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Perceiving Attitudes,
Conceiving Minds

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INTRODUCTION

One of the most challenging theoretical tasks for developmental psychology is to characterise the transition between an infant's modes of communicating with other people in the first year of life, and the emergence of a young child's increasingly sophisticated concepts of mind over the ensuing three or four years. In this chapter I shall offer an account that begins with the infant's abilities to perceive certain forms of "attitude" in the behaviour of other people, and ends with the young child's insight into the nature of intentional mental states. I shall be emphasising not only the special qualities of personal relatedness and interpersonal engagement that make this progression possible, but also the significance of a one-year-old's ability to perceive the directness of another person's attitudes towards a visually specified world. I shall argue that the child's capacity to disembed from his or her own perspective vis-à-vis the world, and to engage in creative symbolic play, are important stepping-stones along this social-development pathway.

I shall proceed by analysing each of the terms I have employed in the title of my chapter. I shall need to introduce a further notion to weld together the business of perceiving attitudes on the one hand, and conceiving of minds on the other—the young child's developing concept of "persons."

PERCEIVING ATTITUDES

In the Beginning

Let me begin with the notion of perception, as this applies to the period of infancy. Perception is relational. By this I mean that the very act of perceiving is bound up with the infant's propensities to action and feeling towards the world-as-perceived. Heinz Werner (1948) tried to capture this by writing of the "things of action" or "signal things" in the primitive world of animals or young children. The signal-qualities in the environment depend not only on the biologically relevant characteristics of what is perceived, but also on an organism's readiness for action. Correspondingly (Werner, 1948, pp. 65-6; see also Piaget, 1972): "the affective and motor behavior of the child impresses itself on the world of things and fashions it... In fact, things are often not known at all unless they are known motor-affectively, that is, according to their pragmatic value for the subject." Werner emphasises how physiognomic as opposed to matter-of-fact perception has special importance in the social domain (1948, pp. 69, 76): "In our own sphere there is one field where objects are commonly perceived as directly expressing an inner life. This is in our perception of the faces and bodily movements of human beings and higher animals... The relatively early understanding of human expressions and gestures is possible because of the early development of physiognomic perception." So for example, when an infant (or an older child or adult, come to that) perceives another person's infectious smile as a smile, or perceives someone's angry growl as a personally meaningful event, this mode of apprehending emotional meaning entails that the individual has an inclination to respond to the person concerned with appropriate motor-affective behaviour and attitudes. A child's understanding of what people's emotional expressions *are*—expressions of subjective mental life, as well as gestures that occur when a person faces emotion-arousing circumstances and reacts with emotion-typical styles of action—is grounded in such biologically provided perceptual-affective processes.

These considerations give prominence to the role of "attitudes" in establishing interpersonal relatedness. Not only does the infant have perceptible attitudes of its own, but also from around two months of age, the infant appears to react to certain of the bodily expressed attitudes of another person who is engaged with the infant in face-to-face exchanges (Haviland & Lelwica, 1987; Murray & Trevarthen, 1985). Of course, this is not to say that an infant has a conception of what attitudes are, any more than he or she has a conception of what things are. Rather, the infant can be observed to respond to meanings perceived in the bodies and behaviour of other people, meanings that we as adults know to have significance as expressions of a person's psychological state.

Now it is essential to the nature of attitudes that they have a subjective dimension. We know "what it is like" to be angry about something, jealous of someone, interested in events, and so on (Nagel, 1979). It is also the case that *certain* attitudes have overt behavioural manifestations. Indeed, Warren and Jahoda (1973) suggest that, a little over one hundred years ago, the term "attitude" was used exclusively to refer to a person's posture, for instance the posture associated with a threatening attitude. As a class, therefore, attitudes have *both* mental *and* bodily attributes. This is significant for our account of how a child's understanding of the mind, as well as the child's ability to read the mind in a person's expressions and other behaviour, originates. More specifically, it suggests that we might characterise the earliest stages of interpersonal perception not in terms of an infant perceiving (what we call) bodies, nor in terms of the infant perceiving (what we call) minds, but rather in terms of the infant perceiving and relating to person-anchored attitudes that the older child comes to conceptualise as having bodily and mental aspects.

Thus far, I have focused upon person-to-person perception and relatedness. Before I move on to consider more sophisticated forms of "perceiving attitudes," I need to amplify the implications of what I have described. I have been dealing with what Werner and Kaplan (1984) call the primordial sharing situation between infant and caretaker, and what Trevarthen (1979) calls primary intersubjectivity. I have drawn attention to the way in which an infant's attitudes may be configured in accordance with his or her perception of the attitudes of other people. Such interpersonal coordination often, but by no means always, involves a sharing of similar feelings between infant and caretaker; for example, an infant might be angry when the caretaker is disapproving and restraining. Nor do the means to emotional contact between infant and caretaker always involve the mutual sharing and perceiving of universal facial and vocal expressions of affect such as those of happiness, anger, or fear (Ekman & Friesen, 1975; Izard, 1977). There are more subtle but equally significant patterns in the timing and strength of a person's bodily gestures that influence the affective states of someone else (Stern, 1985). Having said this, we as adults observe (in behaviour) that the psychological states of infant and caretaker often correspond in one way or another, and there is indication that each member of the dyad registers and even seeks harmonious communion (e.g. Murray & Trevarthen, 1985). The crux is that there is such a thing as "emotional contact" between an infant and caretaker, just as there is between one adult and another, and human beings have the capacity to perceive when this occurs or fails to occur between themselves and others. Correspondingly, there are primitive mechanisms for establishing and registering psychological connectedness between one individual and another. These are givens of human psychology. It would also appear that

infants can perceive when there is interpersonal disconnectedness, and this implies that they have the capacity to discriminate between states of self-other congruence and self-other disparity. In summary, therefore, intersubjective engagement and mental co-ordination between infant and caretaker entail that the infant's attitudes are altered and shaped by the infant's perception of those aspects of the caretaker's behaviour that we as adults conceptualise as manifestations of attitudes, especially emotional attitudes.

Attitudes involve more than bodily expressible feeling states, however. Attitudes are directed towards "objects." If an individual has a fearful attitude, this entails not only that her behaviour and subjective experience has a quality of fearfulness about it, but also that there is something that is feared. The complication is that what is feared may "exist" only in the mind of the individual. Here we encounter the fact that, being mental states, attitudes have intentionality (Brentano, 1874/1973, p. 88):

Every mental phenomenon is characterized by what the Scholastics of the Middle Ages called the intentional (or mental) inexistence of an object, and what we might call, though not wholly unambiguously, reference to a content, direction toward an object (which is not to be understood here as meaning a thing, or immanent objectivity. Every mental phenomenon includes something as object within itself, although they do not all do so in the same way. In presentation something is presented, in judgment something is affirmed or denied, in love loved, in hate hated, in desire desired and so on. This intentional in-existence is characteristic exclusively of mental phenomena.

On the one hand, we can often perceive what it is that another person fears, loves and so on. As Bechtel (1988) notes, the intentionality of mental states has to do with their ability to be about events in the world, and we can often see what is at the focus of someone else's attitude. On the other hand, the object or focus of an attitude may exist only in the mind of the person who has the attitude. Moreover, what a person judges, loves, or hates is something that falls under a particular description *for* that person. For example, a person may be afraid of his shadow, thinking that it is a menacing pursuer; or another might fear eternal damnation. One way of characterising this aspect of mental states is to say that a person can "misrepresent" one thing as another, or can represent something as having properties it does not have, or can (re)present something that does not exist (Leslie, 1987). What a single object or event is represented as, may differ from person to person.

Therefore, if children are going to acquire an understanding of what attitudes are, they will need to grasp at least two things: Firstly, they must understand the kinds of subjectively experienced and qualitatively distinct psychological-cum-behavioural states that characterise each of a range of

attitudes, not only different states of feeling (whether fear, envy, competitiveness, love, or whatever), but also attitudes that are implicated in pretending, believing and knowing; and secondly, they must understand the ways in which such states are directed towards actual or merely potential situations and events in the world, as these fall under descriptions for the individual whose states they are.

I shall come to some special properties of propositional attitudes, attitudes such as pretending or believing *that* such-and-such is the case, when I come to consider a child's growing conception of mind. For now, I want to argue (as I have in earlier papers: Hobson, 1990a; 1991) that a critical stage in the elaboration of interpersonal, and therefore psychological, understanding occurs when, towards the end of the first year of life, an infant begins to relate to another person's attitudes as these are "directed" to objects and events in a shared, visually specified world.

The Relatedness Triangle

The period from about eight months of age, what Trevarthen and Hubley (1978) call the phase of secondary intersubjectivity, is one in which an infant acquires new ways of relating to the care giver as a person. In particular, the infant co-ordinates object-directed actions and attitudes with interpersonal sharing and exchange (Bakeman & Adamson, 1982; Sugarman, 1984). I am going to speak of the "relatedness triangle" when referring to such instances of person-with-person co-reference in relation to things. Examples are when the infant shows things to another person, checking whether the person is attending by looking to the person's eyes; when the infant engages in "social referencing," seeking out another person's emotional attitude to events in the environment, and altering her own attitudes to these events accordingly; when the infant follows the eye-gaze or point of someone else, again with checking-back; or when he or she requests help with something or responds to simple requests. In each case, infants not only relate to another person and to the nonpersonal world of objects and events, but they also relate to the *other person's* relatedness towards the world and towards themselves—the relatedness triangle among self, other, and the environment. Around the end of the first year of life, the infant also initiates as well as accepts invitations to games such as peek-a-boo, gives a shake of the head to express refusal, imitates conventional gestures (e.g. hugging) as well as actions on objects, begins to pretend-copy others' activities such as telephoning or mopping the floor, and utters greetings and uses name-like words (Bretherton, McNew, & Beeghly-Smith, 1981; Klinnert, Campos, Sorce, Emde, & Svejda, 1983; Trevarthen & Hubley, 1978).

I have already emphasised that in the months leading up to this time, the infant is able to register forms of one-to-one, intersubjective "sharing" with

another person (Hobson, 1989a; Mundy & Sigman, 1989; Rogers & Pennington, 1991). What is new beyond the age of eight months or so is that the infant shares experiences of the world "out there," both intending to establish such interpersonally co-ordinated attitudes in showing things to someone else and monitoring that person's reactions, and being interested in following another person's focus of attention in order to establish psychological "co-orientation" vis-à-vis objects and events in the surroundings. In requesting actions, initiating games, communicating refusal, making greetings, and so on, infants are also engaging with and relating to the other person's attitudes and intentions towards themselves. The infants' capacity to imitate conventional actions and gestures reveals how they can identify with and assume the attitudes and actions of another person. Infants appreciate not only that they and others have the capacity to share, but that they are also psychologically distinct (Bretherton et al., 1981; Hobson, 1990b).

It is not clear how we should account for the transition into the phase of secondary intersubjectivity. It may very well be the case that at this time in infancy, endogenous factors to do with maturation of the nervous system play an important role in furthering both cognitive and social development. However, there is also evidence for a newly established linkage across two relatively distinct lines of development. Sugarman (1984) reported that only when infants could co-ordinate objects in an instrumental fashion at around eight to ten months of age, for example in using a support to reach an object, were they able to "use" someone else to reach something, or "use" an object to gain someone's attention (also Bates, 1979; Bates, Benigni, Bretherton, Camaioni, & Volterra, 1979). This suggests that some generalised ability associated with means-ends understanding finds special application in the social arena. Having said this, it is also obvious that another person is *not* used just like a mechanical tool or even a robot, for in such circumstances the child will often smile or vocalise towards the person without physically manipulating her. As Camaioni (1992) stresses, to engage with someone as a communicative partner is very different from attributing autonomous behaviour or mere "instrumentality" to others.

Comparative studies highlight what is at stake here. Gomez (1991) describes how the young hand-reared gorilla masters tool use several months *before* she is able to attract attention from and communicate requests to another person. This is similar to the developmental progression one sometimes observes in young children with autism, who may take hold of a person's hand and treat it as if it were a mechanical tool (albeit at times, like a tool with some agent-like properties such as a capacity to move itself). Kanner (1943, p. 247) portrays this impersonal attitude as follows:

If the adults did not try to enter the [autistic] child's domain, he would at times, while moving between them, gently touch a hand or a knee as on other occasions he patted the desk or the couch. But he never looked into anyone's face. If an adult forcibly intruded himself by taking a block away or stepping on an object that the child needed, the child struggled and became angry with the hand or the foot, which was dealt with *per se* and not as a part of a person. He never addressed a word or a look to the owner of the hand or foot. When the object was retrieved, the child's mood changed abruptly to one of placidity. When pricked, he showed fear of the *pin* but not of the person who pricked him.

Let us tentatively suppose that one constraint on person-person-object co-ordination is an infant's grasp of means-ends relations, or something related to this. What the above set of observations suggest is that, in the case of normal infants, an awareness of persons as subjects of experience is in place "ready and waiting" for the cognitive advance of means-ends understanding to usher in the stage of secondary intersubjectivity and person-person-object co-ordination. This is not so for gorillas, nor for autistic individuals. As Gomez (1991) argues for the case of the gorilla, and as I have argued for the case of the child with autism (Hobson, 1982; 1989b), it is just a sufficiently elaborated awareness of persons as "subjects of experience" that seems to be slow in developing and perhaps limited in depth in these individuals. It is a limitation that is rendered conspicuous by the dissociation between nonsocial and social abilities that emerge simultaneously in normal development.

The comparative perspective reveals something further. The specific constraints in social understanding amongst gorillas and autistic children are reflected at a succeeding stage of development, when such individuals *do* come to exhibit requesting behaviour that may involve eye-contact and communicative gestures to another person. In normal infants towards the end of the first year, communicative acts of requesting ("protoimperatives") emerge at roughly the same time as those aimed at sharing experiences ("protodeclaratives") (Bates et al., 1979). This is not the case with gorillas, who exhibit protoimperative but not protodeclarative gestures (Gomez, Sarria, & Tamarit, 1993). So, too, young autistic children who are able to regulate an adult's behaviour to achieve an environmental end such as getting food, typically do not try to direct the adult's attention towards themselves or to an object, as an end in and of itself (Curcio, 1978; Loveland & Landry, 1986; Sigman, Mundy, Sherman, & Ungerer, 1986; Wetherby & Prutting, 1984; also Baron-Cohen, 1989). To communicate requests is one thing; to communicate for the sake of communicating and sharing experiences is quite another.

There is something else that needs emphasis. This has to do with the infant's capacity to perceive the directedness of attitudes. There are

probably a set of rather different mechanisms that enable and incline an infant (perhaps even an infant under eight months of age) to follow another person's line of regard or another person's directedness of action (Baron-Cohen & Cross, 1992; Butterworth & Jarrett, 1991; Scaife & Bruner, 1975). The significant point for the present discussion is that such mechanisms may lead an infant to share a focus of attitude with someone else, in the sense of attending to the same thing, *without* the infant apprehending that object or event as a shared focus. This changes with the advent of secondary intersubjectivity at the end of the first year of life, in that now the infant specifically demonstrates the desire to share experiences with others.

Once again in the domain of sharing, there appears to be a linkage between two rather different sets of processes in the infant. One is concerned with perceiving the directedness of another person's bodily orientation and action, and the other is concerned with apprehending the subjective, psychological orientation or attitude that accompanies such relatedness between a person and the world. I anticipate that there is something special about the perception of goal-directed agency (e.g. Premack & Dasser, 1991), something special about the perception of eye-direction (e.g. Baron-Cohen & Ring, this volume; Butterworth & Jarrett, 1991), and quite possibly other specialised perceptual mechanisms for detecting directedness in behaviour. At least certain of these mechanisms appear to be distinct from those that enable a child to perceive and become engaged with the subjectivity of others. For example, autistic children who are impaired in grasping the quality of a person's subjective orientations perform well in line-of-sight tasks such as hide-and-seek played out with miniature figures (Hobson, 1984). The important point is that to perceive goal-directedness or eye-direction is not the same as perceiving attitudes—consider our understanding of mobile robots—and that perceiving and subsequently conceiving of *attitudes* is at the core of interpersonal understanding. On the other hand, the mechanisms for perceiving “outer-directedness” conjoin with the mechanisms for perceiving “subjectivity” in such a way that an infant can perceive how another person's subjective attitudes are targeted. This means that the nine-month-old infant relates to a world that is a potentially shareable world, that is, a world that the infant itself recognises to be shared amongst persons who have attitudes towards the surroundings.

The question arises, how we should characterise the forms of interpersonal understanding that are present in normal nine- to ten-month-olds but relatively absent in gorillas and autistic children? It is tempting to suppose that we have to decide between two rather stark alternatives; *either* the infant is merely reacting to “behaviour,” rather in the way one might react to the organised and goal-directed movements of a robot, *or* the infant has a concept of someone else's “mind” operating in the background of behaviour. In keeping with my argument thus far, I want to reject each of

these alternatives. I suggest that we are simply one step further along the pathway from perceiving attitudes to conceptualising minds. Clearly, the infant does apprehend and react to signs that another person is attending to things, having emotional reactions to events, acting in a goal-directed manner, and so on. The mode of apprehension is such that the infant becomes engaged with these facets of human expression and conduct, in ways that are different to the infant's engagement with nonpersonal things. The kind of engagement not only influences the infant's own affective and motivational states and may influence his or her attitudes towards shared objects and events in the world, but it also prompts the infant to seek out how another person is orientated towards the world, and quite often to *imitate* the person's actions and to *assume* the person's attitudes. The notion of “engagement” is intended to capture the motivational and emotional as well as cognitive aspects of such interpersonal relatedness. All this is subsumed under what Bretherton et al. (1981) call the infant's implicit recognition of other persons. It does not require that infants *conceptualise* “minds,” nor does it presuppose that infants have the degree of reflective self-awareness, to enable them knowingly to adopt or to try to adopt another person's psychological perspective. What it does require is that the infants have a kind of insight that other persons are special by virtue of affording these particular modes of interpersonal engagement. It also requires that infants register how people have psychological states that may differ from their own (why else would the infant need to show the person objects, or engage in social referencing?), and that another person's orientation may be aligned with (as in imitation), rebuffed (as in refusal or negation), shared (as in co-operative play), and so on. It is insofar as these modes of apprehending and identifying with other persons as sources of attitude are relatively absent in gorillas and autistic children, that gorillas and autistic children differ from normal infants of around one year old (see also Gomez et al., 1993; Tomasello, Kruger, & Ratner, 1993).

A little earlier I speculated that we shall need an account of several distinct mechanisms involved in an infant's capacities to perceive another person's goal-directed agency, to perceive the person's line of visual regard, and to perceive the quality of the person's subjective orientation. I am now suggesting that we need a complementary account of how the infant is drawn into acting like someone else, looking to the same place as someone else, and assuming a similar or correspondent psychological orientation to that of someone else. I pursue this line of thought because I believe there are forms of interpersonal “role taking” that antedate, and are developmental prerequisites for, the more sophisticated varieties of perspective taking in which children deliberately and self-consciously put themselves into someone else's shoes. My proposal is that it is partly through assuming another person's attitudes by processes of noninferential empathy, and

perhaps through imitating another person's actions, that children come to experience and in due course to understand what it means to assume another's psychological viewpoint. It is only when the children achieve insight into the nature of "self" vis-à-vis "other," and have acquired the concept of a person as "someone in whose place I can put myself" (Bosch, 1970, p. 89), that they are in a position to adopt alternative perspectives as alternative perspectives. Shortly I shall offer some suggestions as to how this stage is attained around the middle of the second year of life.

THE CONCEPT OF PERSONS

I should like to recapitulate a part of what has gone before, from a different starting-point. The theoretical position I am advocating is sufficiently out of key with much contemporary developmental theory, that it may well seem ill-focused or confusing. In addition to this, I need to establish a bridge between the infant's capacities to perceive attitudes on the one hand, and the three- or four-year-old's new-found conception of the "representational mind" on the other. The bridge is constituted by the young child's developing concept of persons (also Hobson, 1993a; 1993b).

Wittgenstein (1958, p. 178) writes: "My attitude towards him is an attitude towards a soul. I am not of the *opinion* that he has a soul ... The human body is the best picture of the human soul." Wittgenstein's point is that there is something primary and irreducible about our attitudes toward a person, and the attitudes we adopt are what gives substance to our concept of a person who has her own subjective experiences. As Malcolm (1962, p. 91) explains: "I do not *believe* that the man is suffering who writhes before me—for to what facts would a 'belief' be related, such that a change in the facts would lead me to alter it? I *react* to his suffering. I look at him with compassion and try to comfort him." If one never experienced the kinds of attitude that are fitting for persons, what Hamlyn (1974, p. 34) calls "natural reactions of person to person," then one would not acquire the concept of what a person is. Such personal relatedness has anchorage in perceptual-affective propensities. To return to Wittgenstein (1980a, para. 570) again: "'We see emotion'—As opposed to what?—We do not see facial contortions and *make the inference* that he is feeling joy, grief, boredom. We describe a face immediately as sad, radiant, bored, even when we are unable to give any other description of the features.—Grief, one would like to say, is personified in the face. This is essential to what we call 'emotion'." Such interpersonal relatedness is *not* primarily and essentially a matter of ascribing to others what one knows from one's own case (Wittgenstein, 1980b, para. 927): "Do you look within *yourself*, in order to recognize the fury in *his* face? It is there as clearly as in your own breast."

Suppose it is true that the attitudes involved in our relatedness towards persons are constitutive of our concepts of persons. What does this matter for our account of the origins of an understanding of mind?

I believe it matters a great deal. The reason is that it is through a child's apprehension of the nature of persons, that the child comes to conceptualise how persons *are* bodies-cum-minds, or if you like, how persons "have" bodies and minds. Just as attitudes have a subjective dimension as well as behavioural expression, so persons have mental as well as physical existence. As Strawson (1962, pp. 135–137) insists:

What we have to acknowledge ... is the *primitiveness* of the concept of a person. What I mean by the concept of a person is the concept of a type of entity such that *both* predicates ascribing states of consciousness *and* predicates ascribing corporeal characteristics, a physical situation, etc. are equally applicable to a single individual of that single type.... The concept of a person is logically prior to that of an individual consciousness. The concept of a person is not to be analysed as that of an animated body or of an embodied anima.

Sure enough, we adults tend to maintain a radical disjunction between our concepts about the body and those that concern the mind. Although this conceptual apartheid is certainly justified and appropriate in many circumstances, it may prove an obstacle to evolving an adequate genetic epistemology in relation to the development of interpersonal understanding. As Cockburn (1990, p. 55) also has argued, notions of "body" and "mind" should not "displace the notion of the *human being* from its fundamental place in our ontology."

CONCEIVING (OF) MINDS

The title of this chapter contains the expression "conceiving minds," but I have mainly written about the child's progress towards conceiving *of* minds as a psychological property of persons. I believe that the two are intimately linked, in the sense that the developed, creative human mind is conceived (and subsequently born) through a phylogenetic and ontogenetic advance in human beings' capacity to conceive *of* the minds of others and themselves. I need to sketch my view of how this advance proceeds in normal child development.

An adequate treatment of the matter would begin with an analysis of what it means to acquire a concept of anything at all, and then to apply the results to the special case of "concepts of mind" (Hobson, 1993c). I shall gloss over the fact that, for an individual to acquire *the* concept of something, he or she needs to share that concept with others, and therefore needs to enter into relations with others that make agreement and correction

possible (Hamlyn, 1978). Instead I shall adopt the stance that much, if not all, of our capacity for conceptual thought is bound up with the ability to symbolise, and suggest how this latter ability is founded upon a certain level of interpersonal understanding. In other words, I shall try to portray a kind of developmental bootstrapping in which interpersonal understanding yields symbolic functioning, and symbolic functioning affords the means to conceptualise mental life itself.

The basic idea is relatively simple. It is that, in the course of the second year of life, a child achieves an insight into the nature of the relationship between persons and the world, and along with this a further insight into the correspondences between self and others. The first insight is that objects and events in the world can be "given" meanings by people. The child discovers a fact of life: Any given object can be construed differently by different people, and any person can apprehend meanings that are person-dependent rather than object-specified. Not only may one person find alarming what another finds attractive, but also one person might construe something (say, a spoon) as a device for feeding, whereas another sees it as an instrument for banging. The second insight is that children themselves can choose to confer new meanings on objects and events, as in symbolic play. Children appreciate that a wooden block is a wooden block, but alongside this they can adopt an attitude towards the block that is in some way fitting for something else such as a house, and pretend-take the block to represent a house. A third advance (which I would hesitate to call an "insight") is that children come to adopt another person's stance towards themselves as a source of attitudes—they achieve self-reflective awareness (Mead, 1934). This is especially important because children can now "introspect" and confer on to others what they discover about the quality of their own mental life—children can take roles and apply analogy from their own case to that of others, on the basis of an earlier-established awareness of the nature of persons. An additional insight has to do with the nature of designation—people (including themselves) can concur in employing particular sounds or other symbols to "name" or otherwise to carry meanings, in such a way that meaning-for-self and meaning-for-others agree (Huttenlocher & Higgins, 1978). I believe that the notion of a "naming insight" (McShane, 1980) is both justified and necessary here, not least because, in order truly to symbolise in a communicative context, individuals must know that this is what they are doing, and for this they must have anticipated the meaning of the symbol for the receiver of the communication (Kaye, 1982).

I hope this makes it clear why the child's understanding of person-anchored attitudes, intentional symbolisation, and self-reflective awareness are so tightly knit together (if not, I hope it might become clearer from the more detailed account I give in Hobson, 1993c). In employing communicative and conventional symbols, children reorientate another person's

attitude to correspond with the attitude that the symbol anchors for themselves. Such consciousness of self and others is possible only on the basis of the child's recognition of and responsiveness to a range of attitudes, including others' attitudes towards the child's own self.

It remains to explain how children acquire the critical insights I have described. What are the conditions that enable children to make the distinction between attitudes and the things to which those attitudes are directed; to appreciate that a given person may have (and be expressing) this, that, or the other attitude at a given point in time; to transfer attitudes across situations, as in symbolic play; to conceptualise their own attitudes, and to realise that attitudes with which children are familiar in their own case are ascribable to other persons as *their* first-person experiences; and to grasp the nature of intentional communication by symbols?

I believe that the answer lies in the "relatedness triangle" I described earlier. By the end of the first year of life, infants are already relating to people's psychological orientations to a shared world, and have the propensity not only to register but also to imitate and identify with alternative attitudes. A *given*, visually specified object has one meaning for the infant and a potentially different meaning for another person. Not only this, but at times the other person's attitudes are directed towards infants themselves, and often towards infants' own expressed attitudes. I have emphasised how infants can perceive the directedness of attitudes, and are in a position to "triangulate" two separable person-derived attitudes as these bear upon a single object or event that is related-to. That is, a particular object can begin with one meaning for the infant, but the infant can also perceive that it means something different to someone else. It is by registering this contrast that infants come to disembed from their own immediate apprehension of the world, and to distance thought from thing (Werner & Kaplan, 1984). If there are two attitudes to one thing, then attitudes-to-things are different from the things themselves. Out of the infant's experience of *interpersonal* co-referential attitudes, the young child distils out an understanding of the nature of co-reference itself. The child discovers how it is possible to adopt more than a single attitude to *anything*, and soon may be observed to adopt attitudes towards his or her own attitudes and thus towards "himself"/"herself" (e.g. Kagan, 1982).

Once children understand that they have the potential as human beings to adopt more than one co-referential attitude to a given object or event, then they can apply alternative attitudes in creative symbolic play. At the same time, the child appreciates how attitudes are essentially to do with meanings-for-persons; as such, they pick out or even create particular *aspects* of meaning in whatever is at the focus of the attitude. The child has become aware of what it means for an object to fall under a particular description for a person. Correspondingly, the child is in a position to learn of symbols

(Langer, 1957, pp. 60–61) as ‘vehicles for the conception of objects ... it is the conceptions, not the things, that symbols directly mean.’” The point is that symbols capture particular aspects of what things mean to people, and what things mean have much to do with the attitudes that people adopt towards them. We psychologists may think of “symbolic thought” as a highly abstracted process, but the source of such thinking is in the infant’s psychological engagement with the world. This is of critical importance for the referring and representational characteristics of symbolising. After all, it is *people*, not symbols or “representations,” that represent things and situations. Here we fathom the profound insight in Vygotsky’s (1962, p. 8) claim that: “every idea contains a transmuted affective attitude toward the bit of reality to which it refers.”

Let me review where this condensed argument has led us. Perhaps it is fitting to do so by referring to Leslie’s (1987) seminal article on the topic of “metarepresentation” (my reply to which fills out aspects of the present alternative approach: Hobson, 1990a). Leslie (1987, p. 412) drew attention to the: “striking isomorphism between the three fundamental forms of pretend play and three crucial logical properties of mental state expressions in language.” The forms of play in question are object substitution, when one object is treated as if it were another object, the attribution of pretend properties, and the invention of imaginary objects. Correspondingly, mental state expressions have referential opacity (e.g. one may know of something under one description, without recognising the same referent when this falls under a different description), nonentailment of truth (one can believe something that is untrue), and nonentailment of existence (one can think about fairies that probably don’t exist). Leslie’s suggestion is that mental state expressions are akin to pretence in that they depend upon an innate ability to “decouple” representations from the world they represent, that is, upon the ability to “metarepresent.” This metarepresentational capacity emerges towards the end of infancy at around 18 months of age, and underpins (Leslie, 1987, p. 416): “the human mind’s ability to characterise and manipulate its own attitudes to information.”

I have found this a very helpful *description* of what pretence entails, but I take a different approach to the “isomorphism” that Leslie maps out. Moreover, I question whether to posit a “decoupling mechanism” tells us any more than that somehow the infant has to distinguish attitudes from the objects of those attitudes, and I doubt whether the appeal to innatism is justified here (although in a personal communication, Alan Leslie has suggested that I do not offer a cognitive-process theory, and so do not experience the problem in the way that he does). According to the account I have presented, this critical ability to relate to one’s own relatedness to the world is the developmental outcome of a prior ability to relate to *other people’s* relatedness to the world. In other words, the process of

“decoupling” or “distancing” of self from other, of thought from thing, and of symbol from referent is one that occurs through the interiorisation of the relatedness triangle (Vygotsky, 1978, p. 57): “An interpersonal process is transformed into an intrapersonal one.” No wonder that the modes of symbolic play correspond with the characteristics of mental state understanding, because the capacity for creative symbolisation is the exercise of just such insight into the nature of psychological attitudes and their meaning-conferring properties. It is telling that Leslie compares pretending with holding a primary (veridical) representation in quotation marks. I think it is *more* like this than Leslie appreciates, because of the early forms of role taking that antedate and form the substrate for the capacity knowingly to assume an attitude to play materials “as if” the attitude were another person’s. The child who symbolises is one who can play with the fact that an object or event can fall under “different descriptions” not only for different persons, but also for a single individual—the child him/herself.

Having said this, it will take another two or three years before a child fully appreciates what it means to have the particular attitude: “to take as true of reality,” and thus what it means to entertain false beliefs (Forguson & Gopnik, 1988; Perner, 1988). Earlier I promised to say something about propositional attitudes, for example to pretend/believe/fear *that* such-and-such is the case. Once a child has recognised that people have attitudes, then there is development in the *kinds* of attitude that a child understands. It should be no surprise that emotional attitudes (including attention) and the pretend attitude are amongst the first to be understood as applicable to “intentional objects” (i.e. things and events as-represented), because there is evidence that such attitudes are both registered and adopted well before a child’s first birthday (e.g. Reddy, 1991). What is new in the second year of life is that the child can pretend “that” one thing is another.

How should we characterise this achievement? I have argued that it corresponds with the child coming to understand that objects or events fall under descriptions-for-persons, or what is known as mental content. The child also grasps that an already-established attitude of pretending can be applied as a kind of “meta-attitude” in taking up the creative possibilities of adopting alternative attitudes to the world. That is, the child can now choose to adopt alternative attitudes to objects or situations pretendingly, over and above the ability to engage in infantile forms of playful, not-for-serious face-to-face transactions with others. The alternative attitudes entail corresponding mental contents. A child who pretend-takes a block as a house applies selected house-appropriate attitudes in a pretending, as-if manner to the object which she continues to treat as a wooden block. Thus the child chooses to subsume the block “under the description” of a house in a specifically playful and symbolic manner—that is, only *certain* house-meanings are applied, for the child knows the block is not literally a house!

It is the ability to understand the nature of attitudes, together with the ability to be playful (and to maintain the distinction between coexisting playful and serious attitudes) that enables the child to pretend *that* a block is a house. This kind of theoretical account has some affinity with that of Perner (1988), but it differs in emphasising the child's insight into the nature of person-to-world attitudes and what I have called descriptions-for-persons.

The child's understanding of the content of mental states, *what* is pretended/attended to/felt, becomes elaborated as the child learns more about how people construe the world. The child's grasp of the nature of mental states also becomes more sophisticated. Here we come to consider the child's conception of "belief."

There is something very special about the cases of knowing and believing, insofar as the nature of these mental states corresponds with a change in the status of the "objects" of the attitudes involved. In order to understand knowing and believing, the child must appreciate that there is a *privileged* description of the world, namely what is true or real or "what is the case," with which an attitude may be concerned. As I have suggested elsewhere (Hobson, 1993c), it may be partly because a child has to recognise what it means for a particular description of the world to be branded as "true" of reality, that it takes a relatively long time for the child to understand the nature of the particular attitude, "to hold as true" (i.e. to believe; Hobson, 1993c). I strongly suspect that children learn this in at least two ways (probably more): firstly, by observing how in their own case as well as that of others, successful action depends upon a person holding a "correct" view of the world, a view that may be derived from perceiving how things are; and secondly, by registering that there is a particular ("true") description of states of affairs concerning which people can reach agreement or be corrected, and over which people engage in passionate exchanges ("You took my sweets"; "I didn't!"; "Mummy, she *did*, she *did*!"). Once children recognise the significance of the attitude "to hold as true" (for example, whom did Mummy believe?), then they can work out the behavioural implications of holding "false beliefs." Reality (what is true) may be contrasted with mere appearance (what seems true to a person from a particular and perhaps deceptive viewpoint); knowledge (what is correctly held as true) may be contrasted with belief.

In order to acquire concepts of belief and false belief, therefore, the child needs to become oriented towards reality as "reality." My suggestion is that the concept of "reality" is a concept of the way things truly are, and the way human beings should agree they are, over and above any particular individual's potentially distorted viewpoint. (Think how often we argue about what is really the case, in the belief that if we are correct, others will eventually agree.) This account is in keeping with recent evidence that young

children who are in a position to have co-operative and conflictual discussions with siblings are those who achieve success in false belief tasks at a relatively early age (Dunn, this volume; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Perner, Ruffman, & Leekam, 1993). My suggestion is that, through participating in and witnessing exchanges among siblings and parents, such children are quicker to learn to how there is a special, "true" description of states of affairs. For instance, reality serves as the reference-point for agreement and dispute. I agree with Gopnik, Slaughter, and Meltzoff (this volume) that here we witness a genuine conceptual change in children's understanding of the relation between mind and the world, and I too argue that certain forms of perceptual role taking are important for prompting the recognition of contrasts in perspective that are relevant for understanding "belief." I also think this conceptual change corresponds with a shift away from what Mitchell (this volume) calls early childhood realism. My point is that the revolution at around the age of three or four years is one that occurs when the child's mental orientation alters from that of merely distinguishing serious from pretend attitudes, "my view" from "your view," and so on, to that of relating *any* individual views to the supra-individual characterisation of the world that we call "reality." Reality and truth command respect and acknowledgement—from anyone. Four-year-olds have come to understand this, and they have come to focus upon, register, and recall what a person holds to be true of reality.

Thus one can trace a developmental sequence from the infant perceiving how people's attitudes have both qualitative characteristics (of emotional tone, playfulness, etc.) and directedness towards the world, to the older child conceiving how people have psychological states that entail a representational relationship between "the mind" and reality.

PERSPECTIVES FROM DEVELOPMENTAL PSYCHOPATHOLOGY

An important source of evidence concerning the position I have outlined is that provided by developmental psychopathology, and specifically the developmental psychopathology of early childhood autism and congenital blindness. In each of these conditions, there is a striking coincidence between limitations and/or delays in the development of interpersonal understanding on the one hand, and in the emergence of creative symbolic play on the other (e.g. Fraiberg & Adelson, 1977; Hobson, 1990a). How is this coincidence to be explained?

Let me begin with autism. I believe that "autism" is essentially a failure to engage in patterned intersubjective co-ordination and exchange with other people (e.g. Hobson, 1989a; 1991). In many but probably not all cases, this seems to include a relative incapacity to perceive and react to affective

attitudes in others, and therefore to "share experiences" (Hobson, 1989b). One result is that the autistic child suffers delay and often permanent limitation in engaging with and in understanding the nature of psychological attitudes, and with this in apprehending and comprehending the nature of persons who have subjective orientations towards the world. The child's lack of sharing and co-reference with others in the relatedness triangle deprives the child of the kinds of experience that promote (and may even be a prerequisite for) the *normal* disembedding of thought from thing, and thus the capacity to apply co-referential attitudes in symbolic play. At a more sophisticated level, the autistic child's inattentiveness towards and unengagement with the attitudes of other persons, coupled with his or her difficulty in comprehending what it might mean to arrive at a shared, "correct" description of the world, have serious consequences for the child's grasp of what it means to believe, to know, and so on (e.g. Baron-Cohen, Leslie, & Frith, 1985; Leslie & Frith, 1988).

The major differences between this and Leslie's "metarepresentation hypothesis" as applied to autism lie in the degree to which each style of account lends itself to the "computational metaphor" of psychological functioning—Leslie's certainly does, mine does only to a limited degree—and in the roles that Leslie ascribes to innate cognitive abilities and which I ascribe to social-developmental processes grounded in innate capacities for interpersonal and specifically intersubjective engagement.

I believe the phenomena of congenital blindness provide evidence against the view that there is a normally innate "decoupling mechanism" that is subject to autism-specific dysfunction. My thesis is that a critical component of a congenitally blind child's difficulties in developing creative symbolic play (and in mastering personal pronoun usage and becoming non-echolalic) lies in the child's inability to see the *directedness* of other people's attitudes towards a common, visually specified world. Once again, this time for reasons of visual impairment rather than because of essential deficits in intersubjective engagement, blind children have deficient experience of the relatedness triangle and of co-reference with others. The result is what Anderson, Dunlea, and Kekelis (1984) identify as an impairment in perspective taking, an impairment that may extend to those early forms of psychological co-orientation with others that are the roots of creative symbolic functioning. The impediment is not absolute, because vision is not the only means to interpersonal and thus intrapersonal co-reference, but it may nevertheless account for the blind child's difficulty (Fraiberg & Adelson, 1977, p. 249) in "representing the self as an 'I' in a universe of I's" and in appreciating the nature of person-anchored attitudes to the world. My suggestion is that this disability plays an important part in causing the impressive degree of overlap in the clinical presentation of congenitally blind and autistic children, especially with regard to

abnormalities in creative symbolic play and specific aspects of linguistic role taking (e.g. Hobson, 1990a; in press). The children in each diagnostic group encounter an obstacle on the social-developmental pathway that normally leads to the capacity to conceptualise self and others as persons with attitudes vis-à-vis a shared world, and through this, to the capacity for creative symbolic play. In the case of children with autism, the obstacles have to do with intersubjective engagement and the perceiving and understanding of an important class of psychological attitudes; in the case of congenitally blind children, the obstacles include that of being unable to see the ways in which attitudes are directed from persons towards a given, visually specified world.

CONCLUSION

Perhaps I have been overambitious in trying to condense so much into a brief chapter. There are many gaps in the account, and several of my points are speculative. For example, I have stressed the significance of a young child's dawning understanding of what I have called descriptions-for-persons (or mental content). I have also emphasised the importance of the "for-persons" part of this phrase, partly because of the developmental background to the cognitive advance in question (especially, the infant's awareness of persons, and the subsequent recognition of co-orientations among persons), and partly because I am dealing with the child's understanding of *psychological* orientations, not merely "representations" or "metarepresentations" in the abstract, as for example in photographs (see relevant discussions in Leekam & Perner, 1991; Leslie & Thaiss, 1992; Perner, 1993). What I have only implied, and not properly dealt with, is the possibility that there may be alternative routes to at least a partial understanding of attitudes and thus descriptions-for-persons, routes that may be open even to children with autism (who after all do understand quite a lot about having visuo-spatial viewpoints and a range of other mental states, e.g. Baron-Cohen, 1991). Indeed, my treatment of approaches from developmental psychopathology has been distinctly unsuitable: It goes without saying that early childhood autism and congenital blindness are complex conditions, and there may well be alternative or additional explanations for the children's deficits.

Nevertheless, I hope that I have conveyed the thrust of my argument. A philosophical analysis of what it means to arrive at knowledge of persons with minds, and a conceptual analysis of what it means to symbolise and to designate-for-persons, combine with evidence from normal development and developmental psychopathology to suggest that a young child's conceptions of mind are founded on preconceptual forms of interpersonal understanding and "sharing" that depend upon innate capacities to perceive

and react to attitudes in other people. The specifically human creative and symbolic capacities of mind are conceived by virtue of the young child's developing conception of the minds of persons, and the child's conceptions of mind are founded on abilities to perceive and to have attitudes towards the psychological attitudes of others.

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