hammond et al., 2017; Reddy et al., 2013). By early in the first year, most infants can hand out-of-reach objects to an adult experimenter and most parents report that their infants have helped in everyday life (Dahl, 2015; Hammond et al., 2017; Warneken & Tomasello, 2007). During the second year and into the third, children become increasingly helpful, eventually helping even before the recipient has signaled that they need help (Dahl, 2015; Svetlova et al., 2010; Warneken, 2013; Warneken & Tomasello, 2006; Waugh & Brownell, 2017).

During the very same period, rates of hitting, biting, and kicking also increase. The first signs of forceful behaviors toward others emerge by the middle of the first year (Hay et al., 2010, 2014). Subsequently, most infants become more likely to use force against others, according to both parental reports and naturalistic observations (Alink et al., 2006; Dahl, 2016; Tremblay et al., 2004). According to comprehensive reviews, the frequency of children's physical force toward others appears to peak somewhere after the second birthday, whereupon it decreases into later childhood (Hay, 2005; Tremblay & Nagin, 2005). Indeed, Hay and colleagues (2021) found a significant decrease in the use of force in play sessions with peers from 1.5 years to 2.5 years. As we note in the next section, it is not until these later ages that the trajectories of helpful and forceful behaviors begin to diverge.

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Fact 2: Neither Helpful nor Forceful Behaviors are, at first, Guided by Concerns with Others' Wellbeing

At first glance, helpful and forceful behaviors seem diametrically opposed: Helpful behaviors tend to promote others' welfare, whereas forceful behaviors tend to reduce it. In general, children and adults tend to approve of helpful behaviors and condemn forceful behaviors (although they make exceptions in some situations: Dahl et al., 2020; Jambon & Smetana, 2014). Beyond early childhood, individuals who score higher on indices of prosociality tend to score lower on indices of antisociality (Eisenberg et al., 2015).

In the first two years, however, helpful and forceful tendencies are *not* diametrically opposed. Many, if not most, infants rely increasingly on both behaviors during the same period (Dahl, 2015, 2016). Corroborating a handful of prior studies (e.g., Gill & Calkins, 2003), Hay and colleagues (2021) found that measures of prosocial and aggressive tendencies were either uncorrelated or positively correlated in the second year. The robust negative correlations between measures of prosocial and aggressive tendencies—no matter how natural such correlations might appear—emerged only later in childhood, consistent with prior literature.

Why do helpful and forceful behaviors rise together, and correlate, in the first two years? One likely explanation is that neither helpful nor forceful behaviors serve the functions they serve later in life (Dahl, 2019). Indeed, many scholars have suggested that infants' earliest helpful behaviors do not spring from a concern with promoting others' welfare, and that their earliest forceful behaviors do not spring from a concern with hurting others (Brownell & Hazen, 1999; Carpendale et al., 2015; Dahl, 2016; Dahl & Paulus, 2019; Hay & Cook, 2007; Tremblay, 2010).

Consider, for instance, that many of infants' earliest acts of force are unprovoked. (In addition to the provoked acts of force documented by Hay and colleagues.) In our work, we operationalized unprovoked acts of force as acts of force that occurred without any prior blockage of infants' goals (Dahl, 2016). We have studied infants' unprovoked force using both parental reports and naturalistic observations. In the second year, half or more of infants' acts of force were found to be unprovoked; these unprovoked acts of force toward parents or other family members were almost never accompanied by signs of infant distress. These acts of unprovoked force may be ways of initiating social interactions with others rather than efforts to harm another (Brownell & Hazen, 1999; Dahl, 2016).

Similarly, early helpful behaviors appear to be driven by motives other than concerns with affecting the welfare of others. Even early in the first year, infants' empathic responsiveness to others' responsiveness remain unreliable, as infants rarely try to comfort another person in distress at this age (Roth-Hanania et al., 2011; Zahn-Waxler et al., 1992). Second, we know that infants enjoy social interactions with their parents around the first birthday; thus, it is both parsimonious and plausible to infer that many of infants' acts of helping at home and laboratory settings spring from desires for social interaction (Carpendale et al., 2015; Paulus, 2014; Waugh & Brownell, 2017).

In these ways, helping and hitting early in the second year differ in quality, not just in frequency, from helping and hitting a year later. At the latter age, children often seek to comfort another person in distress, and show concern that the other person receive help, even if they are not the ones to provide such help (Hepach et al., 2012; Svetlova et al., 2010; Zahn-

Waxler et al., 1992). Earlier work has showed that unprovoked force at home began to decrease in the second half of the second year (Dahl, 2016). Furthermore, rates of aggression in the second half of the second year are more predictive of later externalizing problems than are aggressive tendencies earlier in infancy (e.g., Alink et al., 2006; Côté et al., 2006; Hay et al., 2021; Shaw et al., 2001). Taken together, findings like these suggest that helpful and forceful behaviors gradually take on their mature, and opposing, psychological functions as children develop from infancy to preschool age.

What do These Two Facts Mean for our Questions and Answers about the Ontogeny of Morality?

Infants' orientations toward helpful and forceful behaviors have played a major role in debates about the origins of human morality. According to some nativist or evolutionary accounts, infants' engagement in and preference for helping suggest that infants have an innate moral sense or are naturally altruistic (Bloom, 2013; Hamlin, 2013; Warneken, 2015). Others have debated whether infants have a natural propensity toward aggression, or whether aggression has to be learned (for discussions, see Tremblay, 2010; Tremblay et al., 1999). The monograph by Hay and colleagues (2021), as well as other research (for further reviews, see Dahl, 2019; Smetana, Jambon, et al., 2018), urge a different starting point.

The indubitable, though inconvenient, reality is that most infants engage in frequent helpful and forceful acts during the first year of life, and that neither behavior appears to be reliably guided by concerns about the welfare of others. Faced with these facts, we decline to classify infants as predominantly prosocial or predominantly aggressive, nor as moral or immoral. We believe it is more fruitful to consider infants as taking their first steps *toward* morality during the first two years. On that basis, our field can study the developmental transformations that lead to the emergence of moral concerns with others' welfare, rights, justice, and fairness.

Adopting this developmental line of inquiry will require the field to build on the work of Hay and colleagues. Specifically, it will be crucial to trace the developing psychological functions of helpful and forceful behaviors from infancy to preschool age. Under which circumstances do children's helpful actions become guided with concerns for others' welfare, or even with a sense of moral obligation to promote others' welfare (Dahl & Paulus, 2019; Hay & Cook, 2007)? Under which circumstances do children refrain from hitting others out of concern for protecting others' welfare or for their own moral judgment that hitting is wrong (Dahl, 2019)?

Basic moral orientations toward helpful and forceful behaviors emerge by the third birthday (Dahl, 2019; Smetana, Jambon, et al., 2018; Tomasello, 2018). Around this age, children judge that helpful actions are good, or even obligatory, and that forceful actions are wrong; they provide justifications for such judgments that reference others' welfare and rights; and they show negative emotions and interventions in response to moral violations (e.g., Dahl et al., 2020; Hardecker et al., 2016; Nucci & Weber, 1995; Smetana, Ball, et al., 2018; Vaish et al., 2011). The window of developmental transformation identified by Hay and colleagues in their monograph will remain focal for research on children's orientations toward helpful and forceful behaviors in the coming years.

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