

Theory of Mind

A Critical Assessment

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ABSTRACT. The 'Theory of Mind' approach has been associated with probably the fastest-growing body of empirical research in psychology over the last 25 years, and has given rise to a range of different theoretical positions and elaborations within those positions. The basic idea is that understanding other people involves bridging a gulf between observed 'behaviour' and hidden mental states by means of a theory. The articles in this Special Issue subject 'Theory of Mind' to sustained critical scrutiny, and also present alternative accounts of how we make sense of—and *make* sense *to*—other people. They trace the historical sources of 'Theory of Mind', criticize its fundamental assumptions and favoured methods, and examine its applications to child development and the explanation of schizophrenia and autism.

KEY WORDS: cognitivism, dualism, folk psychology, Theory of Mind

Theory of Mind (ToM) is defined in psychology as the ability to impute mental states to others and to oneself (e.g. Premack, 1976). Doing this is referred to as 'mind-reading' or 'mentalizing' (e.g. Whiten & Perner, 1991) and it is seen as being essential to both self-reflection and coordinated social action. Indeed, the assumption that social action entails 'mind-reading' has come to make it seem the preserve of cognitive psychology. Whereas in the 1940s and 1950s there was an attempt to ground 'cognition' in the social, there is now supposedly a 'consensus that any respectable cognitive science will have to hold itself responsible for explaining the development of distinctively social cognitive capacities' (Slater, 1996, p. 141).

The expression 'theory of mind' was originally coined in 1978 by Premack in his research on the intentionality of primates (Premack, 1976;

Premack & Woodruff, 1978). The concept of ToM has been adopted by developmental psychologists to explain the development of social cognition (Bretherton, McNew, & Beeghly-Smith, 1981; Perner & Wimmer, 1985), and it has also been used to explain psychiatric disorders such as autism (e.g. Baron-Cohen, Leslie, & Frith, 1985) and more recently schizophrenia (e.g. Frith & Corcoran, 1996).

The ToM framework has been associated with probably the fastest-growing body of empirical research in psychology over the last 25 years, and has also given rise to a range of different theoretical positions and elaborations within those positions. Yet the approach has so far escaped a serious assessment or historical investigation, and has avoided any sustained engagement with alternative explanations of social action, such as discursive psychology, ethnomethodology or sociocultural psychology. By comparison with the wealth of articles and books published by proponents of ToM, the critical literature on ToM is rather small, consisting of a few articles and monographs taking issue with its assumptions (e.g. Hobson, 1991), methods (Dunn, 1988; Reddy, 1991) and findings (McCabe, Leudar, & Antaki, 2004). The limited published criticism directed against ToM has been simply ignored. To our knowledge there exists not a single published response in which members of the ToM community address systematically and carefully the objections to their programme. Indeed, studies that would seem to contradict ToM are either ignored or subjected to considerably more scrutiny than confirmatory findings. The hypothesis of 'Theory of Mind' has become so much a part of the furniture in developmental and cognitive psychology that it is often confused with the phenomena it was introduced to explain.

The Theory of Mind framework is important, and not just because it has captured the imaginations of many psychologists and is producing a large body of research. The framework is also fairly representative of contemporary cognitive psychology and so of its problems. Interpersonal understanding is seen as a theoretical accomplishment, involving a person constructing and using a 'theory' of other people's minds, as well as their own. Applying the theory to observable behaviour enables the individual to interpret that behaviour in intentional terms and as the product of specific mental states. The ToM framework is a development of philosophical cognitivism and especially of the conception of 'folk psychology' (see, e.g., Bennett, 1976; Dennett, 1979). ToM in return holds out the prospect of empirical confirmation of the philosophical claim that our ordinary, commonsense understandings of mental life amount to a contingent, empirical theory of mind (e.g. Wellman, 1990). Ivan Leudar and Alan Costall note in their historical analysis below that this feature of the ToM framework—treating children and adults as theoreticians—is not actually an empirical discovery at all, but a background assumption inherited from Chomsky's psychology of language. Most of the contributors to this issue argue that the ToM framework inappropriately intellectualizes everyday social activities

(see especially Shanker, Sharrock and Coulter, and Costall and Leudar). Most of the contributors also go beyond a critique and provide alternative, praxiologically based accounts. Charles Antaki uses conversation analysis to demonstrate that conversations, even those involving participants with supposed ToM deficits, are organized so that participants' communicative intentions and background beliefs are obvious, without a need for inference. Stuart Shanker provides an account of autism which dispenses with the need for the Theory of Mind. He argues that the ability to understand someone else's thoughts and emotions develops in everyday social interactions alongside the child's own emotions and sense of self, and children with autism are socially impaired because their endowment prevents them from participating in mutually coordinated interactive experiences. Tommaso Colombino shows that ToM does not provide a model of autism that is useful or sustainable in classroom interactions involving children with this disorder. Rosemarie McCabe discusses why individuals with schizophrenia who fare badly on formal tests of ToM aptitude have no problems in managing intentionality in interactions outside of the laboratory.

According to the ToM framework, we are all supposed to invoke 'mental states' to 'explain' and 'predict' behaviour, and these are theoretical entities which are not publicly observable but must be *inferred* from that very behaviour. Thus ToM works with intellectualized, private, disembodied and de-situated cognitions, sharply distinguished from physical 'behaviours', where the cognitions explain the behaviour and give it meaning. It treats the distinction between behaviour and 'cognitions' not as culturally contingent, but as a natural one to be discovered by developing children. This account of intentionality is profoundly Cartesian—epistemically and methodologically dualist—as most of the contributions to this issue note. Leudar and Costall provide a genealogy of the ToM framework and conclude that the Cartesian framework of ToM is mediated by Chomsky's psychology (e.g. his scorn for behaviourism and mere behaviour) and by his and Grice's conception of pragmatics, which inherits and passes on 'the problem of other minds'. As Shanker comments, it is so very easy to regard Descartes' epistemic dualism as a profound insight, which is precisely what has happened within the confines of the ToM. Indeed, within the ToM framework, the child has to discover the 'proper' understanding of other minds (as opposed to the mere *appearance* of understanding on the part of very young children or chimpanzees or dogs), thus recapitulating Descartes' accomplishment.¹ Sharrock and Coulter challenge this point of view head on and demonstrate that we could not, in principle, learn to know about such individualized and occluded Cartesian mental states. What is learned is a language in which behaviour is a criterion of co-extensive intentionality, not evidence of 'mental states' elsewhere.² Costall and Leudar note further that the problem of other minds characteristic of ToM may in fact reflect an adherence to a more profound

dualism—that between ‘appearance’ and ‘reality’. This is tied to psychology’s desire to be one of the natural sciences, which are seen as discovering hidden order on the basis of observable but superficial evidence. They note that this dualism is not merely philosophical but inscribed in the methods of investigation within psychology. The alternative to the mind/behaviour epistemic dualism of ToM is to take situated social actions as the object of psychology, whose intentionality is directly graspable, without the benefit of an inference or a mediating theory (e.g. Costall & Leudar, 1996; Still & Costall, 1991). This is a position argued by the psychologists contributing to this issue.

What, then, is a proper method of investigation in psychology? Most researchers on ToM conduct experiments to test hypotheses about children’s ability to represent the intentions of others, rather than observe and analyse their intentionality in spontaneous social interactions. These two methods yield very different results. The evidence from the experimental investigations indicates that children usually acquire adult-like ToM sometime between 3 and 4 years of age (e.g. Perner & Wimmer, 1985). As Vasu Reddy and Paul Morris point out below, the observational investigations of children in their families, on the other hand, would seem to demonstrate that even very small infants are capable of teasing, comforting, deceiving, helping, joking—behaviours which all presuppose understanding psychological states of other people (e.g. Dunn, 1988; Reddy, 1991). A similar discrepancy between the experimental and observational findings also applies to individuals with autism and schizophrenia (e.g. McCabe et al., 2004).

The ecologically sound observational and analytic methods are widely dismissed by the experimentalists as providing no more than merely ‘anecdotal’ evidence. Yet the experiments substitute abstract puzzle solving for situated, collaborative and embodied management of intentionality. The pertinent conceptual issue concerns the relationship between the experiments and the theories. The experiments do not just ‘test’ the theory, but themselves reproduce the unnoticed assumptions of the theory. The ToM approach and false belief tasks both intellectualize intentionality and put abstract solipsistic reasoning about solipsistic mental states on the centre stage. Moreover, as Danziger (1989) has cogently argued, psychological experiments cannot be thought of as experiments in, say, chemistry—they are inevitably situated social interactions (if of an odd and impoverished kind). There are, then, two general issues involved: the nature of social interactions that take place in ToM experiments; and how the claimed results relate to the theory which has, one might say, *co-produced* them.

Being an account of how children learn to ‘mind-read’, ToM is inevitably also a model of how children come to be able to participate in complex social interactions. The assumption is that social life is underwritten by a

theory. Yet children are clearly able to live rich social lives before they supposedly acquire ToM, and, despite their lack of ToM, appear in no way autistic. Furthermore, not only young children but also primates and individuals with autism and schizophrenia (also allegedly lacking a Theory of Mind) are nevertheless able to *participate* in the experiments that purport to show that they lack a Theory of Mind. Below Vasu Reddy and Paul Morris examine the place of Theory of Mind in developmental psychology, and in particular the ways in which Theory of Mind has protected itself from evidence of the understanding of other people by very young children by insisting that such participatory understanding must be deemed inferior, even spurious: the pseudo-understanding of mind. They challenge this pervasive view, arguing that engagement with others should be regarded as *fundamental* to a proper understanding of other people—not just developmentally but scientifically. They argue that ToM both treats people as ‘objects’ in the sense implied by MacMurray (1961) and postulates that ordinary folk learn about other people in this way.

Emma Williams has analysed the autobiographies of several adults diagnosed as autistic concerning the difficulties they experience in relating to other people, and reinforces the point made in many of the articles in this Special Issue that theorizing about mind can only be derivative. Effective theorizing, and the effective deployment of that theory, presupposes an understanding of other people. As the case studies she examines make clear, it is people with autism who are obliged to resort to theory in understanding other people in a serious and sustained way. However, because of the inability to relate more fundamentally to others in an *engaged* way, not only are the theories they develop very stilted, but they are also applied to specific situations in a rigid and ultimately ineffective way. We can learn from Ryle (1949) here: *successful* theory presupposes successful practice.

This Special Issue of *Theory & Psychology* addresses all these problems. We aim partly to remedy the existing lack of analysis and critique of ToM, and provide theoretical and methodological alternatives to it as a study of activity. We:

- elucidate the historical roots of the ToM framework;
- critically analyse the philosophical bases of ToM;
- analyse ToM as a representative cognitive psychological paradigm, subjecting it to critique;
- discuss the applications of ToM to child development;
- evaluate the methods used to investigate ToM;
- question the attempts to use ToM to explain schizophrenia and autism; and
- provide alternatives to ToM with respect to how human intentional action should be understood.

Notes

1. One pertinent debate in the ToM framework concerns the evolutionary continuity/discontinuity of behavioural and 'representational capacities'. The researchers attempt to determine whether humans are a unique species in having a Theory of Mind (or 'folk psychology') and using it to coordinate social interactions (e.g. Byrne & Whiten, 1988). According to Whiten and Perner (1991), ToM evolved because it provides a social advantage—'it allows a primate to outcompete its companions' (cf. Suddendorf & Whiten, 2001). The research on primates is set in parallel with that on children, despite the fact that both live in very different situations. Both are approached as cognitively unknown and possibly devoid of intentionality (e.g. Premack, 1976).
2. Within the ToM paradigm there is in fact a debate between nativist brain reductionism and functionalism. As Leslie (2000) has recently put it, there are two main positions regarding how the child comes to 'possess' an adult ToM. According to *theory-theory* (Perner, 1991; Wellman, 1990), the child learns to theorize much as scientists are supposed to do. Leslie (1987, 1994), however, believes that a child's increasing competence at mentalizing does not reflect learning, but maturation of a 'ToM module' that 'helps normally developing children to attend to the *invisible* mental states of others' (Leslie, 2000, p. 61, emphasis added). These two conceptions of ToM differ with respect to their degree of biological and evolutionary reductionism, but they share the same basic idea, still prevalent in much of contemporary psychology—that understanding other minds involves a *leap* from the visible behaviour to an essentially occult mind.

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