

## CHAPTER 36

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# DEVELOPING AN UNDERSTANDING OF NORMATIVITY

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## INTRODUCTION

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### From Prediction and Causes to Prescription and Reasons

The capacity for *cognition* allows human and nonhuman animals to navigate the physical world effectively and adaptively. For instance, animals can estimate distances, memorize events, track objects in space, detect regularities, discriminate between small sets of objects exactly and between large sets approximately, and make causal inferences. Thus, over the last decades, developmental and comparative research have gained more and more insights into the development of human and nonhuman thinking about the natural world including its entities, regularities, and causal structure (Baillargeon and Carey 2012; Call and Tomasello 2005; Rakoczy 2014; Tomasello 2014).

But many animals, including humans, also evolved a form of cognition that does not serve to deal with the physical world per se, but rather with the observable (behavioral) and unobservable (mental) states of conspecifics (and other species)—typically called *social cognition*. The study of human and nonhuman social-cognitive capacities has mostly been concerned with issues of mindreading (i.e., understanding individual psychological states, such as beliefs and desires). Based on research conducted over the last couple of years in particular, scholars have suggested that nonhuman animals (e.g., chimpanzees) understand simple perceptual states (e.g., seeing), but potentially not propositional mental states, such as beliefs proper (Andrews 2012; Call and Tomasello 2008; but see Carruthers 2013 for arguments in favor of continuity between

animals and humans, and Penn and Povinelli 2007 for arguments in favor of more fundamental discontinuity). Regarding social cognition and mindreading in human ontogeny (and adulthood), two-process accounts have been advocated lately. One process (for tracking “belief-like” states) is thought to be fast and efficient, but inflexible, while the other (for explicit reasoning about beliefs and propositional attitudes in general) is thought to be slow but flexible (Apperly and Butterfill 2009; Butterfill and Apperly 2013; Rakoczy 2015).

Human (and perhaps even nonhuman) social cognition, however, not only deals with the prediction and explanation of others’ behavior and individual mental states in a causal-descriptive sense—that is, humans not only understand themselves to live in a world of social regularities and causes for action. Human social cognition also gives rise to the phenomenon of *normativity* in thought and action, a fundamental notion in philosophy, but somewhat less noted in psychological research. For instance, humans understand themselves to have such things as obligations, commitments, rights, entitlements, social institutions, cultural knowledge, traditions, customs, mores, and rules. In other words, humans not only have (and think about) causes for belief and action. They also have and recognize *reasons* to believe certain things and reasons to act in certain ways (Raz 1999; Scanlon 1998; Searle 2001); and in psychological terms, this reason responsiveness might be based on the human-specific ability to take normative attitudes toward their own and others’ thought and action (Schmidt and Rakoczy 2016). Normativity thus poses a problem not only conceptually and ontologically (e.g., What are normative facts and how do they relate to empirical facts? Brandom 1994; Sellars 1963), but also psychologically and empirically: how do humans, psychologically, come to integrate the two “worlds”—the realm of predictions and causes on the one hand and the realm of prescriptions and reasons on the other—in their everyday reasoning and acting? (Hitchcock and Knobe 2009; Kalish 2006). Despite the pervasiveness of normativity, there is little research on the developmental origins of understanding normativity. Here we review developmental research conducted over the last couple of years suggesting that even young children have some basic grasp of a variety of different normative phenomena. But two things should be said and clarified in advance. First, not all kinds of normativity are alike. Thus, we first provide a brief overview of different types of norms infants and children need to develop an understanding of. And second, not all kinds of verbal or nonverbal behaviors (e.g., imitation) are indicative of an understanding of normativity, nor practical if we are to investigate the roots of normativity in early human ontogeny. Hence, we briefly discuss the methodological question of how to measure whether a creature understands something about normativity.

## Features and Types of Normativity

When talking about the normative, we mean something distinct from how the world *is*. In a general sense, we mean some ideal state in the world that can be attained or not. That is, there are conditions of success and failure regarding some state of affairs (Brandom

1994; Kripke 1982; McDowell 1984). Examples are mental states (which can successfully represent reality) and linguistic expressions (which can successfully be applied). Here, we are interested in normativity in a narrow sense, that is, in norms that set standards of correctness, come with normative force and authority, are valid both in general (agent-independent) and context-relative ways:

- *Standards of correctness*: a given human action in a given social interaction can be assessed as right or wrong according to some *standard* accepted by a given group of people (Hechter and Opp 2001; Popitz 2006). What this implies is that for an agent to be granted an understanding of norms, the agent must be capable of comparing (not necessarily in propositional terms) an observed action with an ideal “standard,” an ideal act.
- *Generality*: norms entail some abstractness and general applicability, such that they are valid for any agent (including oneself) in equivalent circumstances—they are valid in *general, agent-independent ways* (Nagel 1986).
- *Normative force*: norms are peculiar phenomena in that they do not have brute physical force (e.g., the law of gravity makes us fall, but laws of logic do not knock us down) and they are distinct from mere coercion (e.g., performing an action because someone is holding a gun to your head)—rather, norms have *binding force* and authority over us and there is typically the possibility to violate them (Korsgaard 1996; Rousseau 1762/1997, pp. 43–4). Thus, we have normative expectations about what we (oneself and others) “ought” to do in a particular situation (Chudek and Henrich 2011; Gloor 2014). Crucially, we could do otherwise, but we think we should adhere to the norm. Normative expectations are to be kept distinct from descriptive expectations about how people “will” behave. Normative expectations come with motivational force and are about how people “should” behave. Therefore, descriptive expectations are typically said to have a mind-to-world direction of fit (analogous to epistemic states), whereas normative expectations are construed to have a world-to-mind direction of fit (analogous to volitional states; Christen and Glock 2012; Schmid 2011; Searle 1983).<sup>1</sup>
- *Context-relativity*: norms, such as standing in line in a grocery store, typically apply in one context but not in another. Norms are thus usually context-relative. Even more non-arbitrary norms (such as moral norms we discuss later) can be relative to context: for instance, it is somewhat fine to harm someone in a boxing match (opponents have a legitimate reason to harm each other), although it is usually forbidden to harm someone (without any reason). Note that the generality feature of norms is not opposed to context relativity, since for a norm to apply in general (i.e., in all contexts of a certain category) does not preclude that it applies only in certain contexts (i.e., not in other categories of contexts).

<sup>1</sup> Alternatively, if one follows accounts that stress the role of beliefs in explaining norms (e.g., Bicchieri 2006; Lewis 1969), normative expectations could be considered having a double direction of fit.

Having these key features of normativity at hand, let us look how one can categorize normative phenomena. Surely, not all norms are created equal. One way to delineate normative phenomena is to talk about *practical* and *theoretical* (or *epistemic*) normativity (Engel 2011; Littlejohn and Turri 2014). Practical norms pertain to human actions; they give reasons to act in certain ways, and are thus part and parcel of human cultural practices and values. Epistemic norms pertain to human beliefs; they give reasons to believe certain things, and are thus fundamental to our theoretical reasoning, cultural knowledge, and understanding of truth.<sup>2</sup> Our focus here is on practical norms.

Many subscribe to the view that there are different types of practical norms. Perhaps the most famous contrast is that between *conventional* norms and *moral* norms (Korsgaard 1996; Lewis 1969; Scanlon 1998; Turiel 1983, 2006). Conventional norms regulate, organize, and constitute social practices and are typically arbitrary (i.e., another form of behavior could have become the norm or the “equilibrium”). A common further distinction is often made between conventional norms that are constitutive of some (social) behavior and conventional norms that merely regulate pre-existing (social) behavior (e.g., greeting conventions, etiquette rules, traffic rules). Constitutive norms create new social and institutional facts by the formula “X counts as Y in context C” (Rawls 1955; Searle 1995, 2010)—and if collectively accepted, they have normative consequences and prescribe or proscribe certain actions for agents in certain roles (Searle 1995, 2010). All kinds of social institutions, such as money, marriage, and games, are constituted by constitutive norms. Moral norms (at least prototypical ones), however, are considered non-arbitrary, as they are about issues of well-being, justice, and rights (Turiel 1983, 2006). And perhaps some moral norms spread more easily because they capitalize on something prior to the norm like a predisposition to feel averse to harming others (Nichols 2004). By contrast, without etiquette rules that regulate ways of eating, people might simply use their hands. *Norms of instrumental rationality* are different from both conventional and moral norms, because here the focus is on the efficiency (or rationality) of a means-end relation: an agent ought to adopt the most efficient means to reach his or her end (Korsgaard 1997).<sup>3</sup> Interestingly, however, they can be considered wide in scope—similar to moral norms—in that they apply to any rational agent.

## How to Measure Norm Sensitivity

A major question is how we can assess whether infants and children understand something about normativity. One strategy could be to investigate whether the young learner’s behavior conforms to certain norms. But mere (accidental) acting in accordance with a

<sup>2</sup> However, the practical-epistemic distinction need not be understood categorically (Graham 2015; Littlejohn and Turri 2014). For some epistemic norms might be considered practical (perhaps even moral), such as the norm to give true and relevant information (Graham 2015; Rescorla 2007).

<sup>3</sup> Norms of instrumental rationality can be construed as governing both practical and theoretical reasoning and thus not only prescribe certain actions, but also certain beliefs (Kelly 2003).

norm is not indicative of truly following a norm based on an understanding that one's action is subject to a norm (Brandom 1994; Wittgenstein 1953/2001). That is, the acting in accordance with a norm does not reveal whether the child understands the important features of normativity outlined earlier (in particular, standards of correctness, normative force, and generality). One can act in accordance with a norm for many different reasons, such as preferring a course of action or being afraid of sanctions. Then, might it be better to just ask children whether a given action is right or wrong? This is of course an important approach. Interview studies based on Elliot Turiel and colleagues' social domain theory on children's judgment and reasoning about norm transgressions in hypothetical scenarios have revealed that even preschoolers make subtle distinctions between moral and conventional norms (and that with age, children are able to justify their judgments), such as that they consider prototypical moral transgressions as more severe and wrong independent of an authority's opinion (Killen and Smetana 2014; Smetana 2006; Turiel 1983, 2006; Turiel and Dahl 2016). Two caveats, however, need to be raised. First, interview techniques have their limits when it comes to investigating younger children's, infants', and nonhuman animals' understanding of norms. And second, they focus on children's knowledge about (prevailing) norms and do not directly assess children's understanding of the normative force of norms; for the normative force of normativity essentially reveals itself most clearly in social interactions when actual norm transgressions occur.<sup>4</sup> More specifically, an understanding of normativity with its main features can be assessed most convincingly by confronting an individual with an actual norm violation and testing whether the individual—as an unaffected observer—enforces the norm via critique, sanctioning, and the like. Precursors to such spontaneous third-party norm enforcement have been reported in a few studies, for instance, regarding infants' spontaneous reactions to malfunctioning artifacts (Kagan 1981), or regarding two- and three-year-olds' spontaneous rejections of assertions that do not match reality (Pea 1982). Over the last couple of years, researchers have begun to systematically investigate young children's understanding of normativity in different domains and contexts using the method of spontaneous third-party norm enforcement. Overall, this research suggests between two and three years of age, children begin to show a robust understanding of different types of norms in a variety of contexts, and that they not only understand them cognitively, but also care about them motivationally (e.g., by upholding norms in cases of violation). In what follows, we will take a closer look at this research.

<sup>4</sup> This does not mean that statements and judgments in an interview have nothing to do with an individual's understanding of norms and actual behavior in social interactions. Turiel (2008), for instance, found that children make similar distinctions between moral and conventional transgressions for both real and hypothetical violations, and that their behavior in observed social interactions also corresponds to the moral-conventional distinction. This, however, does not obviate the need for a direct assessment of children's understanding of the normative force and generality of norms (see also Blasi 1983 for a discussion of the complex relation between moral cognition and behavior).

## **CHILDREN'S DEVELOPING UNDERSTANDING OF NORMATIVITY**

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### **Conventional Normativity**

The first experimental research on children's understanding of normativity focused on simple solitary cooperative rule games (i.e., each player is supposed to perform the same action) based on conventional (constitutive) norms. The first study tested two- and three-year-old children's understanding of such simple game rules by giving them the opportunity to spontaneously criticize a third party (a hand puppet) that violated the rules of the game (Rakoczy, Warneken, and Tomasello 2008). An adult model introduced the game by using normative language and novel words ("This game is called Daxing!"), and then the third-party puppet said that she was going to play the game (Daxing), too. The puppet, however, showed a different action, which was explicitly introduced as wrong before by the adult—thus, this act was against the constitutive norms of the game. Three-year-olds protested and criticized the puppet, often by using normative language (e.g., "This is wrong. One must do it like this."). They intervened less when the puppet said that she would show the child something (i.e., when not playing the game) and performed the same action. Two-year-olds showed the same general pattern of protest behavior, but used less normative language. This study provided the first evidence that young children understand that established constitutive norms have normative consequences for parties who engage in activities that are subject to these norms. In addition, children's disinterested enforcement of these norms suggests that they have some grasp of the three features of normativity, since they applied the norms to other participants of the social practice.

Rakoczy and colleagues (2009) followed up on this first study and looked more closely at young children's understanding of the context-relativity of conventional norms. They had young children (ages two and three) again play a simple game, but this time the action was prescribed at one location (Table A), not at another (Table B). Three-year-olds (but not two-year-olds) took into account the context-relativity of these game rules and intervened against third-party transgressions only when the action was wrong in a given context.

Pretense can be considered another paradigmatic case of conventional constitutive norms (Currie 1998; Rakoczy 2008a), since in a pretend game, players act as if a certain object were another object (e.g., using a banana as a telephone), and thereby treat object X as Y in game context C (Rakoczy 2008a). Rakoczy (2008b) had two- and three-year-old children play a simple pretend game. An adult demonstrated, for instance, that an object is to be treated as a knife in a pretend game. When a puppet pretended to eat the object (i.e., the knife), children protested. They did not protest, however, when the puppet pretended to eat an object that was designated as a carrot. In a subsequent study, it was found that three-year-olds, but not two-year-olds, are able to

switch between different pretend identities in two game contexts. For instance, a yellow stick may count as a toothbrush in one game at one location and as a carrot in another game at a different location (Wyman, Rakoczy, and Tomasello 2009). Hence, by three years of age, children understand something about the context-relative bindingness of conventional norms.

The scope of conventional norms is not only relative in spatial, but also in sociocultural terms. That is, many conventional norms are group-relative (e.g., etiquette rules, currency). Schmidt, Rakoczy, and Tomasello (2012) investigated how three-year-old children understand the social scope of prototypical conventional norms (simple solitary game-like actions), moral norms (destroying someone's property), and norms of instrumental rationality (failing to use the necessary means to an end). Children did not treat all norm transgressions by all transgressors alike: for conventional norm transgressions, they criticized an in-group member more than an out-group individual, but for moral and instrumental norm transgressions, children protested equally against in-group and out-group violators. This suggests that children recognize that conventional norms are limited in scope to members of their own group, whereas they understand moral and instrumental norms to have a much wider scope (see later for further research on moral norms).

## Norm Psychology, Intentionality, and Rationality

Are norm psychology and other forms of social cognition related from early in development? In their normative evaluation of an action, adults take into account the agent's intentionality, and they do so differentially for different types of norms (Giffin and Lombrozo 2015). Current research suggests that even children reason in such ways. One dimension on which conventional and moral norms differ is how much adults take into account an agent's freedom to act and other aspects of intentionality in normative assessment: If a soccer player is unable to reach the ball with his or her head and uses the hand instead (be it a reflex action or intentional), the referee will blow the whistle in any case (according to the constitutive norms of the game). Whether, however, a soccer player caused a severe injury to another player unintentionally or intentionally (e.g., because he or she is angry due to a prior foul), the referee would blow the whistle in both cases, but we would evaluate the situation differently in moral terms (i.e., less blame in case of unintentional harm). In a recent study, Josephs and colleagues (2016) found that young children (four-year-olds more so than three-year-olds) make this distinction between moral and conventional norms. They did not blame a third party for committing a moral violation when this agent was physically constrained, but they still criticized a violator of conventional norms who was under physical constraint (although less than a violator under no constraint; see also Tunçgenç, Hohenberger, and Rakoczy 2015, for similar findings with Turkish children).

All studies on children's understanding of conventional norms reported so far were concerned with (solitary) cooperative games, that is, with activities in which all



participants of a social practice have the same goal and are supposed to do something in the same way (without any need for simultaneous coordination). Many human institutionalized practices, however, are characterized by a friendly juxtaposition of cooperation and competition. In a competitive game, for instance, players jointly intend to compete within a cooperative framework, that is, a set of constitutive norms. And, importantly, opponents in a competitive game expect each other to try to win and thus to employ rational game-playing strategy. This, however, means that a player has to coordinate normative expectations about her opponent's rational game-playing, the constitutive norms of the game, and her own goal to win. A purely egocentric player should actually applaud an opponent who plays irrationally, since this is beneficial to the egocentric player's goal attainment. Schmidt, Hardecker, and Tomasello (2016) investigated whether preschoolers (three- and five-year-olds) form such normative expectations about rational game-playing in a simple two-player competitive game. Children played against a puppet, and sometimes the puppet helped children to get closer to winning the game. Five-year-olds protested irrational play regardless of whether their opponent adhered to the constitutive norms of the game or not. Three-year-olds showed a more ambiguous protest pattern. This study thus suggests that even preschoolers understand something about the bindingness of cooperatively structured competition.

Second, and less intuitively, children's ascription of intentionality to an agent is influenced by their normative assessment of her behavior. In particular, recent research has shown that children from age four, much like adults, are subject to the so-called "side-effect effect" (Knobe 2003), interpreting the bringing about of foreseen but unintended side effects as more intentional when they are negative than when they are positive (Leslie, Knobe, and Cohen 2006; Pellizzoni, Siegal, and Surian 2009; Rakoczy et al. 2015). Overall, these studies suggest that from early in development, children's understanding of normativity and other forms of social cognition are intimately related and well integrated (see also Smetana, Jambon et al. 2012, for reciprocal relations between children's moral judgment and theory of mind).

## **Norm Learning Mechanisms**

Besides investigating young children's understanding of different types of norms and interrelations between normativity and theory of mind, researchers have begun looking at mechanisms of norm learning. That is, the young learner needs to solve an epistemological problem: on which basis shall he or she infer that a single observed action is subject to norms (and thus generalizable) as opposed to an idiosyncratic action (and thus not generalizable)? In real life, infants and children observe many actions that are not accompanied by explicit language and instruction (e.g., that "this is the way we do it"), even more so in non-Western cultures (Lancy 1996; Rogoff 2003). We note that there is a rich literature on children's sociocultural learning (e.g., assessing children's imitation of



others' actions) that is beyond the scope of this chapter (see, e.g., Legare and Harris 2016; Legare and Nielsen 2015; Tomasello 2016).

When it comes to learning norms, reliability and competence, for instance, are important social-epistemic cues. Rakoczy, Warneken, and Tomasello (2009) found that four-year-olds selectively learn rule games from reliable models (e.g., who previously labeled objects correctly) over unreliable models and that children formed normative expectations about the way the games were played. Thus, when a third party violated the rules of the game (as demonstrated by the reliable model), children protested and corrected the deviator. Competence might also be expressed in mere age differences. In a different study, three- and four-year-olds watched as an adult and a peer model performed two game-like actions in different ways (Rakoczy et al. 2010). Children at both ages preferred to imitate the action performed by the adult, and, crucially, they also attributed normativity to the adult's action: when a third-party puppet deviated from the demonstrated action (the puppet performed the action the peer had demonstrated), they criticized the puppet, but they did not protest when the puppet performed the adult's action.

But what if children incidentally observe an adult who performs a new action on some artifacts, but does not tell the child that this action is the right way to do things? Schmidt, Rakoczy, and Tomasello (2011) explored this question and found that children at age three attribute normativity and generality to novel game-like acts when observing an adult who intentionally and confidently performed these actions. Importantly, the adult did not explicitly teach children anything or address them. Children nevertheless attributed normativity to the action and later protested against a third-party puppet that performed a deviating action. In a control condition, children inferred significantly less normativity when the adult performed the action as if she invented it on the spot, although even in this context, some children protested against the puppet. It is possible that children have a natural tendency to "promiscuously" impute normativity to others' intentional actions similar to their propensity to attribute purpose to objects and others' actions and minds more generally (Kelemen 1999, 2004). A recent study provides evidence for such promiscuous normativity in young children (Schmidt et al. 2016): three-year-olds incidentally witnessed an unknown adult who, in one experiment, spontaneously took some junk objects out of a trash bag. The person then performed a brief idiosyncratic, arbitrary, and intentional action without obvious purpose (e.g., taking a damaged snail shell and pushing it a bit forward with a piece of wood). In another condition, the adult used pedagogical cues ("Look!") before performing the action. Thus, the evidence spoke against the possibility that this act was subject to any norms. Nonetheless, children even normalized such singular and individual behavior (both in the incidental observation and in the pedagogical context) unless it was marked as an accident (as in a control condition). That is, they protested and intervened against a puppet that performed a slightly different action (reaching a similar goal, but in a different way) with the junk objects. Hence, it seems that young children have a strong tendency to violate Hume's law, that is, to go from "is" to "ought" (Hume 1739/2000) and to construct social rules out of the blue. Although pedagogy did

not make a difference in the studies discussed, it might still be a catalyst for normative learning in other situations—for instance, with respect to the strength of normative learning. An experiment found that young children are more resistant to counter-evidence when they have learned conventional norms pedagogically for their benefit than when they merely incidentally observed an adult performing an action that is subject to conventional norms (Butler et al. 2015).

Promiscuous normativity may be a mechanism important for explaining children's tendency to overimitate, that is, to imitate adult actions that are not necessary to reach a goal. Recent studies suggest that young children's overimitation is at least partly normatively motivated in that they think that even unnecessary actions are supposed to be performed. Kenward (2012), for instance, found that three- and five-year-old children who learned instrumental actions (necessary to achieve a goal) and some unnecessary actions (not necessary to achieve a goal) protested against a third-party puppet that omitted the unnecessary acts. In a further study (Keupp, Behne, and Rakoczy, 2013), three- and five-year-olds criticized a puppet more that omitted irrelevant actions when they had learned the actions in a conventional context (e.g., "This game is called Daxing!") than when they had learned the actions in a means-end context (i.e., the adult emphasized the goal of the action sequence, such as ringing some bells). This suggests that children attributed normativity to these irrelevant actions, presumably because they inferred that they were also part of the conventional activity. Furthermore, recent studies found that children's overimitation is not automatic, but rather flexible and rational: children criticize a third-party puppet less when she does not perform irrelevant actions in a novel context (Keupp et al. 2015), but more when the irrelevant actions cause harm (destruction of an adult's belongings; Keupp et al. 2016).

In sum, these findings suggest that young children's norm learning is far from being a passive process—children actively seek out norms, are highly motivated to identify actions that are valid beyond the here and now, and use social-pragmatic and epistemic cues in rational and selective ways to make the inductive leap that some behavior is subject to norms.

## **Ontology of Norms**

A thorough understanding of normativity not only requires children to follow and enforce norms in rational and context-relative ways, but also to learn that norms are essentially human-made social facts that can be changed or brought into existence under certain conditions (e.g., by collectively aligning our beliefs, desires, and intentions). Thus, children face the developmental task to learn about the social nature of norms. One mechanism by which norms can come into existence is agreement among a local group of people. Schmidt and colleagues (2016b) investigated under which conditions three-year-old children understand arbitrary game rules as established and valid. If

all participants (several puppets and the child) agreed upon a game rule, children enforced this rule on deviators. If, however, there was dissent during the norm-setting process, children failed to see a norm as established for anyone at all, not even for people who had agreed—even a majority of 90 percent would not create a norm. This suggests that even young children understand something of the role of agreement in creating norms, but that their early grasp of the ontology of norms is confined to conditions of unanimity.

Another study looked at spontaneous norm creation in five-year-old peers (Göckeritz, Schmidt, and Tomasello 2014). Five-year-old children worked together on an apparatus in order to achieve a shared goal (getting some rewards). Children co-constructed their own norms for coordination (including assignment of roles) and thereby regulated their interaction. When paired with novice peers, children transmitted their created norms as objective facts using generic normative language (e.g., “One should do it like this!”) instead of renegotiating how to coordinate, suggesting that they reified the co-constructed norms as if they had discovered them (see also Köymen et al. 2014, 2015, for children’s use of generic normative language and tendency to objectify norms).

## Norms in Language Use

Our everyday use of language is governed by norms, too. And language is an especially interesting case regarding the world of causes and the world of reasons, since some types of speech acts (assertions) are used to merely describe the causal world, while others (imperatives) are used to change the causal world (Searle 1969, 1983). Both types of speech acts, however, are assessed by human speakers within the normative world of reasons. How do young children, then, make sense of different types of speech act (i.e., different directions of fit)? Rakoczy and Tomasello (2009) assessed whether three-year-olds understand this structural difference between assertions and imperatives and found that children protested against a commentator who asserted that an actor was performing a certain action (although this was not the case), but that they protested against the actor if she was not doing what the commentator told her to do. In another study, four-year-olds showed an understanding of the normativity of future-directed speech acts (Lohse et al. 2014), such that they recognized that a speaker made a mistake when her prediction (“A will do X”) did not come true, but that an actor made a mistake when she did not follow an imperative with the same content that had been given earlier by a speaker.

## Moral Normativity

Perhaps the most famous kind of normativity is moral normativity. A proper treatment of moral norms would go beyond the scope of this chapter. We therefore confine

ourselves to briefly discussing current work on children's understanding of the binding force and generality of moral norms. But before doing so, we should note that over the last couple of years, researchers have accumulated evidence that even infants have prosocial preferences (e.g., for helping over hindering agents; see Hamlin 2013 for a review), descriptive expectations about equality (third-party fairness) in resource allocation (Geraci and Surian 2011; Schmidt and Sommerville 2011; Sloane, Baillargeon, and Premack 2012), and empathic tendencies toward others in distress (Svetlova, Nichols, and Brownell 2010; Vaish, Carpenter, and Tomasello 2009)—a suite of cognitive and motivational tendencies that may plausibly ground morality proper (Jensen, Vaish, and Schmidt 2014; Roughley 2016). It is not clear yet, however, how exactly these early capacities relate to young children's developing understanding of moral norms (in particular, regarding the features' normative force and generality). One finding worth noting is that infants' early descriptive expectations about third-party fairness are related to their own prosocial sharing behavior (Schmidt and Sommerville 2011; Sommerville et al. 2013; see also Dahl, Schuck, and Campos 2013): that is, infants who engage in costly sharing (giving away a toy they like) are more concerned about third-party fairness than infants who engage in non-costly sharing (giving away a toy they do not prefer). This interrelation opens the possibility—to be investigated further—that the development of normative expectations (beyond purely descriptive ones) about morally relevant actions is fostered by other-regard and sympathy.

Regarding a more mature understanding of moral normativity, researchers have found that young children at age three protest violations of moral norms, for instance, when a third party harms someone by destroying or throwing away her property (Rossano, Rakoczy, and Tomasello 2011; Schmidt, Rakoczy, and Tomasello 2012; Vaish, Missana, and Tomasello 2011). And with regard to distributive justice, preschoolers start to enforce the norm of equality (Rakoczy, Kaufmann, and Lohse, submitted), and at early school age, children begin to understand that sometimes inequality is normatively justified, such as when one individual is needier or more meritorious than another (Schmidt et al. 2016c). Moreover, young children's understanding of moral normativity goes beyond the notion of obligation and extends to issues of rights and entitlements. For instance, Schmidt, Rakoczy, and Tomasello (2013) found that three-year-olds defend an actor's entitlement (e.g., to play with a toy) against someone else who threatens the actor's entitlement (i.e., children actively intervene and show some early form of moral courage; Baumert, Halmburger, and Schmitt 2013).

In sum, the research reported here suggests that even young children have some basic grasp of a variety of normative phenomena, apply norms in context-specific ways, and, with age, become more flexible in their understanding of norms, including their social ontology. Young children's selective and rational third-party enforcement of norms provides evidence that they understand the main features of normativity (standards of correctness, normative force, generality, context relativity) and also care about normativity.

## CONCLUSION AND OUTLOOK

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Humans share with many other species, notably primates, basic capacities for representing the natural and social world around them in terms of enduring objects governed by natural regularities. But human cognition seems unique in being “fraught with ought” (Sellars 1963): it is concerned not only with what is the case, tends to happen, or occurs regularly, but with normative questions of what is appropriate or correct and what ought to be done. The developmental research reviewed in this chapter suggests that basic forms of normative cognition emerge early in human ontogeny: from as early as two to three years of age, children understand and enforce simple social norms governing conventional activities such as games and language use. They learn such norms swiftly, sometimes overeagerly, from observing others, and their normative assumptions themselves play important roles in imitation and other forms of social learning. And generally, normative cognition and other forms of social cognition seem to be intimately related from early in development.

From this developmental research, we have thus learned about our early developing norm psychology and its relation to other cognitive capacities. But fundamental questions remain open for future inquiry: How does this norm psychology emerge ontogenetically? What are its phylogenetic origins, and what its cognitive foundations? One promising avenue, in our view, will be to investigate different forms of norm psychology in relation to different forms of intentionality. Arguably, every form of individual intentionality as such already brings with it basic forms of normativity mentioned at the outset of this chapter: intentional beings are subject to correctness conditions of belief, for example, and to success conditions of action (e.g., Burge 2009; Hurley 2003). But the more complex forms of norm psychology under review in this chapter—norm psychology in which the agent herself is not only subject to norms, but has some grasp of them and some stake in enforcing them—quite plausibly are the upshot of more complex and more social forms of intentionality, in particular, shared or collective intentionality (Rakoczy and Tomasello 2007; Schmidt and Rakoczy 2016; Schmidt and Tomasello 2012; Tomasello 2014; Tomasello and Rakoczy 2003). Intuitively, the most basic forms of shared or collective intentionality involve two or more agents acting in ways that transcend purely individual intentions and actions, intending “that we . . .” (e.g., dance tango, take a walk together, lift a table together, play ball together; Bratman 1992; Gilbert 1989; Searle 1990; Tuomela and Miller 1988). Even the most basic and mundane forms of shared intentionality such as taking a walk together establish new and more social forms of normativity: individual agents are now not only subject to normative assessment in terms of success or failure vis-à-vis their own goals, but subjects of (and subject to) normative expectations toward each other: when we have committed ourselves to taking a walk together, each of us is now committed to fulfilling her part in this project and subject to critique in case of deviation (e.g., “Hey, you can’t just go shopping without any

explanation—we are taking a walk together!”). More complex forms of shared intentionality involve not only coordination of shared activities, but the conventional creation of new, so-called “institutional” facts (e.g., Searle 1995). Shared intentional practices of playing games or speaking languages, for example, create such new facts as “this is check-mate,” “this figure is a king,” “‘dog’ means dog”—observer-dependent facts that are not out there as facts about the natural world, but only hold because we as participants of the practice take them to hold. And such facts have inherent normative implications: when something is a king in chess, it licenses certain movements; when some sound pattern refers to dogs in a given language, it licenses and requires certain usage.

From an ontogenetic point of view, basic forms of shared intentionality seem to develop from the second year of life: from 12 to 18 months, children begin to engage in simple cooperative activities, both instrumental and playful, with others involving preverbal indicators of true shared intentionality such as coordination, communication, division of labor, and role reversal. More complex forms of shared intentionality with conventional fact-creation emerge from the end of the second year, in particular, in the form of joint pretense and other games. From this time on, children also show the first signs of actively tracking and enforcing the socially constituted norms of such practices (Rakoczy 2008a; Rakoczy, Warneken, and Tomasello 2008; Schmidt, Rakoczy, and Tomasello 2011).

From a comparative point of view, while social coordination is, of course, widespread in the animal kingdom, to date there is no clear and convincing evidence that nonhuman animals, even great apes, engage in anything like proper cooperation involving joint goals and coordinated roles (Tomasello 2014; Tomasello et al. 2012). Similarly, although chimpanzee groups do have something like behavioral traditions and culture *sensu lato* (Boesch 2012), to date there is no evidence that chimpanzees understand certain behaviors as enforceable generic types (Rudolf von Rohr, Burkart, and van Schaik 2011; Schmidt and Rakoczy 2016), and it is possible that these behavioral regularities are based on individual learning strategies or genetic variability (Langergraber et al. 2011; Tennie, Call, and Tomasello and 2009). In general, more complex forms of shared intentionality involving shared conventional practices and fact creation seem quite clearly to be a unique human capacity (Rudolf von Rohr et al. 2011; Schmidt and Rakoczy 2016).

So, one picture that is worth being explored more systematically in future research is that while humans and other species, notably primates, share basic forms of individual intentionality (and the corresponding natural norms of correctness and success), uniquely human forms of norm psychology and uniquely human forms of shared intentionality develop in close tandem in early ontogeny, the former building on and growing out of the latter.

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