

Developing Conceptions of Responsive Intentional Agents

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ABSTRACT

We argue that folk psychology and folk morality both develop from the same core conception of persons, namely a concept of a responsive intentional agent. Key features of this conception are evident in infancy and develop universally in the preschool years across cultures and languages. Even these early understandings develop, shaped and specified via processes of cognitive construction intertwined with cultural constructs of persons provided within interactive culturally constituted, communicative experiences of childhood. The result is culturally variable endpoints of social cognitive development, that is, culturally variable folk psychologies and folk moralities. We underwrite this argument with data from studies of theory of mind understandings, moral judgments, person description and explanation, and autobiographical memory, research that spans from infancy to adulthood and includes a variety of cultural communities.

KEYWORDS

Social cognition, theory of mind, moral judgment, development, culture

Folk psychology and folk morality may or may not prove to be two very different domains of social cognition. But we believe that both develop from the same core conceptions of persons evident early in development. In particular, central to folk psychology and to folk morality is the concept of a *responsive intentional agent*, and core features of this concept are apparent in infancy. From this beginning, however, social cognitive understandings, whether they be considered folk psychology or folk morality, can be elaborated differently in the course of development, and relatedly are elaborated differently in different societies. Therefore, we emphasize

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that core concepts (especially, responsive agency) develop, informed by cultural communications and elaborations.

For convenience, our discussion focuses initially on social cognitive understandings that have been addressed under the heading of theory of mind. However, we advocate a broad conception of “theory of mind” encompassing conceptions not only of individual mental states such as beliefs and desires, but also conceptions of social influences on action and thought such as, specifically, obligations and permissions (Wellman & Miller submitted). That is, contemporary discussions of theory of mind, with their emphasis on the mental states of individual agents, tend to portray persons as autonomous agents – intentional actors whose actions are determined by individual choices, preferences and beliefs. This is important, but only part of the story because persons are, equally, responsive agents – intentional actors whose actions are influenced by social norms, roles, values, and belief systems. A notion of responsive intentional agency helps capture this more balanced everyday conception and moreover is apparent in the person concepts of children.

Terminologically, we will often use the phrase folk psychology to refer to our topic, because it helps emphasize the influence of social-cultural, “folk” construals in the developmental unfolding of these social cognitive conceptions. In this use we are treating folk psychology as an umbrella concept that encompasses not only a broadened conception of “theory of mind” but also moral reasoning as well as other types of folk psychological knowledge.

Many of our claims and conclusions are based on considerable empirical data. We will not present any of this data in detail, but the nature and overall pattern of findings shape our key proposals. We begin with a list of what we take to be central empirical findings. In what follows we exemplify these findings briefly in the process of using them to assemble our larger argument.

Key Empirical Findings

- Normal humans construe themselves and others as responsive intentional agents – persons whose actions and experiences depend on their goals, beliefs, and desires shaped by and responsive to the situations (the physical and especially social situations) in which they find themselves.

- These construals are evident in (perhaps especially evident in) the conceptions of 3-, 4- and 5-year-old children.
- Indeed initial, relevant insights are achieved in infancy.
- Some of these early-developing understandings are widespread across societies and languages, thus arguably universal.
- These early understandings are both *early achieved* but also *dynamic*. They are dynamic in the sense that they vary over development, initial understandings evolve on the basis of experience and received information. As a result, folk psychological understandings are also dynamic in the sense of being different in timing and (eventually) in character across cultures.
- Thus, adult folk psychologies (and related moralities) can, and do, differ substantially across cultural communities.

Everyday Folk Psychology

The claim behind the phrase “theory of mind” is that our everyday folk psychology privileges an understanding of ourselves and others in terms of our internal mental states – the beliefs, desires, emotions, goals, and knowledge of intentional actors. In one influential shorthand, theory of mind reasoning centers around an understanding of Beliefs-Desires-Actions (Davidson 1980, Stich 1983, Wellman 1990) and goes something like this: Because an actor has certain beliefs and desires, embedded in certain situations, he or she engages in certain intentional actions. Or, people engage in *actions* they *think* will get them what they *want* in their current circumstances. Take Romeo and Juliet. Because Romeo and Juliet want to be together, but believe their families will violently disapprove, they act to see each other in secret.

Beyond beliefs, desires and actions, theory of mind reasoning includes other, related constructs such as actors’ perceptions, emotions, urges, and decisions. So a bit more completely: Because Romeo *loves* Juliet, he *wants* to be with her. Because he *knows* his family’s objections, he *decides* to *act* in secret. When he is successful and can be with Juliet he has certain *emotions* (e.g., joy). When unsuccessful and they are apart he has others (e.g., misery). It is worth reiterating here our initial contention (see also Wellman & Miller submitted) that everyday understanding even of mental states and intentional actions encompasses the appreciation that such states and actions are responsive to the contexts in which the agent is situated –

in particular, a social context of regulations, values and expectations. For example, Romeo's actions are responsive to and constrained by his sense of his family's objections, his duties as a filial son, and so on.

False Belief. This brief analysis includes many parts, but it highlights the importance of a construct like beliefs within our everyday theory of mind. People are seen as engaging in acts they *think* will get them what they want. Of course they can be wrong – in which case they think and act mistakenly. Mistakes, errors, ignorance, and wrong ideas, are the very stuff of our everyday psychology. This importance of beliefs, and mistaken beliefs, is why there has been so much research on children's understanding of false belief.

Children's understanding of false belief has been researched via a variety of false belief tasks. For example: A child sees Maxi put his chocolate in the cupboard and go away. While Maxi can't see, the chocolate gets switched to the drawer. Maxi comes back and he wants his chocolate. Then the child is asked, "Where will Maxi look for his chocolate, the cupboard or the drawer?" Correct answers – saying that Maxi will look in the cupboard – show an understanding that people live their lives, in part, within their mental states. Really the chocolate he wants is in the drawer, but Maxi will look in the cupboard – because it is beliefs, not just reality, that determine action. Children that are 4 or 5 years of age often solve this problem, as do adults.

Theory of mind encompasses many understandings beyond false belief, and we discuss some of these later. But false belief proves a useful starting point for our discussion because it is a hallmark folk psychological achievement that has now been studied in children in many cultural communities speaking many different languages.

Meta-analysis. Wellman and colleagues (2001) conducted a large meta-analysis of false belief understanding that included almost 200 studies encompassing a great many false-belief tasks (such as, the Maxi task) and task variations. Across these studies researchers used tasks that were verbal and nonverbal, that asked children to judge behavior or thoughts (Where will Maxi look? What does he think?), that featured real life persons, videotaped characters, toy figurines, and story protagonists.

The key initial finding is shown in Figure 1. This shows the plot of proportion correct for false belief judgments (from all conditions in the meta-analysis) arrayed against mean age of the children in a condition.

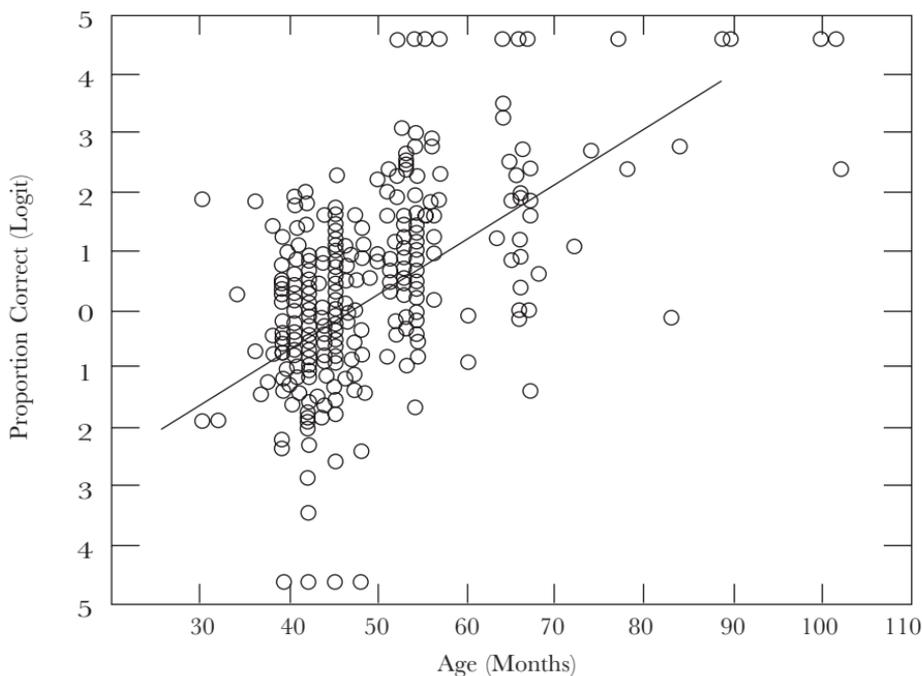


Figure 1

In this graph the data are transformed so that the basic developmental trajectory becomes a linear one. With this transformation chance performance is 0, below-chance performance is negative, and above-chance performance is positive. The data show early achievement and developmental change; there is an overall developmental trajectory from consistent below-chance performance (i.e., children consistently judging Maxi on the basis of his desires, given the current realities) to largely correct performance. A similar trajectory (from below- to above-chance performance) appears in a vast array of specific false belief situations and tasks, even especially child-friendly, nonverbal versions.

The meta-analysis addressed several questions, one of which is especially relevant here: What is the nature of this developmental trajectory across countries and cultures? Figure 2 shows some of the data. Note there is a similar developmental trajectory in all countries, but there are widely different developmental *timetables*. That is, in all countries and cultures, and with even the most culturally appropriate tasks, children go from significant error to later significant correct understanding. But, as

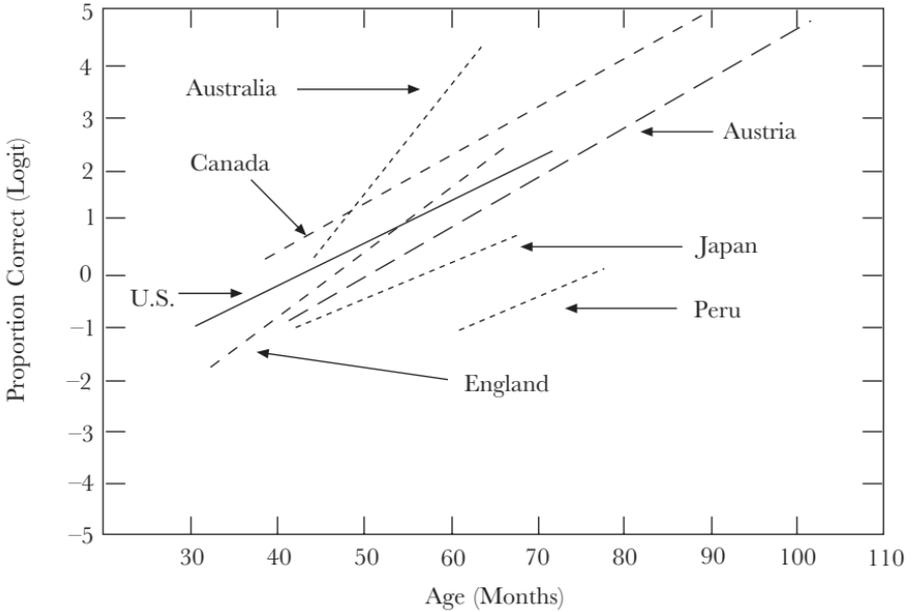


Figure 2

is clear in Figure 2, across different countries children come to an understanding of false belief 5 or so years earlier or later. These data show that theory of mind understandings indeed are dynamic in the sense that they develop, and additionally in the sense that, at the least, early theory of mind understandings vary in the timing of certain milestones (such as false belief) because those milestones are formed and shaped by cultural-communicative experiences.

It is important to note that while most researchers agree that understanding false belief is a hallmark theory-of-mind achievement, not all agree as to its variability across societies. As one example, Callaghan and colleagues (2005) have argued that meta-analytic conclusions mask a deeper more uniform reality. Specifically, Callaghan and colleagues contend that false belief understanding appears on a strikingly *identical* timetable across cultures (not just same trajectory but same timetable). In part, Callaghan and colleagues argue that the vast majority of research has been conducted in Anglo-European societies, so meta-analyses are skewed by that preponderance of studies. Moreover, meta-analytic data are necessarily summed across different studies, and investigators in

different locales have typically used different false belief tasks and task variations. Meta-analyses correct for this task variation statistically, but it is still possible that much of what looks like country-variation in Figure 2 is task-variation instead.

In their research, Callaghan and colleagues used a single comparable false belief task with children in Canada, Peru, Samoa, India and Thailand. Further, the children were from very varied backgrounds: rural vs. city, schooled vs. not, western schools vs. traditional Budist temple schools, poor vs. affluent. In spite of all these differences their data showed false belief understandings to be tightly synchronous in age of acquisition. That is, in spite of wide variation in children's cultures, economic status, schooling and so on (the sorts of differences that ordinarily markedly influence children's understanding and performance), children in their study acquired false belief understanding within about 12 months of each other. This striking synchrony suggests that early theory of mind achievements, and in particular false belief understanding, might represent a biologically-based, maturationally universal achievement relatively unresponsive to cultural communicative experience: "If biological maturation is the main factor responsible for the onset of false-belief understanding, then different cultural experiences would not have tremendous impact on the age of onset" (Callaghan, et al. 2005, p. 382).

However, we stand by our conclusion that the developmental dynamic for theory of mind yields developmental differences across different communities, and this is evident, at the least, in very different timetables for understanding. There are several additional pieces of evidence that support such a conclusion.

Callaghan, et al. (2005) are correct that although the original meta-analysis included studies from various countries, the data were decidedly skewed to children growing up in western-European style communities – US, England, Austria, Australia – and speaking Indo-European languages (English, German, Spanish). But recently further research has accumulated and in particular a great amount of data is emerging from children in East Asia, especially from China. Chinese children grow up in non-western families. Chinese languages are certainly not Indo-European. More than half of the world's children live in East Asia with the largest number of those being Chinese. If we want to know about the nature of theory of mind, including Chinese children seems essential.

Liu, Wellman, Tardif & Sabbagh (2004; submitted), in a meta-analysis of Chinese children's understanding of false belief, assembled almost 200 false belief conditions from Hong Kong and mainland China. Among these data are several studies which, like Callaghan et al., provide comparisons using identical, natural tasks across countries, yet the data show significant *variations* across cultures and languages. For example, Liu et al. find a difference of 2 1/2 years or so for understanding false belief for children in Canada versus Hong Kong. Moreover, Callaghan and colleagues themselves found that children in Japan did not conform to the tight timetable they report in their study – though they did not include those data in their published study.

As a final point, consider the data for children with deafness. Deaf preschool children raised by hearing parents show delays and deficiencies on theory of mind tasks comparable to those of children with autism (Gale, et al., 1997; Peterson & Siegal 1995, 1997; this is true as well for children with cerebral palsy, Dahlgren, et al., 2000). These deaf children have not suffered the same sort of neurological damage that autistics have, as evident by the fact that deaf children raised by deaf parents do not show theory of mind delays. A recent study with very carefully constructed tasks, and an extensive battery of tasks encompassing understanding of desires, knowledge, and hidden emotions as well as false belief (Peterson, Wellman & Liu 2005) confirmed substantial delays for deaf children of hearing parents in contrast to deaf children of deaf parents and normally developing children. These differences in timing (on the order of 8 or more years delay) must be due to the differential opportunities for communicative interchange (and enculturation within communities of discourse about human behavior) across the deaf and hearing samples.

Findings such as these undermine accounts of theory of mind development relying solely on neurological-maturational mechanisms. Folk psychology develops and varies. Even early core understandings, such as realizing the importance of beliefs, vary, at the least in developmental timing, because those milestones are formed and shaped by cultural-communicative experiences.

Infancy. Data on false belief contribute to our understanding that children world-wide largely come to understand human action in intentional terms; they construe people as having intentional mental states – e.g.,

beliefs about the world, desires for things – reflected in intentional actions. Indeed over the last 10 years research has demonstrated that still younger children, toddlers, although ignorant of belief, share this “intentional stance”. Thus, they employ a variety of intentional mental-state constructs to reason about persons’ actions. For example, toddlers conversationally describe and explain human behavior in terms of what the person “wants” or “needs” and “feels” (Bartsch & Wellman 1995; Ruffman, et al., 2002; Wellman, et al., 1995). This is true in the US but also in Cantonese and Mandarin-speaking children in China (Tardif & Wellman 2000). Recent findings suggest that even 1 1/2- and 2-year-olds are able to reason about persons’ intentions (Repacholi & Gopnik 1997). While children at this age are not able to do sophisticated mental state reasoning (for example encompassing an understanding of beliefs), they are able to appreciate the difference between intentional and unintentional behavior (Carpenter, Acktar & Tomasello 1998; Meltzoff 1995). Indeed, there is now considerable interest in what younger infants, in the first year of life, understand about intentional actions.

Infants’ understanding of persons is a classic question, but also a new topic addressed with new methods such as preferential looking and imitation paradigms. Infants cannot talk about mental states, so contemporary research investigates infants’ perception of and reaction to observable intentional actions, actions that adults see as manifesting goals, desires, and knowledge.

Several studies confirm an early intentional understanding in children as young as 6 to 9 months, as illustrated by Phillips and Wellman (in press). Using a habituation-dishabituation paradigm, infants saw a person reach over a barrier and grasp an object, as shown in Figure 3.

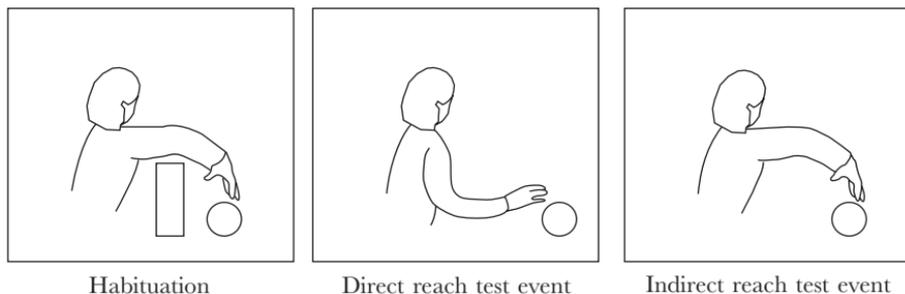


Figure 3

Once the infants were habituated, the barrier was removed and they were shown two test events. One test event showed a *direct* reach for the object; the other showed an *indirect* reach. These test events contrast two different construals of the person's actions, one in terms of goal-directedness and one in terms of physical motions of the arm. If in habituation the infant interpreted the actor's action as goal-directed (as the actor going as directly as possible to get the goal object), then when the barrier is removed the *direct reach* is the expected action and the indirect reach would be more attention-worthy. In the indirect-reach test event, although the actor's arm movement remains the same as during habituation, the actor is no longer going directly to get the object.

In fact, during test, 9- and 12-month-olds look longer at the indirect reach, dishabituate to the indirect reach (even though it is showing the exact same arm movement as in habituation), and do not dishabituate to the direct reach (even though it actually shows a different physical arm movement). This pattern supports the hypothesis that infants construe the reach as goal-directed. (See Gergely, et al., 1995 and Sodian, Schoepper & Metz, 2003 for similar data.)

Several control conditions indicate the infant actually construes human action in terms of goal-directedness. The most critical, we believe, appears in Phillips and Wellman (in press) and involves showing the infant the same actions as in Figure 3 but with *no* goal object. In part, this controls for the possibility that infants might just prefer to look at a curving arm motion. But more crucially, if infants see the actions in Figure 3 as goal-directed they should react differently if there is no goal object. So, for infants in the control condition, habituation and test were identical to those for infants in the experimental condition except that *no* object was ever present. In this case, since there was no object, there was no presentation of a goal-directed action in habituation. And in this case, appropriately, infants do *not* prefer the indirect-reach test event. So the data show appropriate differentiation between actions with and without goal-objects, that is action with and without goal-directed intentionality.

Beyond assessing infants' understanding of goal-directed movement, recent studies employing similar methods also focus on infants' understanding of emotion and perception as shaping persons' intentional action and attention (Phillips, Wellman & Spelke, 2002; Barna & Legerstee,

2005; Woodward 2003), and infants' ability to parse the continuous stream of human movement into intentional-action units or chunks (Baldwin & Baird, 2001).

Responsive Intentional Agents

Belief-desire understanding in preschool, and person understanding in infancy, all point to early achieved (yet dynamic) understandings of intentional actions and agents. Such understandings also necessarily include the conception that intentional action is constrained by and responsive to circumstances. Consider false belief tasks. Achievement of the agent's desires is limited by his or her circumstances (as well as responsive to his or her beliefs) – Maxi wants his chocolate but fails to get it, because really it is in the drawer (although he doesn't know this). Maxi's voluntary actions are limited. Other research shows that preschool children well understand that voluntary actions, based on a character's desires, are responsive to physical and to biological limitations and circumstances as well; this is true in the US (Schult & Wellman 1997), but also Japan (Inagaki & Hatano 2003). Thus by preschool age children know that agents do some things not others, motivated by their goals but responsive to and shaped by the actor's imperfect knowledge coupled with the realities of the situation in which the agent exists.

Even the research with infants shows an awareness of a *responsive* intentional agent. The task outlined in Figure 3, for example, is as much one about how agents respond to circumstance – the constraints of objects versus no-objects, of obstacles versus no-obstacles – as it is about how intentions work. Indeed, the infant's intentional understanding is revealed only because of the interplay between actions and obstacles, between intentions and restrictions to their enactment. Gergley and Csibra (2003) argue, and begin to demonstrate, that all reasoning about intentional action, even in infancy, necessarily includes some construal of goals *and* circumstances of the agent.

Many of the most important circumstances to which agents respond are social ones, and it is this social responsiveness that is central to folk psychology. Agents interact with one another, agents regulate, or attempt

to regulate, each others' actions. Understanding such social responsiveness and regulation is key to an everyday understanding of persons. For example, consider everyday understanding of moral actions and prescriptions. To hold an agent accountable for some action (e.g., a moral violation) the agent's behavior must be understood as motivated by their desires and beliefs, that is, as intentional, rather than understood as merely the result of unintentional movement or physical forces. If Joe steps on and breaks Ann's foot, but does so involuntarily (because ice on the sidewalk made him lose balance) that is not a moral violation; if he does so intentionally it is. There must also be an understanding that a social rule applies to the behavior, and an understanding of the type of social rule that is applicable ("avoid harming others"). For example, the child must come to be able to distinguish between rules that are moral in nature (avoid harm) as compared with rules that involve matters of social convention (dress properly), as well as to identify intentional behavior that is considered a matter of personal choice and thus not seen as socially regulated.

Early work on the development of moral judgments suggested that young children misunderstood these basic distinctions. According to Piaget (1932) for example, in the preschool years children judged that social regulations applied equally to intentional and unintentional actions (or failed to understand the intentional nature of behavior and the social regulation of behavior, altogether). As a consequence, Piaget claimed young children thoroughly confused moral rules, social conventions, and acts of personal choice.

However, contemporary research shows that children in the preschool years are well aware of these social influences on action and understand them as operating on intentional action. Thus, it has been shown that children as young as 2 are sensitive to the presence of social rules. Although not yet discriminating between different types of social rules, 26-month-old children judge that it is "bad" and that it would be "not-ok" to violate rules that have a moral (e.g. hitting another child) or conventional status (e.g. sitting on the rug during show and tell) (Smetana & Braeges, 1990). By age 3 to 4, children also reliably distinguish between issues of morality, convention, and personal-choice. Thus, in research conducted among preschool populations in the U.S. (Nucci & Turiel, 1978; Smetana, 1981), Korea (Song, Smetana & Kim 1987) and Hong Kong

(Yau & Smetana, 2003), children as young as 3 years treat moral rules, in comparison to social conventional rules, as more serious, less revisable, and as less contextually relative. By this age, children also consider certain behaviors as in the domain of personal choice, as indicated by their judgments that individuals themselves, rather than persons in authority, should make decisions about such behavior (Nucci & Weber, 1995).

These contemporary data indicate that for young children intentionality and social regulation go hand in hand. Even before they understand the term “lie”, preschool children rate intentional falsehood as more naughty than unintended misstatements (Wimmer, Gruber & Perner, 1984). As a different example, Harris and Nunez have systematically investigated 3-, 4-, and 5-year-olds understanding of prohibitions like “Jane’s mom says, if you go outside you must wear your hat.” In two studies Nunez and Harris (1998) contrasted children’s judgments of the focal character’s naughtiness for accidental (she’s outside and “the wind’s blown her hat off”) versus intentional (she’s outside and “she’s taken her hat off”) violations of the obligation. In the first study, children in England as young as 3 years (the youngest children tested) appropriately distinguished the two cases – judging the intentional violator as naughty four times more often than the accidental violator. In the second study, children in Columbia, as young as 3 years, did likewise. As Nunez and Harris conclude, “Because deontic rules typically apply to human agents who can deliberately renege on an obligation, an appreciation of the agent’s actions, including a decision about whether an agent has or has not met a prescribed condition, calls for an interpretive stance in which agents’ intentions are assessed . . . a key component of theory of mind” (pp. 155-156).

Even infants show some sensitivity to social restrictions. Phillips, Baron-Cohen and Rutter (1992) engaged both normally-developing infants (9- to 18-month-olds) and young autistic children of comparable mental age (but 3 or so years of chronological age) in several scripted social interactions. In one task, for example, as the infant was engaged in an intentional-desired action (reaching for a desired toy) the adult cupped her hands over the infant’s (restricting the action). In comparison cases, the adult interacted with the infant in non-restrictive ways (e.g., handing a new toy to the child). In the restrictive case, the vast majority of normal infants immediately looked at the adult’s face (rather than simply

struggling with the restriction). In the comparison, non-restrictive case, they very rarely did so. Autistic children very rarely looked at the adult in either case. These data suggest that normally-developing infants are aware that social restrictions (at least in the simple form of behaviorally imposed social restrictions) can apply to intentional actions. Their response is also appropriately social (at least at first) – checking the adult’s face. In contrast, autistic children, who are impaired in theory-of-mind understandings, also do not react appropriately to this social restriction (and instead treat the adult’s hands as like a mere physical limit).

Cultural Differences

Adult folk worldwide seem to have widely varying ideas about persons, actions, and the explanation of social life. Ethnographers make several dramatic claims about such differences (see Lillard 1998 for one summary). We will take our examples from more quantitatively-based psychological studies. Our primary examples revolve around the issues of how discretion (intentional, preference-based choices) and obligation (social regulation of actions) are seen differently in North American versus Indian societies. The specific examples focus on adult conceptions of helping and of duty and they often require or invoke evaluative judgments. Thus, they shed light on folk morality in some specific senses, but more crucially on folk psychology in the broad way we have been using that phrase.

Western analyses of morality have long distinguished between a morality of helping others versus a morality of justice (Gert, 1988; Urmson, 1958). In these analyses, helping others has a moral status that is more discretionary in comparison to justice. For example, matters of justice can be realized merely by refraining from action (i.e., not harming others or not violating their rights), but interpersonal responsiveness requires positive action (i.e., helping others who are in need) and thus is inherently more unbounded in scope and so more discretionary and less obligatory. Further, in cases of conflict, justice is more mandatory than the dictates of interpersonal relationships – interpersonal relationships are subordinate to justice obligations (and this makes moral concerns more desirably “objective”).

However, other folk see things quite differently (Miller, 1994; Shimizu, 2001). In comparative research it is true that US adults tend to treat concerns involving friendship, loyalty and caring as matters for personal decision-making; however, Indian adults tend to treat them as matters of moral duty (Miller & Luthar, 1989). Such a contrast is captured, for example, if respondents are asked to consider the following action: an adult son provides for his elderly parents who are well taken care of, but he does not allow them to live with him in his home. An illustrative, US respondent categorized the issue as a discretionary matter of personal choice:

It's up to the individual to decide. It's duty to the parents versus one's own independence and, I guess, one's self interest . . . It wasn't a life and death situation and their needs were being taken care of. Beyond that it's a personal choice. Whether he wants to live with them has more to do with their emotional and personal relationship (Miller & Luthar, 1989, p. 253).

In contrast, a typical Indian respondent categorized such behavior as a moral violation which involved a breach of the duty to one's parents:

. . . It's a son's duty – birth duty – to take care of his parents. It's not only money that matters. It's being near your dear ones which counts more. . . . the son has no business to ask his father to go away. Even if the parents had not exerted so much for the son, still he is expected to have a certain responsibility towards his parents (Miller & Luthar, 1989, p. 253).

Experimental research contrasting perceptions of helping family and friends under varying need conditions confirm this cross-cultural difference (Miller, Bersoff & Harwood, 1990). In this research Indian respondents treated helping (even low-cost helping not required for life and death outcomes) as a matter of moral duty whereas US adults treated helping as a matter of personal choice. In particular, US adults perceived helping as less obligatory and more discretionary to the extent that the need involved was less and the role relationship more remote.

As noted previously, Western conceptions of morality also place interpersonal responsibilities as subordinate to matters of justice. In this way too helping is more “discretionary”. Empirically, this was seen in an investigation conducted among US and Indian populations that tapped

reasoning about hypothetical conflict situations in which fulfillment of a justice issue conflicts with fulfilling an interpersonal responsibility. For example, X needs to take the train to attend his best friend's wedding. Should he steal a ticket from Y or refrain from stealing it, in order to attend (even in the case where Y has sufficient funds to buy another ticket for himself)? Miller and Bersoff (1992) observed that US adults gave priority to the justice issues. A majority of US adults judged that there was a moral duty *not* to steal the train ticket, even if this was the only way to fulfill the interpersonal responsibility of attending the wedding. In contrast, a majority of Indian adults gave priority to the interpersonal responsibilities. They judged that it was morally required to attend the wedding, even if this meant stealing the ticket.

The discretionary nature of a morality of helping emphasized by US adults, in contrast with Indian adults, is also seen in comparative research assessing conceptions of duty. Thus, Miller & Bersoff (1999) demonstrated that US adults judge there is less responsibility to help a family member (or friend) in cases in which individuals do not share common affective bonds (tastes, interests) than in cases in which they are affectively close. In contrast, Indian adults approach duty in a more obligatory way; they maintain that the responsibility to help family and friends is unaffected by such non-moral, discretionary considerations. It is your duty whether the two of you are close or disaffected.

Conceptions of duty, such as these, provide focal examples of the considerable differences in adult folk psychologies across different cultures and societies. In Western conceptions, duties are straightforward obligations – constraints on the intentional actions of the agent. Given the cultural emphasis on individual autonomy, such constraints are seen as limits on agency and self expression (Bontempo, et al., 1990; Miller & Bersoff 1994; Ijunker & Lepper 1999). That is, duties are typically seen as burdensome obligations at odds with the freely chosen desires of the (autonomous) self.

This view of duty has empirical implications for its motivational status. Theories of motivation advanced by western psychologists assume that it is only by having a fully internalized duty, so that one experiences one's "duty" in a purely freely chosen way, that one could ever experience satisfaction (Deci & Ryan, 1985, 1991). More typically, duty would be experienced as aversive and as reflecting a lesser sense of

agency (Chirkov, Ryan, Kim & Kaplan, 2003; Spence, 1985). Considerable research shows that in more collectivist, nonwestern societies such as India, China and Japan, adults place a much higher emphasis on duty, and doing one's duties than they do in western, individualistic societies. From the western perspective just outlined, the motivational implications are clear: Increased emphasis on duty should be experienced as increasingly aversive and burdensome. Cross-cultural work, however, challenges this view in documenting that in such cultural communities many role-related duties are associated with individual satisfaction and experienced in freely chosen rather than controlling terms (Miller, 2003).

For example, comparative research tapping perceptions of exemplary family behavior reveals that Indian adults not only more frequently treat meeting the needs of family and friends as a matter of duty but they also tend to link such behavior with individual satisfaction (Miller & Bersoff, 1995). Such trends are illustrated in the responses given below by Indian and US adults to the situation of a wife staying with a husband who had been severely injured and so who could no longer fulfill the wife's marital expectations. The Indian respondent assumed that the woman would experience satisfaction in being responsive to her husband's welfare and fulfilling her duty as a wife:

She will have the satisfaction of having fulfilled her duty. She helped her husband during difficulty. If difficulties and happiness are both viewed as equal, only then will the family life be smooth (Miller & Bersoff, 1995, p. 275).

In contrast, the U.S. respondent considered the fulfillment of duty as in opposition to the realization of the individual's desires and thus as unsatisfying:

She is acting out of obligation – not reasons like love. She has a sense of duty, but little satisfaction for her own happiness (Miller & Bersoff, 1995, 275).

In short, conceptions of duty are accorded more positive affective meaning in many collectivist cultures, linked to contrasting ways of construing the self (O'Flaherty & Dennet, 1978). Thus, duty is conceptualized as congruent with and beneficial to, rather than in opposition with, the self; duty reflects self-realizing obligations to be aspired to. Thus, in certain Hindu and Buddhist cultures duty is linked to self identity and self benefit, at least in part, through metaphysical beliefs such as *karma*.

This more expansive conception of duty, apparent in some collectivist cultures and contrasting with certain western conceptions of burdensome self-defeating duties, is apparent in cross-cultural research demonstrating a sense of choice as being *integral* to concepts of duty in collectivist cultural communities. The conclusion of this work notably is not that choice is irrelevant to a sense of agency in collectivist cultural settings but rather that, in contrast to trends commonly observed among individualistic populations, choice and agency are commonly linked to an overt emphasis on duty (Miller, 2003). This type of effect was observed in a recent study in which US and Indian adults explained real life cases in which they helped a friend under circumstances in which it was either strongly expected that they help or in which there was little or no expectation that they help (Miller, Schaberg, Snibe, 2005). Whereas the US respondents reported feeling subjectively compelled to help under the socially expected condition and feeling that they had freely chosen to help in the comparison case, Indian respondents reported a subjective sense of having freely chosen to help under both conditions.

Universality and Variation

The various studies just discussed point to qualitative cultural variation in folk psychology broadly considered – in conceptions of self, agency, duty and fulfillment – and in folk morality considered more narrowly – in conceptions of justice, helping, and proscription/prescription. How can this type of diversity in the adult case square with the notion of universally achieved conceptions in the childhood case, that we discussed to begin with? Don't core human social cognitions, with a universal trajectory, seem at odds with a world replete with quite different adult folk psychologies?

These two sorts of claims seem directly at odds, *if* viewed from within the two contrasting scenarios that dominate discussion of cultural universality and variation in conceptual thinking. One of these dominant alternatives we will call Nativist Knowledge. The idea here is that there are early, evolved understandings, and these never change (*core early knowledge just is core adult knowledge*) (Spelke 1994; 2003). This per-

spective easily accommodates the data of early universal achievements, but struggles with findings as to dramatic variation in folk conceptions. The other dominant alternative we will call Pure One-sided Socialization. The idea is that young children begin ignorant and pick up – match and mirror – whatever their societies tell them (for a review, see Sperber & Hirschfeld, 1999). This perspective easily accommodates the data about differing adult folk psychologies. But it struggles with findings as to early universal core cognitions.

In contrast to either of these accounts, we prefer a different possibility (Miller 1984, 1986; Wellman 1998) that for this paper we will call Development Enabled by Early Framework Understanding. In short, here is the hypothesis that we favor: An early achieved understanding of responsive intentional agents provides a framework for understanding persons. But it is only a very general framework and children must engage in much specific instantiation of the framework, prominently including much culture-specific learning. The initial framework constrains the sorts of hypotheses that children initially make about people (people are intentional and responsive agents). But, such a framework leaves much unspecified, in particular it does not specify exactly what sorts of intentions (to harm, to help, to satisfy) nor exactly what sorts of responsiveness (duty, self-satisfaction, helping others) are important or how they are seen to interrelate, and so on.

Moreover, as we have argued early folk psychological conceptions are not developmentally static; the framework can and does revise and change. For example, the achievement of an understanding of beliefs substantially changes the preschooler's understanding of agents as intentional. But this is a developmental achievement and one that varies dependent on cultural-communicative influences. Thus the framework not only leaves much room for fleshing-out and for elaborations, important conceptual commitments can and do change.

This hypothesis predicts constraints on cultural variability in folk psychologies (including folk moralities considered more narrowly). After all, any specific folk understanding must be learnable by that “folk's” children. By definition, cultural communities cannot evolve a specially elaborated construal of anything that their members cannot learn. Thus on this hypothesis, early learning is constrained by early universal framework

conceptions. At the same time this hypothesis predicts considerable variation, because frameworks change and learning plays out differently in different cultural systems, circumstances and environments.

Intriguingly, constrained variability should be especially notable in childhood; adults' conceptions of people can be much more dissimilar worldwide than childhood ones. Why? Because the initial framework is *enabling* as well as constraining. Initially, the framework provides a helpful ground for a community's members to communicate with their children. But, in part through this communication, frameworks change and community members teach and socialize their children into their group's practices and beliefs.

Development and Culture

Note that key features of this account are its developmental perspective coupled with the essential role of processes of cultural construal and communication in developmental change. Indeed, this account has, we believe, considerable empirical support from the limited studies tackling these issues both comparatively and developmentally. Consider first development. In terms of research on moral judgments, 8-year-old US children and Hindu children *share* a tendency to absolve agents of moral accountability for justice breaches committed under emotional duress (Bersoff & Miller, 1993). However, this differs from adults, where there is a tendency to treat such breaches as moral violations in both cultural communities. Relatedly, in terms of priority given to competing justice and interpersonal expectations, Indian and US 8-year-olds also show a common tendency to give greater weight to interpersonal responsibilities in the case of conflict situations involving life threatening breaches than do adults in their respective cultures (Miller & Bersoff, 1992).

Next consider variation. In terms of social attribution, early work on social explanation and person perception documents that US and Indian 8-year-old children maintain a *common* narrative or script-like emphasis centering on intentional action, but that this is later elaborated in culturally variable directions. Indians come over development to place increasing emphasis on social roles whereas US respondents come over development to place significantly greater emphasis on psychological traits

(Miller, 1984). In investigations of person descriptions (Miller, 1987), the outlooks of 8-year-olds resemble each other in their focus on simple intentions, psychological states and overt actions, as well as physical characteristics. However, by adulthood, the person's perceptions and descriptions of US respondents have become increasingly impersonal and de-contextualized, while those of Indian respondents have become increasingly self-involved and contextually sensitive.

Contemporary work on autobiographical memory likewise points to cross-cultural differences in outlook, such as the greater emphasis placed by Chinese as compared with US children on social role descriptions and the greater emphasis of US as compared to Chinese children on abstract dispositions in their autobiographical recall (Wang & Leichtman, 2000). However, this work also reveals that such cross-cultural differences become more marked with increasing age. For example, the tendency for US respondents to emphasize personal attributes and qualities more than their Chinese peers reaches statistical significance only among second graders and not at the preschool age; and there is a greater age related increase among Chinese than US children in emphasis on social categories from preschool through second grade (Wang & Leichtman, 2000).

In sum, extant evidence points to greater cross-cultural commonality in interpretation of intentional action as present earlier rather than later in development. Thus it also points to the existence of, and specifies the nature of, some culturally variable patterns of development change.

At their most general, these types of findings highlight the role of culture in impacting the paths and endpoints of developmental change. Research in cognitive development, including research on social cognitive development, stems from a constructivist tradition adopted by Piagetian theory but that also remains as the dominant paradigm of contemporary developmental psychology (Flavell, 1994). In this tradition, cognitive development is typically seen as progressing in the direction of increasing adequacy, complexity, and objectivity as young children's understandings change over time to achieve more veridical knowledge of the world. The perspective we advocate in this paper remains within this general constructivist tradition, with its emphasis on the child's active construction of knowledge and on the existence of qualitative developmental change. However, we underscore the recognition that what constitutes objective knowledge is dependent, in part, on the outlooks of different socio-cultural

communities and thus may lead to multiple rather than only one determinate developmental endpoint, multiple rather than only one “objective” realities. To give examples, it is not that the US adult emphasis on traits in everyday social attribution is more veridical or true than the Indian adult emphasis on social roles, nor that the Chinese adult emphasis on collective social routines in autobiographical memory is more accurate than the US adult emphasis on unique personal experiences. Equally, it is unclear that a perspective that treats helping as a matter for personal decision making is any more moral, or objective, than a perspective that treats it as a role-related duty. Rather these contrasting outlooks reflect the priorities and realities of different socio-cultural communities in giving contrasting weight to different aspects of experience. Such weighting is an inevitable part of a constructive, meaning-making process, as social experience must be categorized and interpreted in the process of understanding it. As part of this process, cultural meanings and practices not only represent reality, and thus serve as a source of knowledge about the world, but also play a central role in defining or constituting social experience. Through processes such as everyday social interaction and conversational exchange, culture is intertwined in developmental change both in providing vehicles by which evidence is gathered about the world and in contributing shared assumptions and frameworks that affect the perceived nature of social reality and what is considered objective knowledge.

In terms of developmental change, the present perspective insists that age-related changes in psychological knowledge result not only from cognitive advances in complexity and adequacy, but also from conceptual content, importantly including culturally framed appreciations of social reality. On the one hand, in all cultures, the outlooks of adults and of older children are more cognitively complex and better adapted to experience than the outlooks of young children. Cognitive explanations of developmental change then remain central even in explaining culturally variable age trends. For example, just as traits entail greater cognitive complexity than a simple emphasis on beliefs and desires and thus tend to be somewhat later emerging forms of understandings, social role attributions likewise are more inferential and cognitively complex than simple beliefs and desires and also become spontaneously emphasized relatively later in development. On the other hand, however, such cognitive and

information processing considerations alone do not explain the cultural diversity observed in developmental endpoints of folk psychology. Rather, folk psychology reflects not only developments in cognitive complexity and adequacy, but also culturally variable outlooks on the social world. These outlooks are attuned to cognitive adequacy, but also to a range of other criteria that determine what is considered a sophisticated, mature, appropriate or otherwise socially competent mode of understanding. To illustrate, trait understandings are emphasized among US populations not only because of their adequacy in enabling the more complex explanation and prediction of behavior (Wellman 1990), but at least in part, because of their fit with larger cultural concerns or practices, such as that of treating the individual rather than the social group as the center of moral responsibility for behavior (Hamilton & Hagiwara, 1992) or of tending to psychologize rather than somaticize, mental disorders (Good, 1997).

As Gopnik concludes in criticizing accounts of cognitive development that consider only cultural considerations, it is mistaken to consider social cognition as based on “nothing but social interaction” (Gopnik, 1996, p. 225). Similarly, as we insist here, it is mistaken to consider social cognition as based on nothing but core cognition coupled with cognitive adequacy. Folk psychology can only be explained by taking into account the essential contributions of culture *and* development to its patterning.

Conclusion

Central to folk psychology is the concept of a responsive intentional agent. The core features of this concept are apparent in infancy and lead to certain understandings of persons that develop universally in the preschool years across cultures and languages. Even these early understandings develop, however, shaped and specified via processes of cognitive construction intertwined with cultural constructs of persons provided within interactive culturally constituted, communicative experiences of childhood. The result is culturally variable endpoints of social cognitive development; that is, culturally variable folk psychologies and folk moralities.

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