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# THE EARLY ONTOGENY OF HUMAN COOPERATION AND MORALITY

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The seminal work in the modern study of children's moral development is Piaget's (1932/1997) *The Moral Judgment of the Child*. As is well known, Piaget claimed that before the age of 8 or 9 years, children make moral judgments based only on a respect for authority and the social norms emanating from this authority—and so they are not really autonomous moral agents. But as is also well known, Piaget focused exclusively on the explicit moral judgments that children were capable of formulating in language. Kohlberg's extension of Piaget's framework (e.g., Colby & Kohlberg, 1987) also asked children to express their reasoned moral judgments linguistically and also found that preschool children were essentially premoral.

Social domain theorists (e.g., Smetana et al., 2014; Turiel, 2006) contested the Piaget-Kohlberg picture of preschoolers as premoral. In their theory and research, 3- to 6-year-old children already understand a good deal about morality; specifically, they distinguish moral norms from social conventions, judging that only moral norms are obligatory, universally applicable, and not derived from adult authority. Thus, while a boy might find it silly to wear a dress, he could do so if an adult authorized it or if he belonged to another culture in which it was acceptable, but it would be wrong for him to hit an innocent child, even if an adult authorized it and even in other cultures. Much data support this view of preschool children as at least somewhat competent in their judgments about morality (see Smetana et al., 2014).

Work from the past few decades has thus established that moral understanding begins early in development, certainly far earlier than Piaget and Kohlberg proposed, and concerns quite subtle and differentiated judgments. But all of this research has been almost exclusively cognitive (or sociocognitive) in nature. In contrast, in this chapter, following trends in moral philosophy and moral psychology, we consider children's moral development in its evolutionary context. This means, first, that there is a focus not only on moral cognition and judgment but also on moral action. In evolutionary theory, action is always the primary level of analysis because natural selection only "sees" and "acts upon" actions, with any underlying motivations and cognitive processes selected for only insofar as they have effects on the organism's (hopefully) adaptive actions. Second, this evolutionary perspective has also led researchers to focus on what is most likely the larger social context of human morality—namely, human cooperation in general. After all, the main social function of morality is arguably to regulate social interactions in the general direction of cooperation, given individuals who are at least somewhat selfish.

The outcome of this new research is the discovery that young children's social behavior has a much stronger moral dimension, at much younger ages, than previously supposed. Although they

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cannot articulate it explicitly in language, even toddlers understand a good deal about such things as collaboration, helping, sharing, the feelings of others, fairness, and social norms—as demonstrated by their appropriate actions and reactions in various morally relevant situations. This research does not compete with the social cognitive developmental tradition focusing on moral judgment but rather complements it by highlighting an earlier age and other dimensions of the process. In the preface to his classic book, Piaget (1932/1997) writes, "Readers will find in this book no direct analysis of child morality as it is practiced in home and school life or in children's societies. It is the moral judgment that we propose to investigate, not moral behavior or sentiments" (p. 10). In contrast, we begin here precisely with young children's early moral behavior and sentiments in their direct interactions with others (what we refer to as "toddlers' second-personal morality") and then go on to see how these undergird older preschoolers' more impersonal verbal judgments of morality ("preschoolers' norm-based morality").

## Theoretical Foundations: The Puzzle of Human Cooperation

Humans engage in an extremely wide array of collaborative activities—from foraging to football—many under the aegis of social norms and formal institutions that set specific rules for cooperation. Humans also engage in a wide array of altruistic activities, involving everything from doing favors for friends to donating blood for strangers to fighting and dying for one's country (Richerson & Boyd, 2005). Such cooperation must always be grounded in the individual fitness of the cooperators; an individual sacrificing him- or herself out of existence for the sake of others is a nonstarter. The emergence of cooperation in a species thus requires specific mechanisms that balance the organism's self-interest with its concern and respect for others.

Tomasello and colleagues (2012; Tomasello, 2016) propose that human "ultra-cooperativeness" emerged in two main evolutionary steps. According to their interdependence hypothesis, in a first step a few hundred thousand years ago (*Homo heidelbergensis*), humans became obligate collaborative foragers and thus interdependent on one another. They had a direct interest in the well-being of their partners, leading to the helping of potential partners and avoidance of cheaters. Such social selection of partners advantaged good cooperators who have sympathy for others, and so help them, and who feel equality with and responsibility to others, and so share the spoils of their joint endeavors with them in mutually satisfactory ways.

In a second step a couple of hundred thousand years ago (*Homo sapiens sapiens*), as modern humans faced competition from other groups (Richerson & Boyd, 2005), they scaled up these new collaborative skills and motivations to group life in general. Humans became group-minded: they valued those who shared their cultural practices and values and began to confine their altruism and collaboration to in-group members (Boehm, 2001). Social selection was now about following the social norms of the group, and good cooperators were individuals who both followed social norms and enforced them on others (Richerson & Boyd, 2005). Those social interactions that were underlain by attitudes of sympathetic concern for others and/or a sense of obligation to the group arose as moral norms, whereas social interactions that did not involve these underlying attitudes arose as conventional norms (cf. Nichols, 2004; Tomasello, 2020).

We believe that thinking in terms of these two evolutionary steps of the interdependence hypothesis can help clarify some things about the early ontogeny of human cooperation and morality. In what follows, therefore, we look at some recent studies of early moral development in terms of two dimensions (which are most prominent at two different ages): (1) prosocial behavior in children from mainly 1 to 3 years of age and (2) following and enforcing social norms in children from, mainly 3 to 5 years of age. This is not an ontogenetic sequence: One-year-olds may be in some sense concerned with social norms, and 5-year-olds are certainly concerned with prosociality. However, it is not clear whether children younger than 3 understand norms to be social "agreements." We thus

posit in toddlers a kind of "natural," second-personal morality of cooperation and prosocial behavior (Darwall, 2006). This means that toddlers' moral sentiments and actions are based mainly on their direct interactions with specific others, not on group-wide social norms. One may also conceive of this as a kind of dyadic morality—that is, even if I am interacting with more than one individual, it is my dyadic relation with each of the other individuals that is relevant and there is no sense of a group. This second-personal morality is then followed by a more norm-based, agent-neutral morality in middle to late preschool.

## Toddlers' Second-Personal Morality

Human infants are already highly social beings, and they begin forming social relationships with others during the first year of life. They also presumably have some sense of their dependence on, if not interdependence with, other people. Although young children are, of course, selfish in many situations, we will show in the following section that in many other situations, they subordinate their own self-interests in order to do such things as collaborate, sympathize with, help, and share resources with others. They also evaluate others in terms of such cooperative behaviors and begin to help and share with others more selectively as a result.

### *Collaboration and Commitment*

Young children are surprisingly skilled collaborative and cooperative partners. Already early in the second year of life, toddlers can take turns to achieve social coordination with others (e.g., Eckerman et al., 1989). More relevant for our purposes, young children are motivated to participate *jointly* in joint activities: When a cooperative activity breaks down (such as when the partner suddenly stops participating), 18-month-olds and 2-year-olds actively try to reengage the partner such as by pointing or vocalizing to draw the partner's attention to his part of the activity in order to continue the joint activity rather than attempting to continue by themselves (Warneken et al., 2006). Strikingly, this is true even when the partner is not needed for the child to complete the activity, showing that children do not view the partner as a "social tool" to achieve their own goal but rather in a truly collaborative light (Warneken et al., 2012). Even 14-month-old infants show some capacity to coordinate simple activities, such as bouncing a block on a trampoline, with an adult, and make some effort to reengage passive partners (Warneken & Tomasello, 2007). Moreover, when given a free choice of how to obtain food, 3-year-olds more often choose a collaborative over a solo option (Rekers et al., 2011). These findings point to a fundamental human drive to collaborate with others to achieve joint and shared goals.

Further, once humans have formed a joint goal, they feel committed to it: they know that opting out will harm or disappoint others, and they act in ways to prevent this. Even toddlers feel such commitments. For instance, when working jointly with a partner on a task that should result in both actors receiving a reward, 3.5-year-olds continue to work until the partner has received his reward even if they already received their own reward earlier on (Hamann et al., 2012). They even resist taking "bribes" that would require them to defect from their collaboration (Kachel & Tomasello, 2019). Moreover, if 3-year-olds need to break away from a joint commitment, such as the commitment to play together (rather than individually), they do not simply walk away but take leave from the other as a way of acknowledging and asking to be excused for breaking the commitment (Gräfenhain et al., 2009). Equally, they object when their partner breaks away without taking leave (Kachel et al., 2018; Kanngiesser et al., 2017).

Thus, even very young children are social, collaborative, and cooperative beings who view their collaborative efforts as inherently *joint*. Such jointness makes children interdependent; they need the other to achieve their (social) goals, and they know that the other needs them. They thus experience collaboration and cooperation as committed activities. Certainly, by age 3, children feel responsible

for their joint commitments and either attempt to honor them or apologize for breaking them. From early on, then, children show strong signs of interdependence.

## Sympathy and Helping

Young children and even infants show remarkable prosocial propensities. By 14 to 18 months of age, they readily engage in various forms of instrumental helping, such as picking up an object that an adult accidentally dropped or opening a cabinet door when an adult cannot do so because his hands are full. They do not do these things in control situations that are similar but in which the adult does not need help (Warneken & Tomasello, 2006, 2007). Toddlers even help others at some cost to themselves (Svetlova et al., 2010). Importantly, infants' helping is not limited to completing others' action goals. For instance, when 12-month-old infants see an adult searching for an object that they know the location of, they point to direct the adult's attention to it (Liszkowski et al., 2008). Remarkably, helping elicits a positive effect among infants and young children, particularly when it is costly (Aknin et al., 2018; Hepach & Tomasello, 2020).

An open question is the degree to which young children become prosocial as a result of rewards from adults. Some research indicates that they do not. For instance, when 20-month-old children were rewarded for helping, their helpfulness actually decreased once the reward was taken away; children who were not rewarded at all remained highly helpful throughout (Warneken & Tomasello, 2008). Following the "overjustification" effect (Lepper et al., 1973), this suggests that young children's motivation to help is intrinsic and not dependent on concrete extrinsic rewards and indeed is undermined by such rewards. More recent studies measuring physiological arousal show that 2-year-olds are not motivated to help a person themselves and thus to receive credit for helping, but rather simply to see the person helped (Hepach et al., 2012, 2016, 2019). Toddlers even help when the recipient is absent and cannot acknowledge or reward their help (Hepach, Haberl, et al., 2017). However, other work suggests that praise and encouragement foster helping when it first emerges (around 13–14 months of age), though they have no impact just a few months later (Dahl et al., 2017). Though these findings do not establish that young children help *with the goal* of being praised or rewarded, they do suggest that social rewards may contribute to fostering the earliest instances of helping behavior. However, both lines of work agree that by 1.5 to 2 years, children's prosocial motivation is largely intrinsic.

During this same early period, young children also begin to provide comfort and assistance to those in distress, such as a person who is in pain after bumping her knee or is upset about her broken teddy bear (e.g., Zahn-Waxler et al., 1992). The concern children show correlates with and is thought to motivate their prosocial acts (Eisenberg & Miller, 1987). Indeed, facial expressions of concern for distressed others are evident within the first few months after birth, and infants' concern for distressed or fearful others in the first year predicts their prosocial behavior in the second year (Davidov et al., 2020; Grossmann et al., 2018).

Strikingly, young children's concern is not an automatic response to distress cues but rather a flexible response. By 1.5 to 2 years, children show concern and subsequent prosocial behavior toward a victim even if the victim conveys no overt distress when harmed (Vaish et al., 2009; see Hobson et al., 2009, and Shaw & Wainryb, 2006, for similar findings with older children). Young children also show reduced concern and prosocial behavior toward a "crybaby" (a person who is considerably distressed after being mildly inconvenienced) than toward a person who is similarly distressed after being seriously harmed (Hepach et al., 2013). From early in ontogeny, then, sympathy is a sophisticated and reliable response (Hoffman, 2000; Vaish, 2016).

Around the same time that young children demonstrate this remarkable prosociality themselves, they also show a preference for prosocial over antisocial others. Early in the first year, infants distinguish prosocial from antisocial characters and prefer to touch the prosocial characters (see Margoni & Surian, 2018; Van de Vonderwoort & Hamlin, 2018). These preferences are soon apparent in children's

prosocial behaviors. Even before age 2, for instance, toddlers help those who previously helped them more than those who were unhelpful, evincing direct reciprocity (Dunfield & Kuhlmeier, 2010). Soon thereafter, children also demonstrate indirect reciprocity, such as by reducing their prosocial behavior toward an individual who caused or intended to cause harm to another individual (Dahl et al., 2013; Kenward & Dahl, 2011; Vaish et al., 2010). Through such selective helping, young children demonstrate their recognition of and preference to interact and cooperate with those who are prosocial and their avoidance of those who are harmful or noncooperative, both toward them and toward others.

Moreover, and in line with our evolutionary analysis, children help an individual more in a collaborative context than a noncollaborative context. For instance, Hamann et al. (2012) showed that 3.5-year-olds were more likely to help a peer attain a reward when they previously attained a reward by participating in a collaborative task with the peer than when they previously attained a reward without participating in a collaborative task (see also Melis et al., 2015). This hints at the possibility that human prosocial behavior evolved in interdependent, collaborative contexts.

Together, these findings on infants' and toddlers' instrumental helping, informative pointing, comforting, and selective helping of harmed and/or cooperative others demonstrate a rich system of early prosocial behavior. We would argue that these prosocial behaviors are just as much a part of the moral domain as children's judgments and justifications about hypothetical moral scenarios, and indeed, children's later moral judgments rest on the norm that everyone should care about the welfare of others. Indeed, the research shows that children's early prosociality is as truly "moral" as their later judgments and justifications, as it is intrinsically motivated, based on concern for others, grounded in an interpretation of the situation, flexible depending on interactions and evaluations of others, and facilitated by collaboration.

## *Equality and Sharing*

Young children's prosocial proclivities are also apparent in their sharing behaviors. In naturalistic observations, infants as young as 8 months may show or give toys to parents, other infants, siblings, and strangers, even when resources are low (e.g., Hay, 1979; Rheingold et al., 1976). With development, sharing becomes increasingly selective: even 12-month-olds make some distinctions between recipients of their prosocial actions, being more likely to share objects with their peers and their own mothers than with the peers' mothers (Young & Lewis, 1979).

Some experimental work on early sharing suggests, however, that toddlers are not so willing to share. For instance, 18- and 25-month-olds in an experimental setting did not share food spontaneously (Brownell et al., 2009). Further, 3- to 4-year-olds are generally found to be selfish in their distributions, whereas by 5 to 6 years, children show a greater sense of equality and fairness (Fehr et al., 2008; Lane & Coon, 1972; Rochat et al., 2009). Interestingly, 3- to 4-year-olds state that they themselves and their peers *should* share equally, and they reject and respond negatively to unequal distributions that disadvantage them, yet it is only by 7 to 8 years that children reject distributions that advantage them (Blake et al., 2014; Lobue et al., 2011).

However, these experimental studies involved windfall situations in which children receive resources from a third party without working for it and must relinquish some resources to exhibit fairness. Such situations are removed from the evolutionary mechanisms that we argue likely shape these phenomena in early ontogeny. We propose that from early on, children's sharing and fairness-related behaviors should reflect the effects of the collaborative foraging context of early humans, in which one shares the spoils equally among those who took part in the collaborative effort. Accordingly, 3-year-olds are more likely to divide up rewards equally if they obtained the rewards by working collaboratively than by working individually or receiving a windfall, even when the resources could easily be monopolized (Corbit et al., 2017; Hamann et al., 2011; Warneken et al., 2011). Moreover, working collaboratively induces preschool-age children to reject inequality both when it disadvantages and when it advantages them (Ulber et al., 2017).

Young children also distinguish equal from unequal distributions and prefer equal distributors and distributions. In violation-of-expectation studies, infants early in their second year look longer to a scene in which resources are allocated unequally among recipients than to a scene in which they are allocated equally (Schmidt & Sommerville, 2011; Sloane et al., 2012), suggesting that infants expect resources to be distributed equally among recipients. Additionally, when 15- to 16-month-olds see one distributor being fair toward a recipient and another distributor being unfair toward the same recipient, they expect the recipient to approach the equal distributor and themselves prefer to interact with the equal distributor (Burns & Sommerville, 2014; Geraci & Surian, 2011). Among somewhat older children, these preferences play out in their own prosocial behavior: By age 2 years, children help equal distributors more than unequal distributors (Surian & Franchin, 2017), and by 3.5 years, they share more with those who previously shared with others than those who did not (Olson & Spelke, 2008).

Over development, children's resource distribution moves beyond only equality and becomes more sensitive to reciprocity norms, relationships, and others' behaviors. Some of this sensitivity is apparent by 3 years of age, when children share more with a partner who previously shared with them than one who did not (e.g., Warneken & Tomasello, 2013). This direct reciprocity is not simply due to a positive mood from receiving benefits or a way to reward prosocial individuals, as 3-year-olds reciprocate more toward those who intentionally benefited them than those who did so unintentionally or those who benefited others (Vaish et al., 2018). By age 4, children share (even at a cost) with friends more than with non-friends or strangers (Birch & Billman, 1986; Paulus & Moore, 2014; Yu et al., 2016) and expect friends to share more than non-friends (Lenz et al., 2021). Preschool-age children also share more with their in-group than out-group members (see Over, 2018).

A full-blown concept of fairness (i.e., an understanding of distributive justice or the proper way to divide up resources taking into account multiple factors; Nisan, 1984) emerges slowly between the preschool and school years. In the traditional work on the development of fairness, children are interviewed about hypothetical fair or unfair scenarios. This work has revealed a developmental trend such that young children progress from considering largely irrelevant characteristics of recipients, such as desire or age, to a preference for equal division of resources at about 5 or 6 years, to a preference for reward in proportion to the input (i.e., equity) among children older than 6 years (e.g., Damon, 1975; Fraser et al., 2007; Hook & Cook, 1979). Eventually, children move beyond the equity rule to integrate both need and merit information (McGillicuddy-De Lisi et al., 1994). By 6–8 years of age, children can vary their allocation decisions appropriately depending on context. For instance, they rely on the principle of equity in a reward-for-work context or when distributing luxury items, of equality in a voting context or when distributing necessary items, and of need in a charity context (Rizzo et al., 2016; Sigelman & Waitzman, 1991).

Recent, child-friendlier methods reveal, however, that even young preschoolers can use principles of equity. For instance, when resources are limited to a very small quantity and the child's response is behavioral rather than verbal, even 3-year-olds distribute resources based on merit (e.g., who worked harder; Baumard et al., 2012; Sloane et al., 2012). A collaborative context further facilitates this understanding. In one study, a fair giver gave an equal proportion of resources to himself and a receiver, and an unfair giver gave himself a greater proportion. The scenarios differed in whether the givers had obtained the resources by working collaboratively with the receiver or by working individually. Even 3-year-olds judged the fair giver to be nicer than the unfair giver, *but only* in the collaborative context (Ng et al., 2011). Collaborating even leads 3-year-olds to give up their *own* resources according to merit (Kanngiesser & Warneken, 2012). Thus, in a collaborative context, which we argue is highly relevant for resource distribution, even preschoolers have sophisticated intuitions about and motivation to carry out proportional distribution, which is so central to the full-fledged concept of fairness.

In sum, recent work has provided evidence for a surprisingly early ontogenetic emergence of sharing and the foundations of fairness. Toddlers and, to some degree, even infants show a sense of

equality in resource distributions, in particular in collaborative contexts. Moreover, even very young children prefer individuals who distribute to others equally. They also show sensitivity to a critical aspect of fairness—equity—when examined in collaborative situations. Thus, sharing and some foundational aspects of fairness appear early in moral development, especially in early collaborative and cooperative contexts. They are an important aspect of toddlers' second-personal morality and are, we argue, the seeds of the full-fledged norm-based sense of fairness that emerges later in development.

### *Summary*

Evidence is growing rapidly for a remarkably rich and multifaceted morality, in the sense of prosociality, very early in ontogeny. Toddlers and even infants readily engage in collaborative activities and recognize the jointness or interdependence therein. They also help others and show some sense of equality. Importantly, collaborative contexts facilitate these capacities, providing support for our hypothesis that it was within the context of interdependence that prosocial behavior likely emerged. Toddlers also evaluate others in terms of their prosocial and cooperative behaviors and withdraw their helping and sharing from noncooperative individuals.

Still, all of these behaviors and evaluations are, we argue, based less on a normative, impersonal understanding of morality than on a second personal morality based on personal relationships and social emotions (Darwall, 2006). Thus, toddlers view others primarily from a second-personal, or dyadic, standpoint and evaluate them according to whether they do or do not like the others' behaviors. This is an early form of morality, but it is not a fully adult-like morality—the critical second stage of norm-based, agent-neutral morality is still to come.

## Preschoolers' Norm-Based Morality

Toddlers certainly respond when adults enforce norms—such as when adults tell them things like "We don't hit other children." It is not clear, however, whether they are responding to the norm per se. They could equally be responding simply to the adult's individual imperative that they do or do not do something at that moment. But responding to the norm itself means responding to something more general and timeless than that.

In adult society, social norms are mutual expectations, indeed mutual agreements, about how individuals ought to behave in certain situations. Norms go beyond the particular—they are general and agent-neutral—in at least three ways. First, social norms articulate an objective standard of behavior that is mutually known by all in the group: in situations like this, one ought to behave like that—and we all, including you, know this. Second, the force of the norm is not individual opinion but rather group opinion (or perhaps a larger entity, such as the group's gods), based ultimately on a commitment into which each person enters. "It is not just that I don't like you doing that, but that it is wrong, and we (including you) have agreed that we don't behave like that." Third, the norm applies equally to everyone in the group (or subgroup), including the self. "*One* does not behave like that in this group, and that applies to me as well." Social norms are thus mutually known group expectations and commitments, with respect to group-known standards, which all group members are expected to respect. These norms may vary to some degree across cultures. But though there is variability in such things as what precisely constitutes fairness (e.g., Schaefer et al., 2015), it would nevertheless seem to be the case that some principle of fairness (and others such as basic sympathy) is universal across cultures.

Until there is more research, we may remain agnostic about just how toddlers (prior to about age 3) understand social norms as adults enforce them and, in particular, whether they understand their generality and agent-neutrality. However, starting around age 3, children begin enforcing social

norms on others, and the way they do this provides strong evidence that they have begun to understand social norms as something that goes beyond individuals and, importantly, beyond themselves.

## *Enforcement of Social Norms*

Toddlers socially evaluate other persons, as documented previously, in selectively helping and sharing with them depending on, essentially, whether they view them as nice or mean. In addition, toddlers are building up knowledge of what the norm is, statistically speaking, in many situations. They thus learn and apply words such as *broken*, *dirty*, and *bad* to situations that violate standards and are thus not "normal" (Kagan, 1981). But beyond avoiding mean people and noticing statistical irregularities, children around age 3 also begin to actively intervene in situations to try to set right deviations and violations of the norm. Crucially, they do this from a third-party stance when they themselves are not directly involved or affected by the norm violation, and they often do this with normative language, using generic terms that explicitly mark the generality and agent-neutrality of the judgment (see Schmidt & Tomasello, 2012).

In one study (Vaish, Missana, et al., 2011), children and two puppets each created a drawing or sculpture, after which one puppet left the room. When the remaining puppet then began to destroy the other puppet's creation, 3-year-olds protested verbally. Impressively, about a quarter of the children protested using normative language such as "You can't do that" (in fact, these German children often used the generic pronoun *man*, as in "One doesn't do that") versus, for instance, imperatives or desire-dependent language such as "I don't want you to do that" (Searle, 2001). Pilot work with 2-year-olds showed almost no protest in such situations. Rossano and colleagues (2011) similarly found that 3-year-olds protested, sometimes normatively, when one puppet threatened to take or throw away another puppet's possession, whereas 2-year-olds only protested in an agent-specific manner (when the actor acted on the child's own property). In both studies, 3-year-olds applied the moral norm against destroying or stealing property in an agent-neutral way: on behalf of someone else, as a disinterested enforcer, with the judgment marked as applying to everyone. Similarly, 3-year-olds protest in normative terms against unequal distributions, even as bystanders (Rakoczy et al., 2016).

Beyond protesting verbally, children demonstrate other enforcement-like behaviors as well. For instance, 3-year-olds who witness an actor destroying an absent recipient's artwork later tattle to the recipient about the actor's actions, akin to adults reporting norm violations to authority figures (Vaish, Missana, et al., 2011). They do this not to avoid being blamed for the harm but rather to enforce the norm (Yucel & Vaish, 2018). Children of this age also carry out restorative justice by returning to a victim what a thief had stolen away (Riedl et al., 2015). They thus intervene and respond to third-party moral transgressions in multiple ways that provide converging evidence for their emerging agent-neutral morality.

Perhaps even more tellingly, 3-year-old children also protest conventional norm violations, in which there is no harm involved. In one study (Rakoczy et al., 2008), children watched as a puppet announced that he would now "dax," but he then performed a different action than the one the child had previously seen an adult doing and calling "daxing." Most children objected, even though the game was a solitary one so that playing it incorrectly did not harm or even inconvenience anyone. Again, as with moral norms, children often used normative, generic language such as "No, it does not go like that!" Two-year-olds protested to some extent, but almost always imperatively rather than normatively. Critically, children were not just objecting to the fact that the puppet did not perform the action he said he would, as a subsequent study obtained the same results with a nonverbal indication of the game context (Wyman et al., 2009).

Three-year-olds' emerging understanding of social norms as agreements among people is especially clear in studies involving joint pretense. In studies by Rakoczy (2008) and Wyman et al. (2009),

3-year-olds objected—in much the same way as in the studies of moral norms and game rules—when a puppet used a wooden block as a pretend sandwich if the child and an adult had previously designated this block as pretend soap ("No, one can't eat that. It's soap!"). When the same block was later designated as a sandwich in a different game, children objected if it was used as soap. This flexible behavior clearly shows that young children can, at least in pretense contexts, understand that the norms constituting the game are "agreements" that can be changed. This is despite the fact that when asked verbally about such norms and rules governing games, they cannot really answer coherently at this age (Piaget, 1932/1997).

Further evidence for young children's understanding of the basic workings of social norms comes from their selective enforcement of different types of social norms based on group membership. Thus, children not only distinguish moral from conventional norms on multiple levels (Smetana et al., 2014; Yucel et al., 2020) but also enforce the two distinctly. In particular, when 3-year-olds see a moral norm being broken by an in-group and an out-group member, they protest equivalently, but when they see a conventional norm being broken, they protest more against the in-group than the out-group member (Schmidt et al., 2012; see also Rizzo et al., 2018). Three-year-olds thus have a sense of the *conventional* nature of conventional norms—that is, these norms have been decided on by and thus apply only to one's own group, but members of other groups may not be aware of or need not follow the same conventions. The same is not true of moral norms involving harm, toward which they take a more universalist approach.

Together, recent work suggests that, at least by age 3, children do not view social norms solely in terms of authority, as Piaget assumed. Rather, they recognize them as general, agent-neutral, mutual expectations that represent some kind of implicit agreement of how "we" ought to behave—with the "we" conceptualized differently in the case of moral versus conventional norms. Because children's emerging understanding of social norms involves such things as agent-neutrality, generic language, and reference to the group, it may be seen as reflecting their emerging skills and motivations for collective intentionality (Tomasello et al., 2012).

## *Reputation, Guilt, and Shame*

In their everyday worlds, young children are less often judging and enforcing norms on others and more often being judged and having norms enforced on them. Once more, it is not clear the degree to which children understand this fact, but they do seem to know that their behavior is being normatively assessed, and they sometimes alter their behavior accordingly. Research using verbal tasks has suggested that it is only by age 8 years that children engage in such reputation management (e.g., Banerjee, 2002). However, recent behavioral work reveals this capacity even in preschoolers (Engelmann & Rapp, 2018). In one study (Piazza et al., 2011), 5- to 6-year-olds were faced with a challenging rule-based task while they were either "watched by an invisible person," watched by an adult, or unobserved. Children cheated significantly less on the task when they were observed, either by the invisible person or the adult, than when they were unobserved. Engelmann et al. (2012) further found that 5-year-olds stole less from an imaginary child and helped her more if a peer was observing them (see also Fu et al., 2016; Kelsey et al., 2018). Remarkably, children modify their behaviors based on who their audience is: they are more generous when being observed by in-group than out-group members and potential reciprocators than non-reciprocators (Engelmann et al., 2013).

Children in these studies anticipate being judged and behave in ways that increase positive and decrease negative evaluations of themselves. They avoid having norms applied to them by, in effect, preemptively applying the norms to themselves. But when children do transgress, even if no one sees them and so no one applies the norm, they still often apply the norm to themselves in acts of guilt and/or shame. Thus, if they break another person's toy, many preschoolers show signs of feeling guilty or ashamed (Drummond et al., 2017; Kochanska et al., 2002). In experimental settings, they show

greater reparative behavior if they caused a mishap that harmed someone than if someone else caused the same mishap or if they caused a harmless mishap (Vaish, Carpenter, et al., 2016; see also Hepach, Vaish et al., 2017). These feelings of guilt and shame may be seen as a kind of self-punishment that prevents individuals from reoffending, lessening the chances of others punishing them in the future. Under special conditions, people also reward themselves by feeling pride at having lived up to a social norm when they could have gotten away with ignoring it, such as helping others at great cost to themselves (Sznycer, 2019; Tangney et al., 2007). This positive self-evaluative emotion emerges early: even 3- to 4-year-olds show more pride-like displays after spontaneous helping than prompted helping (Ross, 2017). Such pride likely functions to promote further norm following in the future.

Guilt, shame, and pride are thus internalized versions of the kinds of moral judgments that humans mete out to others who violate or follow social norms. These norm-related, self-conscious emotions thus show with special clarity that the judgment being made is not my personal feeling about things but rather the group's. I am sanctioning or praising myself on behalf of the group, as it were. As particularly strong evidence of group-mindedness, older preschoolers and early school-age children even show collective guilt, shame, and pride—that is, if a member of their group does something blameworthy or praiseworthy, they show guilt, shame, or pride as if they themselves had acted (Bennett & Sani, 2008; Over et al., 2016).

Another function of social emotions such as guilt and shame comes from their outward displays (Goffman, 1967). For instance, guilt displays serve to appease: they signal that one is also suffering, which one hopes will evoke concern and forgiveness and thus reduce the likelihood of punishment, and they indicate that one did not mean to cause harm, one intends to make amends and behave more appropriately in the future, and one is aware of and committed to the group's norms (Castelfranchi & Poggi, 1990; Keltner & Anderson, 2000). Remorseful transgressors should thus elicit forgiveness, affiliation, and cooperation from the victim and other group members. Indeed, 4- to 6-year-old children blame and punish apologetic actors less, forgive them more, and like them better than unapologetic actors (Darby & Schlenker, 1982). Even in the absence of explicit apologies, 5-year-olds prefer and distribute more resources to remorseful than unremorseful transgressors, both as third-party observers and victims of the transgression (Oostenbroek & Vaish, 2019; Vaish, Carpenter, et al., 2011). Thus, preschoolers respond positively to socioemotional displays that convey that the transgressor is enforcing the norm on him- or herself.

Preschoolers also like those who enforce norms on others. In one study (Vaish, Herrmann, et al., 2016), 4.5- to 6-year-old children watched videos of an observer responding to a transgression by either enforcing the norm that the transgressor had broken ("You aren't allowed to do that. Don't ever do that again") or making neutral comments. Children judged that the enforcer had done the right thing, evaluated the non-enforcer as less good, and preferred the enforcer (see also Lee & Warneken, 2020).

We may thus see a continuity from toddlers' social evaluations of others as either helpful or harmful to their enforcement of social norms. From very early ages, they judge others and are even selective about the target of their own cooperative behaviors based on those judgments (see the previous section). But it is only during the preschool years that children understand this process of judgment such that they know they are being judged and so do things to manage those judgments (impression management or self-presentation). One hypothesis is that this is made possible by second-order mental reasoning of the form "I am thinking about what you are thinking about me" (Banerjee, 2002). Perhaps such second-order reasoning is also involved as they judge the judgers and judge positively those who find moral transgressions to be bad.

## *Summary*

During the later preschool years, then, children become truly moral agents—though, of course, there are still many further developments to come. The key is that they no longer consider and act toward

individuals based only on their personal judgments of them (though they certainly continue to do that), but in addition, they begin to understand and internalize the agent-neutral social norms of the group and to consider individuals as group members who both apply social norms to others and have social norms applied to them. And crucially, they come to consider themselves as just one individual among others—nothing special in the eyes of social norms—and even, in an astounding testament to their bifurcated sense of self, to apply the norms and accompanying punishment to themselves. Moreover, by 3 to 5 years, children regulate their own behavior according to these norms, so much so that preschoolers typically enter new situations not just following norms but actively searching for them—"What am I supposed to do here? How do I do it?" (Kalish, 1998)—and rapidly interpreting others' actions as normative (Schmidt et al., 2016). Their sense of self is bound up with seeking out and behaving in accordance with norms.

## Implications for a Developmental Model

Our aim here has been to paint a picture of early moral development from a different perspective and with more dimensions than prior work. Using a theoretical framework originally developed for the evolution of human cooperation (Tomasello et al., 2012), we have brought together a number of different research strands to posit two major phases in children's early moral development. First, toddlers, 1 to 3 years of age, (1) have a number of marked prosocial tendencies involving helping and sharing, (2) evaluate others for their prosocial and antisocial tendencies, and (3) modify their prosocial behavior toward others based on their judgments about them. We propose that toddlers do all of this in second-personal mode (Darwall, 2006)—that is, with respect to specific interactions with specific individuals rather than agent-neutral rules or norms. By about age 3, toddlers already have the basics of the morality of both the "good"—they have sympathy for others and help them as needed—and the "right"—they have a sense of equality in the division of spoils. Importantly, and in line with the evolutionary account, toddlers' attitudes of sympathy and equality—as manifest in their helping and sharing behaviors—are more pronounced within collaborative activities than outside of such activities (see Tomasello, 2020).

Toddlers comply with adults' enforcement of social norms, but they may comprehend them only as simple imperatives. But by about age 3, children begin to enforce social norms on others, both moral norms involving potential harm and conventional norms not involving harm. Indeed, and in line with social domain theory (Smetana et al., 2014), toddlers' attitudes of sympathy and equality are likely foundational for their subsequent distinguishing of conventional and moral norms, with moral norms being precisely those concerned with situations evoking children's natural tendencies toward sympathy and equality (and corresponding natural aversions to harm and inequality). If we think of social norms as being mainly about conformity to the group's ways ("We do things like this"), then conventional norms are all and only about conformity, whereas moral norms are about both conformity and "natural" attitudes of sympathy and equality ("We don't do things like this because it harms others"). Thus, conventional norms may vary widely across groups, as conformity is important in different behavioral domains in different ways in different groups, but moral norms, insofar as they rest on natural attitudes of sympathy and equality developed by toddlers across all cultures, will show less cultural variation in their scope, although they may of course also differ in their specifics (cf. Nichols, 2004).

The truly unique aspect of this second, norm-based phase in early moral development is its agent-neutrality. When young children begin truly understanding the nature of social norms, they begin applying them to others not just when they themselves are affected but from a third-party stance. Why children should feel the need to enforce norms on others—especially conventional norms whose violation seemingly does not cause harm—is not entirely clear, but we think it is tied to their identification with the group and its ways: "We simply do not do things like this, and if you are one of us,

you will not either." And when children themselves violate the norm, they will in many cases sanction themselves in acts of guilt or shame, thus revealing with special clarity that the norms apply to everyone equally. Preschoolers thus come to regulate their own behavior by anticipating how they will be normatively assessed by others, a form of what Korsgaard (2006) calls normative self-governance.

The outcome at the individual level is thus a self-regulating agent who has a natural tendency to do both good things and the right things, who evaluates others both individually and in terms of group norms, and who uses the potential evaluations of both specific others and of social norms in general as regulatory principles to guide her own behavior. These individual prosocial tendencies and group-minded normative tendencies often interact and even compete with one another throughout ontogeny, and they both constantly compete with children's naturally selfish tendencies as well. Moreover, all of these tendencies are modified significantly by socialization and culture such that they might eventually look quite distinct across groups and individuals. Understanding how these different tendencies and self-regulatory processes come together as children develop and socially learn from others in a rich cultural context is a worthy research agenda for developmental psychologists of all theoretical persuasions.

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