Moral Cognition, Emotions, and Neuroscience: An Integrative Developmental View

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Longstanding debates about whether morality is best defined in terms of emotions or judgments have been recently rekindled. In this essay, we review recent approaches from social psychology and moral neuroscience that have emphasized emotions and intuitions as central to morality. We assert that the results of developmental science research on judgments and reasoning informs these approaches and provides an integrative view, drawing on judgments and emotions to explain the acquisition of morality in ontogenesis. We discuss developmental research that supports a theory of morality in which judgments are central and children use emotions to interpret morally relevant situations. Drawing on extensive empirical findings, we conclude that defining morality as the principled treatment of others based on fairness, justice, and others’ welfare remains the fundamental basis of morality in humans.

Keywords: Moral emotion, moral judgement, moral neuroscience

Introduction

Morality is central to human social interactions. Moral codes, norms, values, and beliefs provide the framework for how individuals in diverse cultures make decisions about how to treat one another and how to co-exist in non-aggressive and communal ways. Theorizing about the nature of morality began more than 2,000 years ago with Aristotle; empirical, psychological research on morality conducted within the past century has provided a detailed and complex basis for understanding individuals' beliefs about the “right” course of action in different social contexts and situations. Following distinctions between moral philosophers who emphasized the importance of rationality and judgment (Kant, 1785/1959) and those who have emphasized emotions (Hume, 1739/1969), an ongoing issue that has seen a resurgence of interest and attention—both within psychology and beyond—is whether morality is better explained by focusing primarily on judgments and reasoning or on emotions and affect. This debate has rekindled questions regarding the definition of and criteria for morality and has implications for the new field of moral neuroscience, which seeks to establish a biological basis for moral judgments and emotions.

Unlike other areas of inquiry, developmental psychological research focuses on how morality, including intersections among moral beliefs, emotions, and actions, emerges over the life course, its origins, nature of change, and sources of social influ-

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ence. Recently, developmental science has entered the conversation about judgment and emotions. In this essay, we highlight key developmental findings that support an integrative view and point to the ways in which developmental research provides a unique vantage point on this issue.

We review recent approaches from social psychology and neuroscience that have focused on morality but that have not yet included developmental evidence due to sample limitations (social psychology research typically focuses on adults, not children) and methodological constraints (neuroscience measurements are not yet well suited for children). First, we describe several lines of theorizing and research that have emphasized emotions and intuitions as central to morality. Then we present developmental research that supports a theory of morality in which judgments are central but emotions provide key information used by children to read and interpret morally relevant social situations.

Social Intuitions, Affect, and Judgments

One of the major aims of social psychology over the past decade has been to re-focus research on implicit knowledge, often referred to as nonconscious social cognition (Bargh, 2006). This line of research has recently emerged in theorizing about the cognitive and affective components of morality. As one example, Haidt (2001, 2004, 2007) has proposed that responses to moral events are primarily affective, intuitive, and automated and that moral reasoning, when it occurs, is usually post-hoc rationalization for an initial, intuitive position. This view, referred to as a social intuitionist model, holds that moral judgments rarely result from a deliberative process and that in most situations, individuals make rapid, holistic, and intuitive moral decisions that are justified post-hoc. According to this account, individuals reason only when a fuller examination of different alternatives is needed. This theory is based on data with adults, but as described below, developmental data may provide a different picture.

Haidt (2007) argues for an implicit theory of moral judgments, grounding his position in the primacy of moral affective reactions as documented in recent neuroscientific evidence (for instance, Damasio's 2003 work on brain-damaged patients), evolutionary theory, and social-psychological research. The evolutionary argument, elaborated recently, is that the mind has evolved to contain two types of processing systems (Bargh & Chartrand, 1999). The (evolutionarily) older, automatic, and very fast processing system is emotional and allowed our human ancestors to respond quickly to threats (for instance, from predators), thus ensuring survival. Emotions such as sympathy, anger, and affection are all part of our emotion processing. The cognitive system is seen as more recent, in evolutionary terms, and an overlay to affective processing. Haidt (2001) argues that because of this, it is unlikely that this newer system has evolved to do our moral 'heavy lifting.'

Haidt's (2004) theoretical proposition is that deliberative cognitive processes do have a limited role in morality, but that their role is restricted to overriding more immediate
intuitive responses. Individuals reason “not so much to figure things out for themselves, in private, but to influence others” (Haidt, 2004, p. 284). Thus, in this account, reasoning as an extended, iterative process is used primarily to change one’s mind, for instance, to reframe a situation and consider new alternatives or to come to a new conclusion after hearing others’ arguments, but not to arrive at initial conclusions or decisions. In Haidt’s model, intuitions cause judgments, which lead to reasoning. While Haidt’s account draws on several lines of research, the research directly testing his notions is limited. Haidt’s evidence for the primacy of quick, emotionally laden moral responses comes primarily from studies of disgust (Haidt, Rozin, McCauley, & Imada, 1997), which may encompass more than morality (and may not, itself, constitute a moral issue) and from moral neuroscience research, but not from developmental evidence.

*Moral neuroscience research*

Recent research in the neurosciences has examined moral judgments and moral emotions. Whereas developmental psychologists have focused on developing criteria to define phenomena like morality, neuroscientists have focused more on overcoming the methodological difficulties of using functional magnetic imaging (fMRI). By necessity, they have avoided the complex task of explicitly defining morality (Carpendale, Sokol, & Müller, in Press; Killen & Smetana, 2008; Turiel, 2007). Instead, neuroscientists have used tasks involving a simple binary choice repeated over many trials (often 24 or more) to ensure that participants are thinking about the stimulus material when brain scans are being conducted; otherwise, the phenomenon of interest is not recorded. Responses to the task (averaged over many trials) are compared to baseline assessments to document the parts of the brain that are activated. As multiple versions of the task are administered, the measures are typically simple “yes/no” (ok or not okay) responses. With the current methodology, reasoning processes are not easily recorded; in fact, the current measures are biased towards binary responses, given that quick reactions are easier to record than complex judgments involving deliberation. Furthermore, because of the methodological constraints of using fMRI with children, neuroscientists also have primarily studied adults, even when their questions bear on developmental issues. Nonetheless, moral neuroscience research is exciting, novel, and has the potential to provide a major breakthrough in our understanding of the biological basis of morality.

Yet, as Carpendale et al. (2007) have noted, when neuroscience research has defined morality, it has typically utilized rather broad and sometimes simple definitions of morality as compliance, rule-following behavior, or behavior that violates the rules of society (e.g., Casebeer, 2003; Casebeer & Churchland, 2003; Moll et al., 2005; Raine & Yang, 2006). In turn, some lines of moral neuroscience research highlight the role of moral emotions such as shame, guilt, and remorse as the responses or ‘gut reactions’ (Greene & Haidt, 2002) that lead to desistance from rule violations. Other lines of moral neuroscience research, however, have focused specifically on moral judgment, using dilemmas that reflect developmental approaches such as dis-
tinctions between morality and conventions (Blair, 1995), decisions about exclusion (Eisenberger, Lieberman, & Williams, 2003), and decisions about moral character in situations involving trust (Delgado, Frank, & Phelps, 2005).

One highly cited line of research that has been used to critique the view of morality as reasoning is based on studies of adult responses to the “trolley car” dilemma. In this dilemma, drawn from moral philosophy, individuals are asked to make choices about the value of human life in a sequence of forced-choice questions that pit the agent's intentions and the consequences of his or her actions (Greene, Somerville, Nystrom, Darley, & Cohen, 2001; Hauser, 2006). While undergoing brain scanning using fMRI, individuals are presented with multiple decisions that involve variations on choosing between pulling a lever on a trolley car track which will kill one person but avoid killing five persons, or pushing a stranger off a footbridge which will kill one person but avoid killing five persons. The decisions vary in terms of how directly the agent must act (pulling a lever which results in death, or actually pushing a human being to his death). Due to the nature of the findings, Greene et al. (2001) framed these studies as challenging the Kohlbergian and Piagetian accounts of morality as based on reason and rationality.

Greene et al.'s (2001) highly cited finding is that most individuals choose to kill one person when it entails pulling a switch, but refrain when it requires pushing an individual off a bridge. Different brain regions (portions of the medial frontal gyrus, posterior cingular gyrus, and angular gyrus/bilateral) associated with emotions are activated when these different decisions are made. The findings are far from showing localization for either decision, however. In fact, most of the neural imaging studies show that many areas of the brain are activated when moral decisions are made. Nevertheless, these results have been interpreted as demonstrating a biological basis for differentiating between “moral-impersonal acts,” or rationality (pulling a switch) and “moral-personal acts” or affect (pushing an individual off the bridge).

As has been elaborated in greater detail elsewhere (Killen & Smetana, 2008; Miller, 2008 Turiel, 2007), there are problems with this interpretation; it is not clear that these two choices are distinct forms of moral decisions based differentially on affect. Clearly, they are both horrific decisions that involve causing harm to others, and it is highly likely that both are viewed as unacceptable (see Turiel, 2007). Several studies have suggested that the findings may depend more on contextual features of how harm is inflicted than on the personal/impersonal moral distinction, as is claimed (Waldmann & Dieterich, 2007). From our perspective, making moral decisions entails the difficult task of weighing the cost to the self against an obligation to do the right thing regarding the treatment of others. Thus, researchers need to know how individuals evaluate the trolley car problem and how they justify their choices. The trolley car task does not appear to be an appropriate test of “moral rationality” versus “moral emotions” (or moral impersonal vs. moral personal) distinctions, as it often has been viewed. One way to move the field forward would be to build on the extensive developmental evidence for morality in children by working with neuroscientists to create developmentally-appropriate moral reasoning tasks for fMRI measurements.
A central contribution of moral developmental research has been to document the importance of examining reasons, intentions, and motives in childhood. The research has shown that the same moral judgment can be justified for very different reasons (Colby & Kohlberg, 1987; Eisenberg & Fabes, 2006; Turiel, 2002, 2006) and that reasoning changes with age due to development. Moreover, developmental researchers have shown that most moral emotions, such as shame and empathy, involve cognition (Arsenio & Lemerise, 2004). Few emotional reactions are purely instinctual; most involve reflection and analysis.

Because children do not share the same interpretation of the world as adults, and because the words children use may not reflect the same meaning as when used by adults, developmental psychologists have established methods to assess children's understanding of complex constructs. In contrast, few moral neuroscience experiments include assessments of reasons or motives for acts, which we believe would be useful. Although the original trolley-car experiments did not assess participants' reasons for their choices, Greene and Haidt (2002) nevertheless interpreted their findings as support for the argument that moral intuitions are central. The absence of reasoning data, however, weakens their claims that reasoning is post-hoc and epiphenomenal. Furthermore, when justifications for responses have been obtained, these data have provided some evidence for the importance of reasoning and limited evidence for the intuitionist position (Cushman, Young, & Hauser, 2006). Cushman et al. (2006) had participants evaluate different pairs of trolley-car scenarios that varied additional information presented about different moral principles. They obtained participants' justifications to determine whether they were consistent with the principles presented (suggesting that individuals used the principles in making their judgments). The results suggested that participants understood and were able to articulate the principle that harm caused by action is worse than harm caused by an act of omission, but they did not appear to understand the notion that harm intended as a means to a goal is morally worse than equivalent harm that occurs as a side-effect of achieving the goal. The authors interpreted the first set of findings as support for the use of reasoning in making moral decisions and the second set of findings as support for the intuitionist position when it comes to understanding intentionality.

**Developmental Approaches: Social Domain Theory**

What is the developmental evidence for morality, and how is it measured? In our approach, referred to as social domain theory, we have examined morality as a distinct domain of social knowledge (Killen, McGlothlin, & Lee-Kim, 2002; Nucci, 2001; Smetana, 1995, 2006; Turiel, 1983, 2002, 2006) and have focused on the development of children's understanding of moral concepts. Central to social domain theory is the recognition that individuals have varied social interactions and experiences. Thus, children's active attempts to interpret and make sense of their social experiences are proposed to lead to the construction of different domains of social knowledge.
Research has shown that children’s prescriptive understanding of social relationships and the consequences of their actions for others’ justice, welfare, and rights (e.g., morality) differs from their descriptive knowledge of social systems, social organization, and social conventions (Killen et al., 2002; Nucci, 2001; Smetana, 2006; Turiel, 1983, 2006). In turn, social conventions have been defined as the consensually determined norms, customs, and traditions that regulate social interactions in different social systems and contexts.

The distinction between morality and other types of social knowledge is fundamental—and one demonstrated in over 100 empirical studies -- because it indicates that prescriptive norms about justice and others’ welfare are viewed as independent from cultural and societal norms about group functioning (Killen, Margie, & Sinno, 2006). The research has shown that children and adolescents in rural and urban contexts, in different cultures and socioeconomic statuses, and from religious and secular backgrounds share a common view that fairness and others’ welfare are generalizable and not a matter of consensus; rather, moral principles regarding rights, welfare, and fairness are all necessary to uphold (Helwig, 2006; Wainryb, 2006). The bottom line is that not all social rules are the same. This is a well-established finding from the developmental literature that is often missed in moral neuroscience research, where social norms and rules are often defined in terms of a single, undifferentiated category. Moreover, developmental science research has shown that judgments are differentiated from emotions, as described below.

The empirical psychological research on morality in childhood provides a window into the cognitive and affective capacities of human morality and its emergence in development. Our empirical, developmental approach to morality differs from the phylogenetic account, as we have shown that in early childhood, judgments and responses to moral problems are not automatic, impulsive, and solely affectively based. In fact, research using different methods demonstrates children’s active attempts to interpret and construct their social worlds.

Indeed, extensive observational research with toddlers and preschool children shows that young children tease, confront, challenge, have conflicts over, respond to, and sometimes subvert their siblings, peers, and parents about issues of fairness, welfare, and rights (see Dunn, 2006, and Smetana, 1995, 1997 for reviews; see also Killen, 1991; Killen & Turiel, 1991; Lemerise & Arsenio, 2000). In the Appendix, we reproduce an exchange, described in Killen and Cords (2002, p. 209-210), among a group of three 4-year old children, who were observed (and videotaped) in a study where groups of young children played at a table with toys for 15 minutes without an adult present.

This detailed example reveals the complexities of early social and moral capacities, abilities that are often underestimated in young children. As the example demonstrates, young children’s exchanges are rich with strategies and deliberation. The children maintained the flow of interaction with collaborative suggestions (“Let’s trade”), moral justifications (“That’s not fair because...”), third-party intervention (“Hey, you can both have my spoons”), compromises (children got a different toy than the one they originally
asked for), conventionalized rituals (singing), ownership claims (“You had it already”), threats (“I won’t invite you to my birthday party.”), and requests for bargaining (“I’ll give you this one and I’ll take this one”). While some strategies promoted children’s own self-interests (“I want this one”), others were aimed at peaceably resolving conflicts in the group (“If you give me the green and then I’ll give her the red one and then we’ll all have one.”). In general, the most common type of communicative exchange observed in this sample of over 2,000 conversations was collaborations, or exchanges in which one child offers a suggestion or negotiates with other children. Thus, from early childhood on, reasoning, negotiation, and rationality (as well as some self-interest!) are clearly central components of children’s moral life – both in their social interactions (what Haidt, 2004, called reasoned persuasion), but also, we believe, in their private deliberations.

Research on young children’s emergent moral judgments in both hypothetical and real-life situations (see Damon, 1977; Dunn & Munn, 1987; Killen & Smetana, 1999; Nucci & Turiel, 1978; Smetana, 1981, 1985; Smetana & Braeges, 1990; Smetana, Schlagman, & Adams, 1993; Smetana et al., 1999; Turiel, 1983, 1998) also indicates that by 3 years of age, and more consistently by age 4, children distinguish moral rules and events from other types of social rules and events in their judgments. While young children’s judgments are rudimentary, the concepts (assessed using pictorial stimuli and in tasks that minimize verbal production) are quite sophisticated and involve reflection, not automaticity. The early emergence of reflective morality, observed extensively among North American children as well as children in other cultures (including very young children in Colombia and Hong Kong; see Ardila-Rey & Killen, 2001; Yau & Smetana, 2003) challenges the phylogenetic account of early human morality as consisting entirely of affective responses.

A comparison of ontogenetic and phylogenetic emergence is complicated, however, because the phylogenetic account of morality involves much speculation; obviously, direct, empirical evidence of early hominoid morality is absent. In contrast, for biological evidence of morality in primates, we have drawn from the non-human primate research (Aureli, Cords, & van Schaik, 2002; Cords, 1997; de Waal, 1996, 2001; Verbeek, 2006, Verbeek & de Waal, 1997), which has provided extensive findings regarding how nonhuman primates respond to others in distress, resolve conflicts using non-aggressive means, and engage in negotiation and compromise in the allocation and distribution of resources (de Waal, 2001).

Social-cognitive and affective moral orientations in childhood

Social-cognitive judgments

Young children engage in conflicts over the distribution of toys, inflicting physical and psychological harm on others, the use of space and property, and issues relating to rights, such as play areas, ownership, and expression. Young children not only
view moral transgressions as wrong, but they evaluate moral events on the basis of formal criteria drawn from philosophical writing about morality (Gewirth, 1978; Kant, 1959; Rawls, 1971) such as generalizability, impersonality, obligatoriness, and independence from authority jurisdiction and punishment mandates. For example, when making judgments about physical and psychological harm to others and the distribution of resources, most children judge these events to be wrong, wrong even if there is no rule about it or if the teacher did not see it (authority jurisdiction), wrong at home and at school (or another country; generalizability), and wrong even if the rules say it is permissible. Children also justify their moral evaluations with reasons reflecting the intrinsic consequences of acts for others (“It’ll hurt him, and you shouldn’t make people sad”). They also distinguish both moral and social-conventional rules, events, and transgressions from personal issues. Personal issues have been defined as pertaining to privacy, control over one’s body, and choices (like choice of friends, activities, and leisure activities) that are seen as up to the individual and beyond the bounds of moral concern or conventional regulation (Nucci, 2001; Killen & Smetana, 1999; Smetana, 1995). The content and breadth of the personal domain varies culturally, but all children are thought to distinguish personal from moral and conventional issues, because they contribute to the development of agency, individuality, and effectance.

**Coordinations and overlap**

Early research from the social domain perspective provided compelling evidence that children and adolescents distinguish morality from other social concepts when reasoning about prototypical social events. However, the research also has demonstrated that not all events or situations are prototypic, or “cleanly” categorized as moral or conventional (Smetana, 1983; Turiel, 1983; Turiel, Killen, & Helwig, 1987). Many events or situations are multifaceted and entail overlapping concerns with morality, social conventions, prudence, or personal issues; thus, complex issues are those in which individuals use more than one form of reasoning to make a judgment.

Indeed, we have asserted that explanations of development must entail analyses of how individuals coordinate different moral, conventional, personal, and pragmatic issues in their thinking (Smetana & Turiel, 2003, Turiel, 1983, 1998). Smetana and Turiel (2003) concluded that one of “the distinctive features of … social development may pertain to how [children and] adolescents weigh and coordinate competing moral and non-moral concerns in different types of social situations” (p. 256). Thus, more recent research has examined how different social judgments overlap, conflict, and are coordinated in individuals’ reasoning about multifaceted or controversial events. Furthermore, an important contribution of this research is that it has focused on identifying and analyzing the different moral and social issues involved in making judgments. We believe that these types of task analyses are needed in the neuroscience and social psychological research as well, because without them, it is not clear what is being
measured and how to categorize or understand the complex interweaving of different judgments (and affect).

Affect, emotions, and judgments

As research indicates, moral judgments have been examined in different contexts and cultures (Turiel, 2002, 2006). Importantly, in our view, emotions are an important element in moral judgments and can provide the impetus for children to respond to transgressions and read cues from others concerning the consequences of their actions for others. Arsenio and Lemerise (2004; Arsenio, Gold, & Adams, 2006; Lemerise & Arsenio, 2000) have provided a rigorous program of research on the role of emotions in moral development. Their work provides empirical support for the assertion that children's affective experiences influence their understanding, encoding, and memory for moral transgressions (see Arsenio et al., 2006; Arsenio & Lemerise, 2004; Arsenio & Lover, 1995; Lemerise & Arsenio, 2000).

Arsenio and his colleagues (Arsenio et al., 2006) have demonstrated that different emotions are associated with different types of transgressions. During middle childhood, moral events are evaluated as affectively negative, while other types of norm violations, such as conventional transgressions, are viewed as affectively neutral. These affect ratings are strongly associated with moral judgments (Arsenio & Ford, 1985). Furthermore, children's expectancies of the emotional consequences of moral and social judgments are highly differentiated and increase in complexity with age. Children use information about situational affective consequences (e.g., whether actors or victims are happy, sad, angry, fearful, or neutral) to infer whether events are moral, conventional, or personal (Arsenio, 1988).

These findings led Arsenio to propose that the different tendency of moral and conventional events to elicit emotional arousal may promote differential encoding of these events; highly arousing moral events may be considered “immoral” in part because they are more affectively salient than less arousing events. Thus, these studies demonstrate that affective reactions are a salient feature of children's experiences of transgressions and that they influence their understanding, differentiation, and memory for moral and other types of social events.

From early childhood on, children consistently attribute negative emotions to the victims of transgressions. However, Arsenio (Arsenio & Kramer, 1992), along with others (Keller, Lourenco, Malti, & Saalbach, 2003; Nunner-Winkler & Sodian, 1988; Smetana et al., 1999), has found that young children often have trouble coordinating emotions and cognitions and, in fact, appear to be “happy victimizers” when they attribute positive emotions (like happiness) to transgressors. Beginning at about 6 years of age, children also attribute conflicting emotions (happiness as a result of their gains as well as negative emotions due to their understanding of their victim’s plight) to victimizers. As a consequence of age and positive peer relationships, normative develop-
ment entails a shift from being a “happy victimizer” (at least some of the time, and more for transgressions involving unfair distribution than physical harm) to focusing on the negative consequences for the victim (Arsenio & Lover, 1995). This account provides an explanation for the apparent inconsistency between young children’s relatively sophisticated moral evaluations (at least while focusing on victims) and the frequency of moral misbehaviors and transgressions in early childhood (because children also focus on the gains achieved through victimization). According to Arsenio and Lover (1995), stable individual differences in children’s peer relationships combine with developmental changes to influence children’s moral understanding. This suggests that emotions are central in making moral judgments and developing generalizable moral principles but that they do not define moral development.

Conclusions

In sum, we have proposed that moral development fundamentally pertains to the development of judgments, beliefs, and values about how to treat others and the right course of action in a given situation. Emotions are highly salient, as they provide important information that individuals use in formulating their moral viewpoint, but affective responses do not define morality. Rather, affective responses are used (along with other sources of information) in making moral judgments about the just treatment of others. Throughout childhood, moral judgment and affect are intertwined. The processes are not automatic, nor are they instinctual. Yet, through a great deal of experience and across thousands of social exchanges, adults’ responses to prototypic and straightforward acts often take on the character of habitual or automatic responses. In our view, it is highly problematic to make inferences about automaticity on the basis of adult social-psychological research and speculation about evolutionary processes without considering ontogenetic development.

The empirical evidence from developmental research, presented in only cursory form here, indicates that young children are active, volitional beings who seek to make sense of their moral and social worlds. Moral judgments are emergent during the preschool years and become more comprehensive, broadly applicable—but also more context-sensitive—during childhood and adolescence. Moreover, in normative development, social-cognitive biases such as the “happy victimizer” effect decline, leading to increased coordination of moral judgments with both emotions and behavior. Other social-cognitive biases, such as the well-studied hostile attribution bias (Dodge & Crick, 1990) may persist and account for some of the individual differences in moral evaluations found in childhood and adulthood, particularly among aggressive individuals.

Consider, for a moment, if you were asked to evaluate whether it would be wrong to kill an innocent child. For most individuals, this question could be answered in milliseconds and with a resounding “yes.” Yet, years of social experience, reflection, and deliberation led to this point, which may appear automatic by adulthood (see Wilson,
1993, for a similar argument). Most moral issues are considerably more complex and less straightforward. Responses regarding complex questions and dilemmas are not automatic. They involve deliberation, and they often entail weighing different moral, conventional, pragmatic, personal, or prudential components. The public deliberations by lawyers and Supreme Court justices regarding the most complex societal issues are extensive, elaborate, and lengthy. In contrast to Haidt (2004), who asserts that moral judgment does not occur in private, we believe that individuals’ private deliberations when reading the newspaper, deciding how to vote on an issue, allocating resources, and figuring out what course of action to take in a conflict with a spouse, work partner, or employee all involve reflection, even if at varying lengths and degrees of salience.

Developmental science provides a window into how humans acquire morality (and what might lead it astray). Social psychological research provides an understanding of where development leads, and neuroscience evidence can reveal the biological basis of morality, which is central to a developmental account of morality (Killen & de Waal, 2000). We look forward to future integrative lines of research that contribute to the complex phenomenon of morality.

References


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Appendix (from Killen & Cords, 2002)

Ruth: (Holding up two Fisher-Price people): Hey, I want the green person. How about if we trade? Here, you can have this one (gives a blue person to Michael). And I can have the green one. Okay? (reaches for the green person that Michael is holding).
Michael: No! We already did trade. I want this one (holds on to the green one). I want it now and you had it already.
Lily: Hey, you can both have my spoons, if you want? (shows her spoons to Michael and Ruth).
Ruth: No, I want the green person.
Michael: I’m not trading any of mine (hovers over his toys).
Lily: (sings) I’m not trading any of mine.
Ruth: (sings) I’m not trading any of mine.
Lily: Well, that’s not fair because I don’t have any people (pouts).
Michael: (to Ruth). Give her one of them.
Ruth: But you have three and she has none and I have one. So that’s not fair.
Lily: Yeah, because I have none.
Ruth: (to Michael). You know what? If you give me the green and then I’ll give her the red one and then we’ll all have one.
Michael: Well, if you don’t give me the red one then I won’t invite you to my birthday party.
Lily: But I don’t have any people.
Ruth: Okay, I’ll give you this one (to Lily) and I’ll take this one from Michael and then we’ll all have one, okay?
Michael: (Gives orange person to Ruth). Okay, but can we trade again tomorrow?
Ruth: (sings) Birthday party! (takes the orange person from Michael and gives the red person to Lily).
Lily: (sings) Birthday party!
Michael: (sings) Birthday party!
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