Human Development

Letters to the Editor

Let's Put it to a Test

In their paper, Wellman and Miller make the interesting point that theory-of-mind reasoning should be properly understood as encompassing both traditional belief-desire reasoning and deontic concerns about social obligations and permissions. We agree that a broadened conception of theory-of-mind reasoning in many cases will do a better job of explaining human interactions than a simple focus on beliefs and desires alone.

In general, Wellman and Miller's arguments are based on a review of the extant theory-of-mind literature, which finds that an understanding of both traditional belief-desire reasoning and deontic reasoning are intertwined in development. But there is a different and possibly more direct way to make the case that theory of mind, in the guise of a naïve theory, should unite the domain of beliefs and desires with the domain of deontics: Test whether adults and children actually conceive of belief-desire reasoning and deontic reasoning as unified domains. Such tests have been used successfully to determine the boundaries of people's conceptions of various other domains, such as biology and physics.

For example, a series of studies conducted by Frank Keil and colleagues [Danovitch & Keil, 2004, 2007; Keil et al, 2008; Lutz & Keil, 2002] presented children with experts in a given domain, such as a car mechanic or someone who knows why tennis balls bounce better on the sidewalk than on grass. Children were then asked what else this person would know about: a topic within the expert's domain of expertise (e.g., car repair, physics) or outside of it (e.g., medicine, social psychology). Children's responses to these questions revealed how they cluster knowledge in domains: A physicist should know only other facts about physics, and not about social psychology.

A similar approach could be applied to the study of naïve psychology, which can be construed as simply another domain of knowledge, like naïve physics or naïve biology [e.g., Gelman & Wellman, 1992; Gopnik & Wellman, 1992; Wellman & Gelman, 1998]. A parallel

study to those described above could present adults and children with experts in either belief-desire reasoning or in deontic reasoning, and test whether adults and children see these people as general experts in psychology, who possess knowledge about both types of reasoning, or as limited experts, who possess knowledge only about their proper domains.

Such a study would shed light on the shape of adults' and children's naïve psychology, and could provide additional evidence that belief-desire reasoning and deontic reasoning indeed form two parts of a unified domain.

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Agent Provocateur

In their provocative article *Including deontic reasoning as fundamental to theory of mind,* Wellman and Miller, seemingly working against type, struggle to portray what they term "belief-desire reasoning" and "obligation-permission reasoning" as being so "interrelated," so "interdependent," and so "integrated" as to be fundamentally "inseparable." Perhaps inadvertently, they appear, in all of this, to have accidentally aligned themselves this with Piaget, and his often-repeated claim that the same underlying form of equilibrium, and the same formal structures, are central to both children's intellectual and moral reasoning development. His familiar analogy that "logic is the morality of thought, just as morality is the logic of action" [Piaget, 1932/1965, p. 398], is, no doubt especially convoluted, but, perhaps, no more so, it would seem, than the *Human Development* article currently under review.

Wellman and Miller do make an especially valuable contribution by drawing attention to the fact that the Theories-of-Mind literature has been seriously remiss in having portrayed the course of epistemic development as largely individualistic and otherwise blind to the formative place of social circumstance and culture. Where their otherwise good argument seems to go off the rails, however, is with their unnecessarily profligate claim that typical preschoolers understand themselves as true epistemic agents, easily capable of already understanding the subjective contribution they and others regularly make to the knowing process. The broad corrective they have in mind as a way of repairing the usual lack of "scope" common to standard Theories-of-Mind accounts is to insist that, because "belief-desire reasoning" and "obligation-permission reasoning" both presuppose the active hand of the same agentive, intentional actors, both require being understood as alternative, but indivisible sides of the same mentalistic coin.

There are two distinctive parts to Wellman and Miller's argument, one of which seems unmistakably correct, the other frankly mistaken.

The part of their double-barreled claim that seems largely beyond dispute is that so-called "obligation-permission reasoning" presupposed the existence of some active and intentional agent – someone capable of choosing to take up or set down various obligations, or to exercise or not exercise various permits to act in certain ways. As Wellman and Miller point out, acting on various obligations and permissions is "indelibly voluntary" [p. 111] in that "an actor can only (sensibly) be obligated or permitted to do something he or she can carry out volitionally" [p. 112]. People whose trigger-finger is controlled by wires, or persons who, through coercion or

diminished mental capacity, are not free to actively form intentions, are, they sensibly point out, ordinarily excused from responsibility for their actions.

While something like the capacity to volitionally choose is, no doubt, constitutive, of any coherent notion of obligation or permission, the question of whether some similar requirement also applies to the domain of what Wellman and Miller describe as the more "mentalistic" world of belief-desire reasoning is an altogether different, and evidently more open question – one upon which any assertion about the necessary interdependence of deontic and belief-desire reasoning obviously turns. What needs to be decided, then, is whether Wellman and Miller are correct in their assertion that belief-desire reasoning, like obligation-permission reasoning, similarly presupposes the guiding hand of some comparable, active, intentional agent.

The bold claim to be promoted here is that – Wellman and Miller's assertions to the contrary not withstanding – the minimal notions of agency and intentionality standardly advocated by "theory-theorists," and by other practitioners of the "theories of mind" trade, are radically impoverished, if not generally mistaken, all in ways that leave them sharply different from the deliberations of those active "choosers" required to make any account of obligations and permissions sensible. In short, if whatever assumptions about agency and intentionality ordinarily thought to apply to so-called "belief-desire reasoning" are, in fact, importantly different from, and incommensurable with, the notions of agency and intentionality necessary for any sensible account of deontic reasoning, then the Wellman-Miller "thesis" that both of these forms of reasoning amount to the same thing also needs to be seen as similarly mistaken. What needs to be determined, then, are: exactly what sorts of agency and what sorts of intentionality are presupposed by standard accounts of children's developing Theories-of-Mind or belief-desire reasoning; and whether such notions are, as advertised, importantly overlapping with the intentions required by deontic reasoning. The short answer to be offered here is that they are not.

Before attempting to get clear about what theory-theorists have routinely meant by talk about agency and intentionality, it is important to first draw a sharp distinction between what is loosely imagined to be found in the operative "folk" psychologies evidently practiced by young persons, on the one hand, and, on the other, the studied efforts of grownup professionals to formalize such "naive" theories into some "specific characterization" or "model" of the developing mind. Wellman and Miller tend to regularly blur this distinction and so end up claiming support for their formal model on the basis of informal accounts of what children sometimes do or say. They claim, for example, that "ever-day social reasoners understand people's behaviors in intentional terms as purposive…[p. 105]," and, from a very early age, are

already quick to invoke notions of agency, volition and personal choice. Evidently young persons do say things consistent with such a view. What counts, in the end, however, is how much of all of this ends up as part of the formal models of mind currently being advocate by theory-theorists and others interested to provide some detailed account of children's developing "theories of mind."

Be all of this as it may, when such more casual observations have been formalized into a better-particularized working model, the framework most commonly accepted within traditional Theories-of-Mind accounts has involved two putative "sorts of mental states – beliefs and desires – [which] are claimed to organize mental life and intentional action as understood in our everyday folk psychology…" [p. 107]. Because, in such working models, beliefs are most typically understood as motivationally inert [McNaughten, 1988], full responsibility for getting things underway naturally falls to the more "pushy" notion of "desires," which as Dent [1984, p. 99] argues, "like a weighty brick, fall upon one and impart a certain push to one's body." What all of this comes down to, then, is how (within the traditional theory-of-mind framework) the concept of "desire" is to be understood, and imagined to take up all of the necessary slack ordinarily contained in more grown-up notions of agency and intentionality. The critical judgment being leveled here is that the notion of "desire," as formally understood in Theory-of-Mind circles, both lacks sufficient gravitas to accommodate the necessary weight that is ordinarily contained within most everyday concepts of agency, and too easily allows human action to be construed as the mechanized output of what Harré [1982] has called merely "subpersonal components" of mental life. As a result, we are left, in Campbell's [1995] words, with a "fragmented… picture of human action that fits a machine better than an organism" (p. 34). Some of the reasons for insisting that this is so are briefly detailed below.

First, it needs to be pointed out that, within standard belief-desire accounts, a fledgling appreciation of the notion of "desire" is ordinarily understood to be an especially early achievement. According to Wellman [1990], for example, a beginning grip on the notion of desire is ordinarily had by three, and the typical 4- or 5-year-old is already assumed to be in possession of "an interpretive or constructive understanding of representation" [p. 244] – "a notion of mind as a system of interpretive mental processes" [p. 90] sufficient to allow such preschoolers to see mental contents as being constructed "actively by the person, on the basis of inferences seen as subject to biases, misinterpretations and active interpretation [Wellman & Hickling, 1994, p. 1578]. Echoing the same point, Meltzoff and Gopnik [1993, p. 335] report that, "by five years old, children seem to understand that a person's beliefs about the world are not just recordings of objects and events stamped upon the mind, but are active interpretations or construals from a given perspective." All of this is in line with parallel remarks by Perner [1991,

p. 275], who argues that, "around 4 years, children begin to understand knowledge as representation, with all of its characteristics. One such characteristic is *interpretation."* All this follows, we are told [Gopnik & Wellman, 1994], for the reason that the tried-and-true ability of 4-year-olds to grasp the falseness of false belief signals more than an evident facility with counterfactuals. It is an ability that requires nothing less than the conceptual resources of an interpretive theory of mind. Clearly, then, "theory theory's" vanguard has convinced itself, and means to convince you, that the typical 4-year old has somehow already come to appreciate that human knowledge is the achievement of active human agents, already marked by an appreciation of intentionality.

What remains more or less hidden in the background behind the good performance of young preschoolers on standard measures of false-belief understanding is exactly where their earliest insights about beliefs and desires actually leaves such children in terms of their understanding of the source of the mind's activity and their consequent notions of agency. A strong case can and has been made [e.g., Carpendale & Chandler, 1996; Chandler & Lalonde, 1996] that the view of mental life required to succeed on familiar measures of false-belief understanding only amounts to what Rorty [1979] has characterized as the mind as a simple "mirror of nature" – one that essentially reflects internally on the mind's eye what can be seen externally in the world outside our skins. Although some [e.g., Perner & Davies, 1991] have claimed that the mind, even in this evident state of passive accommodation, nevertheless requires being understood as "doing" something, such minds, I would suggest, are no more "active" than is any other mirror or reflective surface. The mind's activity, in this early case, is neither a process that is initiated nor controlled by an active subject, and is akin instead to what philosophers of action [e.g., Frankfurt, 1988; Taylor, 1966; Velleman, 2000] have characterized as behavioral *re-actions*, or mere internal *events*, that pale by comparison to more "full-blooded" [Velleman, 1993] and "meaningful" [Moya, 1990] real *actions* belonging to, and initiated by, autonomous, self-moving agents. For such young copy-theorist, then, mental life amounts to little more than a series of "psychological and physiological events" that, as Velleman [1993] notes, may be said to "take place inside a person," but then (and here's the catch) such a person "serves merely as the arena for these events: he [sic.] takes no active part" [p. 189]. As such, it can be argued, and is argued here, that, for children who view their own and other minds as "mirrors of nature," it is, perhaps, best to say that, while they may well recognize the activities of epistemic "patients," there is little reason to credit them with an appreciation of the meaning-making actions that characterize knowing "agents." Rather, such impoverished, externalist conceptions of agency lack any fully fledged notion that knowledge belongs to, and is an intrinsic possession of a conscious person who intentionally pursues it [Blasi, 1995].

Although the full story of the developmental process by means of which young persons gradually abandon their view of the mind as passively accommodating to the impact of the environing world, and come to eventually subscribe to a more agentive and intentional account of their own and others mental lives can only be hinted at here, what already seems clear enough is that, through the middle-school and early adolescent years, such children do typically set aside what Bandura [1986, p. 12] has called their earlier and more impoverished notion of "mechanical agency."

All of this too is, of course, just another story. It is not, however, the story on offer by Wellman and Miller. It differs from theirs in many respects. It has more developmental legs, or at least does not run out of potential explanatory power even before children reach school age. It also envisions a developmental world in which the concepts of agency and intentionality required to fuel a increasingly mature understanding of deontic and moral matters, on the one hand, and epistemic growth, on the other, are not given early and once and for all, but interweave across a changing mobius strip of developmental – a trajectory along which thoughts about obligations and permissions, as well as beliefs and desires all find their changing place.

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