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Participants Don't Need Theories

Knowing Minds in Engagement

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ABSTRACT. The theory-theory is not supported by evidence in the everyday actions of infants and toddlers whose lives a Theory of Mind is meant radically to transform. This paper reviews some of these challenges to the theory-theory, particularly from communication and deception. We argue that the theory's disconnection from action is both inevitable and paradoxical. The mind–behaviour dualism upon which it is premised requires a conceptual route to knowing minds and disallows a real test of the theory through the study of action. Taking engagement seriously avoids these problems and requires that both lay people and psychologists be participants rather than observers in order to know, and indeed to create, minds.

KEY WORDS: action, dualism, engagement, infancy, Theory of Mind

In reflection we isolate ourselves from dynamic relations with the Other; we withdraw into ourselves, adopting the attitude of spectators, not of participants. We are then out of touch with the world, and for touch we must substitute vision; for a real contact with the Other an imagined contact; and for real activity an activity of imagination. (Macmurray, 1961/1991, p. 16)

It is difficult to write today about understanding people without reference to the words 'Theory of Mind'. An incredible 1 percent of academic publications in psychology in 2003–4 that refer to infants or children also refer to the term 'Theory of Mind'. And the manner in which the term is used is awesomely matter-of-fact – with a taken-for-grantedness hitherto reserved for those other staples of psychology such as 'growth spurt', 'toilet training', 'short-term memory' and 'secure attachment'. Despite this, the 'theory-theory', as it is called, stands on shaky grounds. The main empirical challenges are from the everyday actions of infants and toddlers, particularly those involving communication and deception, which occur well before the theory argues that they can (see also Astington, 2003; Dunn, 1988, 1991). In order to deal with these challenges the theory-theory has had either to implausibly dismiss them as 'mere behaviour' or to violate its own coherence by various revisions involving modules, auxiliary hypotheses, implicit

theories, precursors and interactions with 'executive factors' (Baron-Cohen, 1995; Bretherton, McNew, & Beeghly-Smith, 1981; Cadinu & Kiesner, 2000; Clements & Perner, 1994; Gopnik, 1993; Hala, Chandler, & Fritz, 1991; Hala & Russell, 2001; Leslie, 1995).

We review key behaviour in infants and toddlers which the 'theory-theory' has often had to 'explain away', and explore the reasons for its discomfort with what infants and young children actually *do* with other minds in everyday life. We argue that the problem lies in psychology's commitment to epistemic detachment, which, we think, stems from thinking of the knower as fundamentally isolated, thus requiring some mediation—an idea, a theory, a revelation, a concept—to bridge the gap from Self to Other, or, in the case of the 'theory-theory', to bridge the gap from behaviour to mind. Through this insistence on mediation, the theory-theory distances itself from action both in its development and in its evidence. As an alternative (both for the psychologist and for the infant) we propose a 'second-person' stance to knowing minds, in which the 'Other' is a 'You' rather than a 'He' or a 'She'. This stance emphasizes action and engagement, not only as the route to knowing minds without the mediation of intellectual bridges, but also as the way in which minds develop to be known.

Doing What They Didn't Ought'er

The theory-theory makes some key predictions about social actions that should not be occurring in infants and toddlers. There are different versions of the theory view even within the group of theorists that Astington (1995) describes as constituting its core. Amongst other things, the differences concern what precedes a 'full' theory of mind (see, e.g., Perner, 1991 vs Gopnik & Wellman, 1992).[1] Amongst all the theory-theorists, however, the focus is on the possibilities for action and explanation that emerge from understanding the representational capacities of minds. The central idea is that minds represent, and that interacting with minds requires, and is therefore constrained by, an understanding of representation. Such understanding is therefore seen as a prerequisite for appropriate engagement with other minds.

In order to test for an understanding of representation (and of how representation leads to action) the theory-theory has typically used situations of mismatch between representation and reality (because such tests cannot be passed through simple matching with reality). Most of the theory-theory's predictions concern, therefore, the failure by infants and toddlers to explain, predict or act upon actions that stem from mis-representations of the world. If children cannot really understand representations, they should not (according to the theory-theory) be able to act appropriately in some situations:

essentially, theory-theorists argue that telling lies, understanding intentions contrary to actual actions, understanding lack of knowledge and under-standing misunderstandings are all dependent on complex representational skills which do not develop until about 4 years. As David Olson (1988) put it in an early paper, it is the acquisition of a Theory of Mind in the pre-school years that allows the development of tricks, secrets, lies—all of those things that make children appealing:

> It is at this third stage [i.e. at age 4 with the development of a Theory of Mind], I suggest, that children become deliberate and self-conscious; they come not only to think of themselves and others as holders of belief states, they also become capable of separating intentions from action, intentions from utterance, beliefs from reality and the like. Tricks, secrets and lies become possible. (p. 424)

However, all of these predictions are problematic. Children do lie, they do repair misunderstandings, they do tell people things they don't know, they do tease people and manipulate their intentions, well before the age of 4. Furthermore, they are treated by those around them at the time, even parents who are developmental psychologists, as really doing these things.[2] Dis-missals of data such as early deception, teasing, communication and refer-encing, for example on the grounds that such actions are rote-learned routines (Perner, 1991) or indicative of superficial knowledge of behaviour, are becoming implausible. In the following sections we describe some of these behaviours and the key predictions that they embarrass.

Deception and False Beliefs

The claim that children cannot lie until they pass the false-belief task was made partly on the logic of the theory, and partly on the evidence that children with autism and children under the age of 4 both fail the false-belief task and are reported not to lie (Stouthamer-Loeber, 1986). However, this prediction ran into problems from the start. An early challenge came from Chandler, Fritz and Hala (1989), who showed that children under 3 can deceive in a laboratory task, although this finding was generally dismissed on the grounds that the children were trained to achieve this (Sodian, 1994). There have been more recent laboratory studies, however, which show that children do pass deception tasks even when they fail false-belief tasks (Celani, Battistelli, Marco, & Battacchi, 1998).

The most serious challenge to the prediction, however, comes from studies which have seriously explored naturalistic deceptions and have challenged the theory-theory's reliance on a study showing that parents believe lying to begin at about 4 years (Stouthammer-Loeber, 1986). Parental judgements about when lying begins differ when they are asked in a general way about the past than when they are asked to judge actual

examples in young children (Newton, 1992), and parents often under-estimate children's lying (Wilson, Smith, & Ross, 2003). Using mothers as observers, Newton, Reddy and Bull (2000) found no relationship between the prevalence of different types of lying and performance on false-belief and deception tasks in 3-year-olds. This was so when comparing groups of passers and failers and when comparing the same children over time. Even the lies of a 2½-year-old were not limited to punishment-avoiding or reward-obtaining: they involved a variety of motives such as face-saving, trickery and fun, and were sometimes complex and creative. These findings were confirmed and extended in an observational study of 2-year-olds (Wilson et al., 2003): not only were 2-year-olds telling a variety of lies, but also, quite contrary to previous assumptions, their lies were no more implausible than those of 4-year-olds. What was found to increase with age instead was the frequency and the verbal fluency of the lies. The ability to deceive seems in fact to start in the first year: as any parent knows, children attempt to conceal forbidden actions much earlier than 2 years and deliberately tease with false requests and offers even before the end of the first year (Reddy, 1991); and skills at deceiving continue to develop through (at least) the middle childhood years (Talwar & Lee, 2002). These continuities suggest that tactical deception is not easily explained by the theory-theory. Deception, like any communication, seems to be an early ability, developing in skill at managing information rather than emerging belatedly at 4 years.

   These data cannot be explained away as formulaic verbal strategies, given the variety and complexity of lies in children who should not, according to the theory, be able to lie at all. Nor can they be dismissed as resulting from straightforward reinforcement, given that parental punishment does not relate to the frequency of lying at this age, when parents are far more likely to challenge than to accept the false information and far more likely to punish the transgressing child than, for example, the accused sibling (Wilson et al., 2003). The reinforcement argument is, moreover, a red herring, implying, illogically, that anything learned from reinforcement cannot constitute genuine knowledge.

Correcting Ignorance and Understanding Knowledge

Another related theory-theory prediction is that because children under 4 cannot understand that not perceiving something leads to ignorance about it, they should not be able to correct ignorance caused by lack of perceptual access by giving information appropriately. Standard tests supported this prediction (Pillow, 1989; Pratt & Bryant, 1990; Robinson, Thomas, Parton, & Nye, 1997; Wimmer, Hogrefe, & Perner, 1988), as did young children's inability to take account of people watching while they hide. This was interpreted to mean that while getting out of sight was not a problem for children under 3, getting out of knowledge was (Perner, 1991).

However, two studies suggest that this conclusion is problematic. O'Neill (1996) found that at 3 and even at 2½ years, children appropriately used information about whether or not their mothers had been present when a currently hidden toy had been introduced to them. Those whose mothers had not been present used additional location information while requesting their mothers to give them the toy, suggesting clear awareness of a link between perceptual access and knowledge. In two other studies, using non-verbal measures of 'information-giving' such as pointing and showing, we found that even 18-month-old children discriminated between people who had already witnessed an event or toy, and people who had not witnessed it (Reddy & Simone, 1995; Simone & Reddy, 1997). They selectively reported or showed things to the latter, and when reporting anything to people who already knew about it, did so about specific features of the object or event. Clearly, from the middle of the second year, infants act on people's knowledge and ignorance through selecting both people and information.

Dismissal of these data in terms of physical associations or learned strategies is hard to maintain in the face of the subtlety of these selective acts. It could be argued that the infants may have simply associated someone's physical presence with the target object, or have learned formulae for 'telling' such as 'when someone comes in who has not already been in the room when something interesting has happened, say something about it', or 'when telling somebody about something they have already seen, only tell them specific details', or 'when asking for an object which you saw when the other was not in the room, tell them where it is'. However, such mechanistic explanations may in fact demand considerably greater skill and complexity than the mentalist explanations they are meant to replace (Whiten, 1994). Further, such explanations would leave very obscure the motivation for the children's selective 'telling'. They make a serious mystery of *why* children would want to communicate about things.

Repairing Miscommunication and Understanding Understanding

Similarly, according to theory-theory logic, until children understand mis-representation they should not be able to understand that others have misunderstood or misperceived information and therefore cannot repair these errors. However, children as young as 14 months consistently and sensibly correct others' misunderstandings of their communicative attempts (Golinkoff, 1986, 1993). The response from the proponents of the theory-theory has been, once again, that these corrections could be strategies for achieving instrumental ends or learned conventions of discourse rather than reflecting any awareness of misunderstanding (Shatz & O'Reilly, 1990). Not even the finding that children repaired about as many conversational utterances as they did instrumental imperatives has convinced the critics that these were true repairs. This dismissal seems motivated by a theoretical

opposition to the possibility of early communication, an opposition neatly contained in the somewhat theoretically biased definition of true communication as being that 'in which both participants have equal access to interpretive procedures that entail sophisticated theories of mind' (Shatz & O'Reilly, 1990, p. 142).

Declarative Pointing and Multiple Representations

Such a theory-based definition of communication not only invites infinite circularities, but also turns many acts which look like a communication of information into 'merely behavioural' strategies for the obtaining of behavioural goals. Another example of the problem that the theory-theory faces in explaining early communication concerns the claim that when infants (at the end of the first year) engage in 'communicative' pointing they are indeed communicating something about the world to the other person (e.g. Bates, 1979; Trevarthen & Hubley, 1978). Within the perspective of the theory view, however, this interpretation of infant pointing is unacceptable: such communication would require that the infant should have a grasp of the other person as capable of attending to something, that is, that the infant is capable of representing that the other person can mentally represent something about the world. And such multiple representations of reality are disallowed by (one of the versions of) the theory-theory until about 18 months of age (Perner, 1991). From this perspective, infant pointing at the end of the first year could not really be communication or sharing of the world with another person but must be simply experimentation upon the other's physical reactions (Perner, 1991).

> Given that infants (perhaps innately) find their mother's eyes and gaze so fascinating, I think it equally plausible that infants engage in 'proto-declarative' pointing and check their effect on their mother's eyes because they enjoy their mastery over her eyes. And there is a boost in these mastery activities around 1 year because at this age, as Piaget (1936/1953) observed in his children's interactions with inanimate objects, they are able to combine sensorimotor schemes and start to systematically explore novel effects (tertiary circular reactions). (Perner, 1991, p. 131)

One way of testing the contradiction between these different interpretations would be to consider what children point at in natural circumstances. If Perner is correct and if the motive for pointing is not to communicate about the target, then there should be little significance to the selection of the targets. However, infants don't generally point to things with a primarily experimental motive. In one study of a 14-month-old infant (Reddy, 1992) the majority of proto-declaratives involved the infant having just seen or heard the target, often with positive affect and excitement. Nor, in fact, did gaze to face always accompany the pointing (especially so when communication and a common body orientation with the recipient had already

been established). Perner's mechanistic explanation becomes very hard to envision.

Other challenges to the communication interpretation have sought evidence of conditioning in the emergence of gaze following (Corkum & Moore, 1995, 1998) and of specific facial stimuli eliciting communicative behaviour (Johnson, Booth, & O'Hearn, 2001), and the debate continues in both empirical and theoretical terms (Legerstee & Barillas, 2003; Reddy, 2003). Communication presents a major problem for the theory-theory and for all cognitive-developmental views, which see it, first, as a primarily mental activity, divorced from (or only incidentally related to) the body and its actions, and, second, as the activity of one individual subject towards another rather than as something that emerges between them. For example, intentional communication has been described in the developmental psycho-linguistic literature as the intentional transfer of information by an agent who is aware of the information she wishes to send and aware of the receiving agent's ability to receive it and understand it and understand the intention to send it (Camaioni, 1993). Such definitions presume the existence of a prior script, the isolation of the communicator from the receiver, and a separation of the act of communication from its content, and make the loneliness of the subject almost insurmountable (see Reddy, 1995, for a discussion of other views of intentional communication). From such presumptions, minds become impossible to know and persons become impossible to communicate with. Many theorists who accept that 12-month-olds do communicate nonetheless hold on to the same sort of intellectualist explanation of communication. For example, Tomasello (1999) talks of a socio-cognitive revolution at 9–12 months where the same sort of representational understanding does the same sort of work, only slightly earlier than Perner (1991) suggested. The problem of communication cannot be solved by simply lowering the age at which a theoretical grasp of minds is possible; it needs a solution which avoids the position of initial egocentrism or 'mind-blindness'.

The Theory Problem

The essence of the problem with the theory-theory is its paradoxical and fundamental exclusion of action from the domain of knowing. Despite its commitment to predictions and hypothesis-testing, the theory-theory has emerged, and survives, independently of the evidence of what people actually do in everyday action and interaction. This exclusion of action is paradoxical because the raison d'être of the theory-theory is supposed to be precisely about its consequences for social interaction. But the theory-theory's links to action as evidence, and as test of its claims, are genuinely suspect. The exclusion of action is fundamental because it is unavoidable,

given the theory-theory's premise of the inaccessibility of mind to anything but thought. As Macmurray (1961/1991) puts it, this is the 'egocentric predicament', in which the subject, portrayed as thinker, is necessarily withdrawn from action and relation:

> The act of thinking is constituted by a purely theoretical intention. It involves a withdrawal from action, and so from all positive, practical relations with the Other. When we think, we shut ourselves within the circles of our own ideas and establish, as it were, a methodological solipsism. We behave as though we were 'pure subjects', observers only, unimplicated in the dynamic relatedness of real existence. Our activity, we assume, makes no difference to the things we think about, but only to our ideas of them, upon which alone we are operative. . . . when, for philosophical purposes, we adopt a theoretical standpoint, and so define our own being as that of a thinker or subject, then, whether we are aware of it or not, we transform this methodological solipsism into an existential one. We exist as thinkers. We are imprisoned in an 'egocentric predicament' and there is no way out. *We are committed to explaining knowledge without reference to action.* (pp. 20–21, emphasis added)

To seek to explain how children come to know other minds through explanations of their thinking about minds leads the theory-theorists to a merry-go-round that they cannot jump off. This is the same merry-go-round that psychology finds itself on when it tries to explain its *own* scientific knowledge of minds through its theories and inferences.

Theory without Power?

Theories are supposed to help us literally to 'get ahead' (Karmiloff-Smith & Inhelder, 1974) by predicting events in the world and changing our actions accordingly. The theory-theory, like any other, predicted serious transformations in children's actions, each of which was supposed to lead to improved manipulation of people. However, as we have seen, passing the false-belief test does not give the child the ability to tell lies; passing the knowledge and ignorance test does not give the child the ability to tell others what they need to know; developing multiple representations does not give the child the ability to tell others about the world, or to correct others' misunderstandings about the world. All these predicted benefits of possessing a Theory of Mind have been shown to happen well before the development of the theory supposed to enable them. Why is it so hard to detect in everyday action the transformations which are supposed to follow the achievement of a Theory of Mind? A defence suggesting that the predicted transformations were not actually critical for the theory would vitiate the theory-theory's central claims. There is a further 'defence' that its experimental methodology is not yet sufficiently ecologically and socio-emotionally valid (Astington, 2003). But this leaves us asking why the theory-theory doesn't then directly use everyday action as more valid evidence of knowing minds! Other counter-

explanations, through predicting more graded levels of transformation, also leave the central problem untouched: they would predict a series of smaller transformations, each led by a prior representational advance, and each subject to the same problems.

Redefining Phenomena to Accord with Theory

Having an independent measure of the transformations that it predicts is vital for any theory. However, there is a peculiar redefinitional tendency in the process of building a scientific paradigm, in which the theory not only defines its own investigative remit but also usurps common meanings and thus redefines its evidence. An interesting behaviour, seen as evidence *of* a theoretical claim, soon becomes defined *by* that claim. For example, deceptive behaviour was believed to emerge at 4 years and was used as evidence for the emergence of the understanding of false beliefs at that age. Soon, however, the understanding of false beliefs became the criterion for the acceptance of deceptive behaviour as true evidence; consequently, examples of deception without collateral proof of false-belief understanding were dismissed as inconclusive. This is evident, for example, in Perner's argument that lying in 3 year-olds must be 'pseudo-lies' since they cannot (according to his theory) be the intentional manipulation of another person's beliefs (Perner, 1991). Only by challenging this redefinition can the development of deception actually be explored (as Wilson and colleagues did in their study, by defining deception in functional terms as 'any false statement whose function required that others believe the lie or, at least, act as if they did', Wilson et al., 2003, p. 42).

Similar shifts can be seen in relation to pretend play and communication. Explained as symbolic play by Piaget (1951/1972), pretence began to require evidence of other symbolic skills in order to be accepted as genuine pretence. Pretence was later explained as meta-representation, and its absence, in contrast to the apparently simpler 'functional play', was seen as an important diagnostic criterion in autism (Baron-Cohen, Leslie, & Frith, 1985; Leslie, 1987; however, see Williams, Reddy, & Costall, 2001). Soon, pretence came to be defined within the theory-theory as that which is not functional play. Similarly, some recent definitions of communication derived from the premises of the theory-theory rule out what would otherwise be accepted as communication. Shatz & O'Reilly (1990), for example, define communication as requiring 'interpretive procedures that entail sophisticated theories of mind' (p. 142), and Camaioni (1993) defines it as the intentional transfer of information with an awareness of the recipient's ability to receive and understand the information and the intention to send it. Other-directed acts that do not involve such transfer of information or such theories of mind are deemed pseudo-communication. Given such redefinitions, the club of pseudo-phenomena cannot but grow, adding 'pseudo-repairs' (Shatz &

O'Reilly, 1990) to 'pseudo-lies' (Piaget, 1951/1972) and 'pseudo-conversation' (Kaye, 1982), and probably, although Perner didn't put it this way, 'pseudo-pointing'!

Untestability of Behaviourist vs Mentalist Explanations

The point has often been made, although not often accepted, that the theory-theory is neo-Cartesian in its acceptance of mental substance as essentially different (in terms of observability) from physical substance (Coulter, 1979; Leudar & Costall, 2004; Sharrock & Coulter, 2004). The theory-theory has not only re-created the problem of other minds but has also built the mind–behaviour dualism into a developmental scheme. Despite some views about a starting-state mentalism giving way to representationalism (Gopnik & Wellman, 1992), it is widely presumed that a behaviourist phase of development precedes a mentalist phase. Olson (1988), for instance, argues that an essentially behaviouristic infant develops into an intentionalist toddler and then into a mentalist child. Similarly, Perner (1991) argues that a 'situational theory of behaviour' at 2 years gives way to a mentalistic theory of behaviour at 3 and then to a representational theory of mind at 4. The sequence has also been adopted in relation to evolution, with monkeys being described as good ethologists (reading behaviour but not minds) but poor psychologists (reading minds!) (Cheney & Seyfarth, 1990). In this way, mentality is conceptualized as a gradually emerging intervening variable in the understanding of behaviour, paralleling the emergence of the O in S–O–R (stimulus–organism–response) relationships (Whiten, 1994). The belief in the difficulty in perceiving mentality is still current. Gergely (2003), for instance, is keen to denounce the 'myth of primary inter-subjectivity' by arguing that the only qualities the infant at 2 months can be argued to perceive in others are behavioural contingencies and not psychological qualities.[3]

   The theory-theory's dismissals of the 'reality' of everyday actions that would appear to challenge its predictions have usually been based on this dualism. The 'challenging' behaviours are simply dismissed as 'mere' behaviour. However, the basis of this dismissal cannot itself be tested and neither, therefore, can the theory-theory's developmental claim that a behaviourist phase in understanding others gives way to a mentalist one. The reason for this is clear: the theory-theory assumes that in order to 'prove' a mentalist explanation we need to rule out a behaviourist one. Behavioural associations, in this view, become 'contaminating' factors in the search for evidence of mind knowledge. However, since behavioural explanations of an associationistic kind can never be ruled out, and, furthermore, claims about mind can never be divorced from claims about behaviour (unless we are talking about telepathy), we are faced with an untestable developmental hypothesis and the theory is shielded by another circularity.

Take for example, Perner's dismissal of proto-declarative pointing at 12 months as being merely due to a behavioural association. This explanation could never be disproved since any pointing, however complex, and even if performed by adults, could always be seen to have prior associations with people's reactions and reinforcements of some kind.[4] The challenge we offered in terms of complex and systematic patterns of what infants point to is therefore not ultimately a challenge to Perner's dismissal at all. However, by the same token, neither is Perner's dismissal a challenge to a mentalist interpretation of these infant actions. If a behaviourist explanation cannot be tested and rejected, then neither can a mentalist one be tested and accepted. The solution to this dilemma can only come from avoiding this dualist trap and taking action seriously by envisaging it as embodied mind.

In summary, the theory-theory has entered into a peculiar relationship with everyday action. The original excitement of the theory-theory lay in the transformational power that a Theory of Mind was believed to have over the everyday actions of typically developing children and perhaps some apes, and to fail to have on the everyday actions of children and adults with some disorders. The representational structures of a Theory of Mind should, according to the theory, show up as serious transformations in everyday life. From the standpoint of this claim, therefore, the theory-theory cannot simply dismiss evidence relating to everyday actions as irrelevant and misleading. However, this is precisely what the theory-theory has done with the challenging evidence of everyday actions in young children. It has done this by invoking the Cartesian gulf between mind and behaviour (without its first-person privilege) and therefore between the understanding of mind and the understanding of behaviour. This gulf allows the theory-theory to make its claims about its representational structures radically transforming everyday actions and yet hide from tests of these claims by being able to dismiss everyday actions as mere behaviour.

Towards an Approach from Engagement

Most of the empirical challenges to theory-theory predictions that we have described have come from actual engagement outside the laboratory between infants and adults. We suggest that it is in engagement with other people rather than in thought that people normally and fundamentally know other people as intentional beings (see also Hobson, 2002).

Engagement gives you access to information that is otherwise much less obvious. As normal adult humans we are enormously sensitive in our interactions with others to the subtleties of contingency and responsiveness, of emotional attentiveness, of responsive or emotion-filled pauses, of the coordination of different aspects of the other's expressions—widening of the eyes, partial opening of the mouth, sudden stilling of the limbs, the quality

of the attention directed to us—in invitation or response to us. This information can still be gained from watching someone else interact, but with more difficulty and often only convincing if presented with detailed statistical analyses. For example, at a conference in 1993, the late Professor Liz Bates commented in response to another speaker's paper on neonatal imitation that she had not believed it existed until she had tried it herself in engagement with her newborn daughter. Now her scepticism was about its significance not about its existence. The challenges to the theory-theory, many of which come from psychologists' own engagement in the first instance with their infants, further support this point.

There is a deeper dimension to engagement than simply being closer to the scene: one is also 'inside' the scene in a different way. Macmurray (1961/1991) argues that we can know other people as people only by relating to them as intentional beings. As he puts it, 'I can know another person as a person only by entering into personal relation with him. Without this I can know him only by observation and inference; only objectively' (p. 28). In a personal relation we do not see the other just as an object making sounds and movements (although we also see these): 'what we apprehend through these are the intentions, the feelings, the thoughts of another person who is in communication with ourselves' (p. 34). In contrast, in an impersonal way of relating to people, we see them as objects (even if objects of interest), perhaps focusing deliberately on the movements and sounds they make, treating them as phenomena to be reflected upon and understood. Martin Buber (1958) made a similar point when he talked of the primacy of the *I–Thou* relation, a way of relating (whether to a person or a tree) that involves openness and complete presence in the engagement. In contrast, the *I–It* mode of relating involves distance between the self and the other, seeing the other as an *It* to be reflected upon. When we enter into engagement with an infant we naturally, even if for short times, treat the infant, and are treated by the infant, as a person, a *Thou*, not an object or *It*. What difference does this make to how we know them and how they know us?

An example of a beautiful but disengaged observation from Piaget (1951/1972) might throw some light on this question.

> OBS 63. At O;10(3) J. put her nose close to her mother's cheek and then pressed against it, which forced her to breathe much more loudly. This phenomenon at once interested her, but instead of merely repeating it or varying it so as to investigate it, she quickly complicated it for the fun of it; she drew back an inch or two, screwed up her nose, sniffed and breathed out alternately very hard (as if she were blowing her nose), then again thrust her nose against her mother's cheek, laughing heartily. These actions were repeated at least once a day for more than a month, as a ritual. (Piaget, 1951/1972, p. 94)

Piaget's observation focuses on the individual actions and sensory interests

of Jacqueline. They do not include reactions from others or from himself. In this particular instance, however, it is hard to believe that the mother, whose cheek was being rubbed and breathed into, and whose ears were filled with a 10-month-old daughter's hearty laughter, did not react at all. Or that on subsequent occasions, there were either no reactions from other people or that they had no impact on Jacqueline's actions and interests. His observation of Jacqueline, although containing some acute perceptions of her intentionality, curiosity and playfulness, nonetheless portrays her as separated from and unengaged with himself.

There is something different about relating to the other person as a *Thou*, in the second person, rather than as a *He* or a *She*, in the third person; or to use Macmurray's terminology, as a person rather than as object. Within such a relation there is always emotional engagement, however mild and indifferent, and this emotionality is the medium within which people (self or others) are known. Although emotional engagement can exist, even to a person with whom we are not in direct engagement, as when we are watching a film, or watching two people argue on the street, it is often the case that our engagement as observers, especially if it is intense, involves some sort of identification with one of the people we are observing, making the other into a sort of *Thou*. The emotionality in an *I–Thou* exchange informs the 'observation' in fundamental ways. Consider the following examples: a baby laughs at something you have said; a student looks hurt when you laugh; a colleague moves aside as you pass by; a neighbour smiles when your eyes meet. And consider in contrast: a baby laughs at her mother; a student looks hurt when someone laughs; a colleague steps aside as someone passes by; a neighbour smiles at someone. Although even as an observer, you might appreciate the laugh, the look of hurt, the avoidance and the smile, the emotion they arouse in you is likely to be different when they are directed at you (or at someone you are identifying with). Your feeling of pride when you have made the baby laugh, your feeling of guilt at hurting the student, bewilderment when the colleague avoids you or pleasure when your neighbour smiles at you are constitutive of your perception of the person. It cannot be otherwise.

And the same is true of infants' perceptions of us in their engagement with us. In engagement they are not confronted with objects whose movements they need to match with (or interpret through) something else in order to understand what they mean. This is the way in which the problem of other minds is sometimes expressed—that is, as the need for a bridge between third-person perceptions and first-person experience (Barresi & Moore, 1996). In engagement, however, the infant is not observing others as objects, from a third-person perspective, but rather is experiencing them as intentional beings in relation with their own intentionality, as second persons (Reddy, 1996). The fact of engagement necessitates that the other is included

in some sort of 'field of the personal'. If this were not the case, we would have very odd engagements indeed, engagements worthy of the label 'autistic', which some authors use to characterize the period of awareness before the development of intellectual bridges between minds (Barresi & Moore, 1996; famously Mahler, Pine, & Bergman, 1975; but see Williams, 2004).

There is a third and vital aspect of engaging with persons as persons: genuine engagement actually creates the minds that are there to be known. Take, for instance, the specific observation described above of Jacqueline by Piaget. It is common practice, and one that we have often been guilty of, to deliberately refrain from action in order not to influence some curious behaviour one is observing. If Piaget had been always, rather than temporarily, emotionally disengaged from Jacqueline's action, there is little doubt that its meaning—both for her and for him—would change. It would involve a major disengagement from Jacqueline as a person. The theory of the individual infant would, in this case, in fact be creating an individual infant given to solitary explorations. The way in which we allow ourselves to engage with others circumscribes the way in which we can know them. You might say, the more we engage with others, the more there is to engage with.

So what does happen in infant–adult interaction according to the story depicted by the theory-theory? The answer is profoundly puzzling: a series of mutual misunderstandings would have to fortuitously give rise to 'correct' mutual understanding (see also Leudar, 1991). The mother of an infant at 2, or 12 or even 14 months would, in this view, have to misinterpret her baby's acts as being conversational or informative or corrective, misattributing to the baby a knowledge of minds that they do not have. On the other side of the engagement, the baby in interacting with the mother must misinterpret the mother's reactions as having a mindlessness that they do not have. And somehow these two sets of misunderstandings of each other's mentality must conclude in a situation where both partners reach a more mutually acceptable or veridical understanding of each other's intentionality. Given that the theory-theory does not accept that infants can have genuine engagement with other people as intentional beings, it is indeed a mystery how this series of mutual misinterpretations ever allows the infant to have anything other than 'pseudo'-awareness leading to pseudo-theories of mind.

Theorizing *presupposes* the knowledge of others that is evident in engagement. Reflections upon, and theories about, other people's intentions and motivations do enter into everyday discourse, but these are developmentally and experientially secondary to actual engagement with these intentions and motivations. The theory-theory has simply not taken early development and engagement seriously enough.

Notes

1. One key difference between their positions appears to be that while Gopnik and Wellman (1992) view the transition from infancy to childhood as one of an increasing understanding of representations—'children seem to start out as mentalists though they learn to be representationalists' (p. 150)—many others, such as Perner (1991) and possibly Astington (1995), see the development as a transition from a behaviourist understanding to a mentalist one.

2. Their own judgements do tend to be forgotten, however, or even replaced by more complex experiences, as the children grow and become more skilful. This might also explain persistent theoretical differences between psychologists whose experience is mainly that of older children and those who work mainly with infants, that is, the difference between 'scoffers' and 'boosters' noted by Chandler (Chandler, Fritz, & Hala, 1989; see also Zeedyk, 1997, for a similar finding regarding shifts in parental perceptions of infant intentionality).

3. Gergely, interestingly, portrays the intersubjectivity position as neo-Cartesian and his own as anti-Cartesian since it rejects the privileged access of the first person. However, Gergely's position, along with many others, is better described as a Cartesian one (continuing its separation of mental and physical qualities) but giving privileged access to the third person. Our position, on the contrary, seeks to give privileged access to the second person, and, by so doing, necessarily accept the transparency of mind in action.

4. A common feature of this paradigm has been to see the ability to speak about mental states as clear evidence of a mentalist conception. However, speaking about mental states is itself a 'behaviour' (see also Sharrock & Coulter, 2004) and therefore also subject to the same associations that the theory-theory sees as undermining the mentalistic significance of non-verbal actions such as pointing and so on.

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