On the origins of self and the case of autism

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Abstract
This article examines what it means to have a self. My focus is on the essential components of self-experience, the kind of psychological architecture required to construct a self, rather than on the configurations or qualities of individual "selves." I adopt a developmental perspective and indicate how early childhood autism may afford unique insights into the role of perceptual-affective and interpersonal experience in determining the normal child's developing awareness of self.

In order to venture back to the origins of self, one's first task is to choose a point of departure. The very concept of "self" appears so abstruse, and that to which it refers so elusive, that one can feel at a loss even to formulate the problem or cluster of problems to be addressed. I shall begin this theoretical article by considering what is encompassed within our notion of the self. I shall also refer to philosophical arguments that point to essential connections between this notion and our concept of persons with subjective mental life. I shall then review some influential writings on the early development of self (for overviews of later aspects of self-development, see Damon & Hart, 1982, 1988; Harter, 1983). Toward the end of the article, I shall turn to an abnormal condition of childhood and indicate how clinical phenomena associated with early childhood autism might influence our perspective on these matters.

The Place of Self
The first matter is to consider the status of the concept of "self" and, more particularly, to characterize the nature of this concept and to assign it a place in our psychological theorizing. There are those who would doubt whether the concept has a place at all. David Hume's (1739/1888) attempt to discover the self by reflecting on his own experiences led him to the conclusion that "I never can catch myself at any time without a perception, and never can observe any thing but the perception" (Book 1, p. 252). According to Hume, the supposed identity and simplicity of the self reveals itself to be an illusion—all we know is a train of feelings and thoughts. Kant (1929) took a different view of the matter. He argued that a person's awareness "that I am" is a precondition for knowledge, insofar as anything that is known must have become "an object for me" (B157, p. 168, and B138, p. 156, respectively). In Kant's view, it must be possible for the "I think" to accompany all my representations, in that the representations are unified in all belonging to me (B132-7, pp. 152-156). On the other hand, Kant suggested, this "original synthetic unity of apperception" is thinkable but cannot be known, and in this it may be contrasted with the kind of knowledge one has of one's own physical and mental characteristics.

I shall employ these highly condensed versions of two classical philosophical accounts of the self to highlight some contentious issues within contemporary psychology and philosophy of mind. My purpose is
to establish a conceptual groundplan so that we might come to survey matters from a developmental perspective.

I shall begin with Hume's introspections. We have seen how Hume tried to shift us away from a focus on the self, to an exclusive concern with mental states and events. Two questions arise. The first is whether any mental state or event could be identified without reference to a subject who experiences it. How far is it possible to have a thought without a thinker, a feeling without a subject who feels? It is essential to the concept of a mental state that it can be ascribed to a person or animal to whom it belongs (Strawson, 1962), and while such an individual may be a self in only a primitive sense, still we are dealing with a subject of experience. The second, related question is whether Hume's very introspective method presupposes the self who is in a position to introspect. If mental states require a subject who has them, then this applies a fortiori to introspective mental states in which the subject has awareness of himself having mental states. Thus, William James (1890) emphasized the distinction between a subject that thinks or knows an object and a subject that thinks that it thinks or knows that it knows, and he criticized associationist writers such as Hume for failing to tackle the problem of how the self comes to be aware of itself or its mental contents. The upshot is that we shall need to consider how there are at least two modes of being a self, or at least two distinct aspects to the fully developed self, one of which entails an awareness of the self–nonself distinction, and the other of which has more to do with the capacity for reflective self-awareness, including consciousness of the self's own mental states.

William James (1890) made a further contribution by stressing how the capacity to think of subjectivity as such, to think of ourselves as thinkers, is bound up with the capacity to distinguish between thought itself and what the thought is "of" or "about." The latter capacity represents a critical cognitive accomplishment, insofar as it constitutes a sine qua non for a person to comprehend the relation between the mind and a mind-independent reality. Modern writers such as Nagel (1979) and McGinn (1983) have suggested how the subjectivity of the self may relate to the development of objectivity. For instance, Nagel emphasized how every subjective phenomenon is essentially connected with a single point of view, whereas objectivity is attained by abstracting away from the individual's viewpoint in order to arrive at a conception of the world that as far as possible is not the view from anywhere within it. McGinn (1983) dwelt on the fact that only a subject of consciousness could grasp indexical modes of presentation, that is, could understand what it is to think of things as I, here, now, and so on. The reason is that the meanings of such terms depend on reference to "me" as I am presented to myself in self-consciousness. Bosch (1970) took up similar themes in his phenomenological analysis of the "Paths to the 'I' in Language" (p. 64), and argued for the view that not only a sense of agency, but also that of possession, make an essential contribution to a person's understanding of his being an "I" in relation to a "you." The very fact that young children can and do employ the words "I" and "you" to emphasize who is the source of agency, and mark a clear distinction between that which is "mine" and that which is "yours," reveals how these aspects of self find early linguistic expression. Another feature of one's awareness of the self–other boundary is that one distinguishes self from others according to a variety of descriptive attributes. To consider this aspect of self, what William James called the Empirical Self or "me," is to confront a fresh set of issues about which qualities are basic to self and other ascriptions.

The self who is an agent, a possessor, and an object of description is an embodied self. How, then, is the bodily self related to the "mental" self, the self who has thoughts, feelings, and other mental states? Or to take up a specific aspect of the problem, how do we as bodily selves arrive at knowledge of our own and others' minds? I shall indicate my approach to this issue by emphasizing three considerations. I shall
state these baldly and return to them later. First, for an important range of mental states, an individual's perception of other creatures' bodily configurations and movements is to perceive something of the mental states that "lie behind" those bodily expressions (Hobson, 1989a). To perceive an expression as an expression is to perceive something that is both physical and mental. This is most evidently so in the case of expressions of emotion. For one individual to perceive another's facial contortions as smiles or scowls is to perceive something of what those expressions mean in terms of the other's feelings and propensities to certain kinds of action (Hampshire, 1976; Merleau-Ponty, 1964; Wittgenstein, 1980).

Second, the basis for an individual's knowledge of other people with minds lies in the kinds of personal (including bodily) relatedness that can exist between persons, especially relatedness involving feelings (Hamlyn, 1974; Hobson, 1990). Third, an individual requires a concept of other persons as subjects of experience if he is to acquire a developed concept of self. One's concept of self is a concept of a person as a person; one's concept of persons cannot be a concept applicable only to a single individual (oneself), for the reason that in this case it would no longer constitute a concept (Strawson, 1962). On the other hand, one's concept of persons becomes enriched once one has a concept of self: one becomes aware that a person "is someone who can think I-thoughts" (Glover, 1988, p. 62).

According to this approach, we shall understand the origins of self only if we begin by appreciating the kinds of relatedness that exist between the infant and the inanimate and the personal world. One precondition for awareness of the outside world is that an infant distinguishes between "I" and "It." One precondition for awareness of persons is that the infant has some direct apprehension of the "subjectivity" that finds expression in the bodily appearances, and especially affective expressions, of others. Awareness of persons—that is, awareness of other individuated centers of subjective orientations toward the world—is a precondition for self-reflection and self-consciousness, for indexical thought, and ultimately for an objective view of the mind-independent world. The child's developing concept of persons with bodies and minds, and of selves who are recognized to act, to possess and to have self-other discriminating characteristics, is pivotal for social understanding. In this account, the child's concept of persons with both bodily and mental qualities is a "primitive," irreducible concept (Strawson, 1962).

A central purpose of this article is to flesh out this explanatory scheme and to examine whether there are grounds for adopting it as a framework for understanding early child development. Thus far, I have tried to indicate the importance of according the concept of self and, with this the concept of persons, an appropriate place in our theories of developmental psychology. I now offer a brief review of selected developmental theories, considered in the light of the foregoing discussion. Toward the end of the article I shall turn to a field of study that bears on these matters, that of early childhood autism.

Developmental Perspectives

In this discussion of writings on the origins of self, I shall indicate how a small sample of influential writers have dwelled on particular aspects of the developmental picture. I shall attempt neither to survey nor to integrate the range of important psychoanalytic and social-psychological contributions (see, e.g., Gordon & Gergen, 1968; Kernberg, 1982; St. Clair, 1986; Suls, 1982). Instead, I shall select and organize material in such a way as to pinpoint specific issues, and offer an integrative perspective that is intended to have general applicability. In particular, I shall emphasize the distinction between an infant's relatedness with other persons, and the infant's relatedness with the nonpersonal physical world.

Personal relatedness

Early developmentalists such as Cooley, Baldwin, and Mead, as well as modern writers such as Stern and Neisser, empha-
sized how specifically interpersonal experience makes an essential contribution to a young child's developing awareness of self. It remains controversial how we should characterize the nature of and basis for such experience, and whether it is essential to all aspects of self-experience.

I shall begin with the contemporaneous writings of Charles Cooley and James Baldwin. Cooley (1902) wrote, "The immediate social reality is the personal idea. . . . The personal idea in its more penetrating interpretations involves sympathy, in the sense of primary communication or an entering into and sharing the mind of someone else . . . " (pp. 84, 102, respectively). Pursuing similar lines of thought, Baldwin (1902) proposed that very early in life, an infant responds to "suggestions of personality" in the behavior of others and thereby differentiates people from things. The child is equipped with an "organic" (instinctive) capacity for sympathy with other persons. Only later does there occur the "subjective stage in the growth of the self-notion" (Baldwin, 1902, p. 14). This development is said to occur through the child's sense of his or her own volition and other more passive bodily feelings, augmented by involvement in early forms of imitation. Finally, the social self emerges as the child ascribes to other people qualities associated with the child's own self. Throughout this developmental epoch, according to Baldwin, the notion of self entails a sense of self-in-relation-to-other, such that "the real self is the bipolar self, the social self, the socius . . . (which) is the higher sense of commonality, personal implication, mutual interest, which social intercourse arouses in him" (pp. 30, 38, respectively). For both Cooley and Baldwin, therefore, self-experience is grounded in particular forms of "instinctive" communication with others: the basic unit of study is not the individual considered in isolation, but the self in relation to other, embodied persons (also Macmurray, 1961).

Contemporary theorists such as Stern (1985) and Neisser (1988) elaborated on the mechanisms and development of interpersonal communication and representation. Citing evidence for amodal perception and a capacity to imitate in very young infants (e.g., Field, Woodson, Greenberg, & Cohen, 1982; Meltzoff & Borton, 1979), Stern suggested that even in the first month or two after birth, selective responsiveness to external social events contributes to the infant's sense of an emergent self. Then from around 2 or 3 months of age, according to Stern, an infant develops the sense of a core self. This includes the sense of self as an agent with a history (i.e., the infant acquires sufficient memory capacity to ensure an experience of self-continuity), with bodily coherence and with invariant patterns of feeling that are recognizable as and when they reoccur. Various forms of recurrent experience—the "self-invariants" of agency, coherence, affectivity, and continuity—are the foundations upon which an infant is said to construct preverbal representations of social interactions. Particular episodes of infant--caretaker experience become represented in such a way that the infant anticipates specific patterns of relatedness with others, as well as with the nonpersonal world. There arises an almost pervasive sense of affectively toned self-with-other, the "core" self. There are further changes at around 7–9 months, as the sense of a subjective self comes into being. From now on the infant can share a focus of attention with others, for instance in following where others point (Murphy & Messer, 1977); can share intentions with others, as in responding to requests (Trevathen & Hubley, 1978); and can share affective orientations with others, as when the infant looks and responds to a caretaker's facial expression on being confronted with a situation that prompts anxiety (Feinman, 1982; Sorce, Emde, Campos, & Klinnert, 1985). Stern observed that these developments require a background of core-relatedness, in which there is already some shared framework of meaning and modes of communication such as gesture, posture, and facial expression. He paid particular attention to a caretaker's "affect attunement" with the infant, a special form of emotional resonance.
between each participant in the social exchange.

Thus, Stern arrived at an account of infants' intersubjective relations in which cognitive abilities of a general kind are brought to bear on specifically interpersonal forms of experience to yield a developmental series of increasingly sophisticated modes of self–other representation. For Stern, "organic" forms of responsiveness to people, including primitive modes of imitation, are manifest from the earliest weeks. Stern provided a developmental perspective on what Cooley called the bipolar self, and highlighted the way that affective experience is integral to this nascent form of social self as well as to feelings of self-continuity. The 9-month-old's subjective self develops pari passu with—in effect, is defined by—the infant's evident regard for the subjective life of others (Bretherton, McNew, & Beeghly-Smith, 1981), and it is only subsequently that the child's more articulated conception of self (the "verbal" self) emerges around the middle of the second year.

Addressing similar issues but with a different theoretical slant, Neisser (1988) propounded a conceptual scheme in which different kinds of self-knowledge are based on different forms of information available to the young child. Each kind of self-knowledge is said to have its own developmental history. The interpersonal self arises through a special form of direct perception that occurs when the self is engaged in immediate, unreflective social interaction with another person. This component of early self-experience "is specified by the orientation and flow of the other individual's expressive gestures..." (p. 43). Neisser has emphasized that the perception of self-inrelation-to-others, the very basis of intersubjectivity, is an emotional business for which species-specific responses are required. Once again, therefore, biologically based capacities for perception of and responsiveness toward the bodies of other people are said to promote specific forms of interpersonal relatedness, and thereby to constitute a basis for awareness of self–other commonality and differentiation.

I–Thou and I–It relations

The question now arises, how far it is possible and necessary to distinguish an infant's capacity for personal relatedness from the infant's modes of perception, action, and feeling toward the nonpersonal world. Cooley (1902) supposed that there is no notion of self altogether distinct from the notion of others. But is it true that there could be no sense of self except for that which entails awareness of other persons? If we heed Martin Buber's (1958) exhortation to respect the fundamental distinction between I–Thou and I–It relations, we might expect to discern a form of "I" that exists in an infant's transactions with the physical, nonsocial world.

We should begin by noting that Cooley himself felt that self-experience was "associated chiefly with ideas of the exercise of power, of being a cause, ideas that emphasize the antithesis between the mind and the rest of the world" (Cooley, 1902, pp. 145–146). It is not clear that such self-experience requires the infant to have a notion of other persons. Or again, Cooley linked "the idea for which the pronouns of the first person are names" with "the my-feeling or sense of appropriation" (p. 137). While the baby does not utter the words "I" or "my," Cooley's view was that even from the earliest weeks of life an infant expresses by his actions the feelings that adults associate with these terms (also Freud, 1925). Correspondingly, Cooley suggested that the child comes to learn the word "I" for an already developed (instinctual) aggressive appropriation. It is questionable whether this aspect of an infant's original self-experience presupposes, or rather contributes to, relations with other persons recognized as such. On the other hand, Cooley's description of the older child's possessiveness and self-assertiveness vis-à-vis other people, the child's propensity to draw attention to himself and to demand things, does imply recognition of others. Here the individual's instinctive reactions appear to have become elaborated in the context of awareness of other persons as centers of opposition as
well as collaboration, persons who themselves may be competing for possession, may be attentive, and can be demanded of. It is only such developed forms of self-awareness that require a recognition of other persons with their own attitudes and mental states.

There is a body of recent evidence to suggest that some sense of connectedness to the “I,” and some degree of differentiation between the “I” and the “not-I,” is present almost from the beginning of life. For example, young infants have been reported to respond bodily to looming optical flow, and they distinguish videotapes of their own immediate actions from videotapes of similar but noncontingent bodily movements (Bahrick & Watson, 1985; Bower, Broughton, & Moore, 1970). In Neisser’s (1988) terminology, an infant who picks up information about the location of the self and the nature of its interaction with the physical environment directly perceives the ecological self. Neisser appeared to echo Kant in suggesting that the ecological self is often accompanied by a definite kind of awareness, but is not itself an object of thought. Butterworth (in press), too, employed the direct realist theory of Gibson (1979) to argue that subjective and objective poles of perception, and with these the distinction between self and environment, are specified in sensory information. Why else should infants topple when a room is swayed around them (Butterworth & Cicchetti, 1978; Butterworth & Hicks, 1977; Lee & Aronson, 1974)? Neisser added an extra dimension to such an account by drawing a clear boundary between this one form of perception that connects and separates the self and the physical environment, and another that connects and separates the self and other persons.

With this scheme in mind, we are able to address familiar questions from a fresh perspective. At least certain features of the existential “I,” perhaps including some senses of physical location, bodily coherence, personal agency, and involvement with yet separateness from other people (albeit people not yet conceptualized as such), might be derived from what is given in structures of perception integrated with patterns of action and feeling. On the other hand, it is possible to argue for the existence of two separable facets to this primal form of self, in that development of I–It ( ecological) and I–Thou ( interpersonal) relations may prove to be partly independent.

Self-reflection

Earlier in this article, I noted James’ (1890) insistence that we consider not only self–nonself differentiation, but also the nature and source of self-consciousness. Although James himself dismissed the notion that the stream of thought might be deemed one of “sciousness,” that is, “not yet including or contemplating its own subjective being” (p. 304), the senses of self considered so far might have coherence without the infant having a capacity for self-contemplation. That human beings can introspect and reflect on their own psychic life, that they are able both to think of themselves as thinkers and to have attitudes toward their own particular mental states, are facts that need to be set in developmental (and evolutionary) context.

Once again, the contributions of Cooley (1902) and Baldwin (1902) deserve attention. These authors emphasized how the emergence of self-consciousness and the growth of reflection require that an individual already understands the nature of other people with minds of their own. Cooley evolved the notion of “the reflected or looking-glass self”: “so in imagination we perceive in another’s mind some thought of our appearance, manners, aims, deeds, character, friends, and so on, and are variously affected by it” (p. 152). For Baldwin, not only “reflective sympathy” but also reflection itself is “just a relation of separate-ness created between the ego-self and the alter-self. If there were no alter thought, there could be no reflection . . . ” (p. 233). This formulation suggests that the child’s capacity to reflect depends upon an awareness of other persons. The point is that in order for a child to adopt a psychological
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perspective vis-à-vis his or her own self and mental events, he or she needs to appreciate the potential existence of appropriate kinds of alternative perspective. The very notion of an alternative perspective on him- or herself is tied up with the concept of an “alter-self” who enjoys a distinct psychological orientation toward the “ego-self.” In other words, a child's capacities to reflect and to become objective by abstracting away from his or her own particular subjective orientation, depend on becoming aware of other persons as centers of their own subjective experience, such that the child can take the role of the other (Mead, 1934). While a child or indeed an animal might be said to have some sense of self accompanying early forms of awareness, an individual acquires a concept of self only insofar as he or she understands the nature of other selves with their own agency, their own attitudes, their own mental life.

The Cooley-Baldwin claim about the social origins of self-reflection is not self-evidently true. For instance, Piaget offered an alternative account in terms of “decentration” and “reflective abstraction” (see Kitchener, 1986). Stern (1985) too emphasized the importance of the child's growing cognitive capacities. According to Stern, it is only when a child acquires a verbal self around 15–18 months of age that he or she can represent him- or herself as an objective entity who can be seen from the outside as well as subjectively felt from the inside. Stern appeared to believe that along with developments in symbolic play and language, this change results from newfound cognitive capacities of a general kind, especially the “ability to coordinate schemes existing in the mind with operations existing externally in actions or words” (p. 165). In Stern's account, the growth of self-consciousness is linked with the changes in the child's self-directed behavior in front of a mirror (Amsterdam, 1972; Lewis & Brooks-Gunn, 1979), with the use of names and pronouns to designate the self, with the establishment of core gender identity, and with acts of empathy toward others (Zahn-Waxler, Radke-Yarrow, & King, 1979).

Kagan (1982) took a radical position in suggesting that the development of self-awareness in the second year of life is constrained by cognitive abilities that accompany brain growth. Kagan's list of the manifestations of self-awareness overlaps with that of Stern, but it also includes a child's anxiety over potential failure and signs of pride following success, and the use of toys rather than the self as the primary agents in symbolic play. Kagan proposed that self-consciousness arises through the maturation of five competences: recognition of the past, retrieval of prior schemata, inference, awareness of one's potentiality for action, and awareness of self as an entity with symbolic attributes. The critical question is how far such “competences” might be sequela to, rather than preconditions for, a child's dawning awareness of self and others. This is a question begged by Kagan's formulation that the earlier features of self-awareness “were inevitable consequences of maturational changes in the central nervous system as long as children were growing in a world of objects and people . . . ” (p. 380). Although there are physical constraints on development, so too there are forms of experience that must have been available to infants with brains functioning in particular ways, for self-awareness to arise. In particular, “objects and people” need to have been perceived as such. At least in special circumstances, as we shall see, other kinds of constraint might operate.

Some empirical issues

I-Thou and I-It relations. There are two principal issues here: how separable are the two lines of development, and how are they coordinated with each other? For the present purposes, I shall merely emphasize the subtlety of the first issue and make a single point relevant to the second.

It is commonly supposed (e.g., by Schaffer, 1984) that one can establish whether or not “person-relatedness” and “thing-relatedness” are distinct from early in life, by observing whether young infants dis-
criminate between people and things—and there is evidence that often they do not (e.g., Frye, Rawling, Moore, & Myers, 1983). The weakness of this argument is that it has too narrow a focus on infants’ perception of what we as adults categorize as people. When a young infant smiles at a drawn circle waved before him, how are we to say whether or not the infant is engaged in personal relatedness, whether or not the circle is a “proto-person” from the infant’s point of view? An alternative approach is to separate two questions: first, whether there is a special form of relatedness that comes to be increasingly restricted but never fully confined to relations with human beings (Werner’s [1948] concept of physiognomic perception might capture one aspect of this); and second, what are the evolving forms of discriminative stimuli that afford infants the opportunity for such personal relatedness. The findings from studies such as that of Sylvester-Bradley (1985) and Murray and Trevarthen (1985) might be interpreted as indicating that there are indeed distinctive modes of early infant behavior and experience that are social in quality, but that at times these might be manifest in nonsocial contexts.

If one adopts this approach, there arises the problem of specifying what is meant by “personal relatedness,” in that this is no longer defined according to the features of the world related to (and note that one can relate to persons impersonally—e.g., Scheler, 1954). Then there is the further problem of distinguishing the two modes of personal and impersonal relatedness, given that these will share some behavioral characteristics. One way to explore matters is from the perspective of genetic epistemology. I have referred to the view that a child’s knowledge of persons as subjects of experience is founded upon experience of reciprocal personal relations involving feelings (especially Hamlyn, 1974). If there exists a psychopathological condition in which there is prima facie evidence for early and profound deficits in interpersonal contact, together with impaired grasp of those concepts that are constructed on the basis of an individual’s experience of personal relations, then a study of this condition might illuminate the nature of personal relatedness per se. I shall come to examine early childhood autism from this point of view.

The second issue, that of the coordination of I-Thou and I-It forms of relatedness and understanding, is too complex to address in this article, but it is relevant to note that persons are also embodied “things.” As Neisser has written, “The fact that the ecological and interpersonal self are aspects of the same person can be directly perceived: they are located in the same place and engaged in the same activities” (p. 55). I-Thou and I-It relations converge on the bodies of others.

The reflective self. There are empirical issues, not only concerning the sources and implications of self-reflection, but also concerning the qualities of self that an individual comes to recognize. To take one example, Stern (1985), Kagan (1982), and Lewis and Brooks-Gunn (1979) seemed to agree that mirror self-recognition signals the child’s ability to recognize him- or herself from an objective (essentially, from another person’s) point of view. But need this be the case? Loveland (1986) argued that mirror self-recognition might have more to do with appreciating the properties of reflecting surfaces than with understanding selfhood. There is also the evidence from studies of mentally retarded children (Mans, Cicchetti, & Sroufe, 1978) and animals (Gallup, 1982) to indicate that given appropriate experience of mirrors, a certain level of cognitive ability may be most important for developing this special form of visually guided reaching. Perhaps general, relatively nonsocial abilities are what normally constrain the emergence of new forms of mirror-guided behavior, including those actions toward one’s own body that are prompted by the recognition that one’s facial appearance (only) has been altered. Whichever senses of self mirror “self-recognition” expresses, therefore, it is by no
means clear that these necessarily entail the kinds of intersubjective experience and understanding that might underpin the reflective self. Body-directed mirror reactions might evolve through "ecological" rather than "interpersonal" development.

Once a child has the capacity to reflect, and has acquired what Lewis and Brooks-Gunn (1979) called the "self as object," by what categories does the child classify itself and other people? Lewis and Brooks-Gunn (1979) and Brooks-Gunn and Lewis (1978) suggested three categories of particular importance: familiarity, age, and gender. Although much of the evidence they review pertains to infants' abilities in differentiating other people according to familiarity (e.g., mothers vs. strangers), age (e.g., babies vs. adults), and gender (e.g., men vs. women), their suggestion is that, more or less, "what we know of others is what we know of self" (Lewis and Brooks-Gunn, 1979, p. 251). For example, young children are supposed to have some awareness of their own characteristics in these respects and to exhibit preferences for others "like me." Yet according to Baldwin, the child ascribes a number of characteristics to himself or herself only after these characteristics have been recognized in others. What is the true course of events, for example in relation to categories of age and gender? There is evidence that 6-month-olds can discriminate among upright but not inverted photographs of the faces of a man, woman, and baby (Fagan, 1972). Infants as young as 7 months display attentiveness and positive affect to an approaching child, but are likely to avert their gaze, move away and show distress when a strange adult approaches (Brooks & Lewis, 1976). Kujawski (1984) reported that when children of around 1 year of age watched films of walking children only visible as an outline of moving points of light, they preferred to look at a child who was of the same gender as themselves (see also Aitken, 1977). So there is at least suggestive evidence for perceptual-affective discrimination of age and sex in others, long before the child will be able to classify itself or other people in a more explicit manner (see also Lewis & Brooks-Gunn, 1979). Whether such discriminative abilities should be seen as manifestations of the ecological or interpersonal self, and whether they indicate a recognition of the characteristics of others before awareness of the child's own age and sex, are matters to which I shall return.

Personal pronouns. An early and striking manifestation of self-awareness is the 2-year-old's ability to comprehend and use personal pronouns such as "I" and "you," "mine" and "yours," and so on. What meanings do such terms have, and what determines when these meanings are comprehended by young children? De Villiers and de Villiers (1974) pointed out that like other deictic terms, "I" and "you" are words that can only be understood by "nongenocentric" individuals who recognize the context of the relationship between the speaker and the addressee. Children need to have grasped reciprocal roles in discourse before they can understand linguistic deixis (Bruner, 1975). On the other hand, they might begin with partial understandings. Charney (1980) reported evidence that children first learn the pronouns most relevant to themselves as participants in dialogue. At an early stage, personal pronouns refer to one person only—the child—but only so long as he or she occupies a particular speech role. Thus, to begin with, Charney's 1- and 2-year-old subjects comprehended "your" when they were addressed, but did not produce "your" correctly to refer to others; they used "my" in the speaker role, generally a "my" embedded in action and lacking independent meaning, but they did not understand the term in all contexts in which it was used by others (see also Loveland, 1984). Individual performance patterns for first- and second-person pronouns showed omissions but few consistent errors, providing little support for Clark's (1978) suggestion that some children make errors by applying these terms as "names" to particular individuals. Although this early pattern of
pronoun comprehension and use was not fully mature, the children seemed to have grasped that when other people used "I" and "my" in contexts of action-with-speaking and perhaps feeling-with-speaking, then these were actions and attitudes with which they themselves could identify (see also Kaye, 1982). If this is correct, then it implies that the children were not only aware of the distinction between self and other, but were also aware of a commonality which that meant that self and other could assume a similar orientation or action, and along with this the appropriate personal pronoun, on different occasions (see also Sharpless, 1985). In fact, Chiat (1981, 1982) illustrated how a given child may instantiate adult and non-adult meanings of personal pronouns in one and the same period of development.

Also revealing is Charney's (1980) observation that nearly all instances of the earliest, person-in-speech-role uses of "my" were produced while a child was acting on an object—searching for, grabbing, acting upon or claiming it, usually when the object was not the child's—as opposed to indicating more permanent ownership. Similarly, in the case of children for whom the pronouns did not yet function as independent linguistic units, "I" and "me" were used while searching for, requesting, affecting, claiming, or noticing an object, but not while describing the child's own body or its movements. During this early period, then, children might employ their own names to refer to their body movements (e.g., sit), their states (e.g., sick), permanent relations of possession (e.g., clothing), and photographs of themselves, but they mainly reserved personal pronouns for settings in which they were participating agents. Only later did the pronouns become referring expressions. Thus at least some of a child's earliest uses of first-person pronouns seemed to occur in contexts of action in relation to (implicit) others, recognized as such. This is in keeping with Cooley's suggestion that the child's early "first-personal pronoun is a sign of . . . the phenomenon of aggressive appropriation, practised by himself, witnessed in others . . ." (p. 160). Once again the evidence is suggestive that in the normal case, an understanding of "I" entails some understanding of a "you."

If mature personal pronoun use depends upon a grasp of reciprocal roles in dialogue, it remains to identify necessary and sufficient conditions for an infant to recognize such roles. For example, Loveland (1984) ascribed 2-year-olds' achievement of fully correct use of all I/you pronouns to the ability to recognize other individuals' spatial points of view. Thus, she concluded that "understanding spatial points of view is a cognitive prerequisite to understanding speaker's point of view, which governs the pragmatics of I/you pronouns" (p. 535). At least in the normal course of development, visuo-spatial perspective taking might contribute to, or be an early manifestation of, the reciprocal role taking required for mastering personal pronouns. Once again, however, other prerequisites might become evident through the study of psychopathological development.

An Integrative Perspective

Drawing upon the works already cited, I propose the following as a scheme for conceptualizing the early development of self. To begin with, it is necessary to distinguish an individual's "primitive" sense of self from the individual's reflective self-awareness and concept of self. The more primitive forms of (nonreflective, preconceptual) self-awareness that exist in the first 9 months or so of life, and that contribute to but do not yet constitute awareness of a self vis-à-vis other conscious persons, include some sense of coherence, agency, affectivity and continuity (Stern, 1985) as well as some experience of appropriating and repudiating (Cooley, 1902; Freud, 1925). There are two separable strands to self-development in this early period. The first concerns the infant's perceptions, feelings, and actions in relation to the outside world, experienced as impersonal. The second concerns the infant's modes of personal relatedness, manifest characteristically
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but not exclusively toward what we as adults call people. Along with Cooley, Baldwin, Stern, and Neisser, I stress the importance of an infant's biologically based capacities for nonverbal interaction with others, and specifically the significance of affective "communication" with others, for allowing the infant early forms of experience of "other minds." I propose that such forms of experience are necessary if the child is to understand how embodied people have mental states (Hobson, in press-a). According to this account, a child's awareness of persons with their own psychological orientations and attitudes vis-à-vis the world is founded upon the child's experience of personal relations with others. Toward the end of the first year, the child has acquired some basic understanding of persons as agents and as subjects of experience (Bretherton et al., 1981; Harding & Golinkoff, 1979). From this point, the child's sense of commonality with as well as differentiation from other persons, together with his or her experience of being an "object" in the world of others, leads the child to realize his or her potential for taking an outside perspective on him- or herself and his or her own attitudes, and so to acquire self-reflective awareness in the second year of life. Only when the child has already attained some concept of self and others as persons is he or she in a position to confer upon others attributes he or she can now recognize in "him- or herself" and confer upon "him- or herself" attributes recognized in others. Only then is the child able to comprehend truly interindividual forms of communication, cooperation, competition, opposition, and possessiveness (e.g., Bergman, 1980; Spitz, 1957). Thus, self- and other-awareness are essential to the normal child's comprehension and use of the personal pronouns "I" and "you." "I" refers because I am a person among others (Strawson, 1962). Self-awareness is also needed if the child is to ascribe stable characteristics such as categories of age and sex to "him- or herself." Moreover, it is only through an understanding of people's subjective orientations toward the world that the child can abstract away from his or her own particular, egocentric perspective and become objective.

The Case of Autism

Any account of normal development can be evaluated with reference to the way it yields understanding of, or at least can be articulated with, psychopathological developmental pathways. The former need not explain the latter in an exhaustive way, but it should give indications of the points at which and manner in which abnormal conditions deviate from the norm, and map the implications of such deviations for subsequent development (see Cicchetti & Beeghly, in press; Cicchetti, Beeghly, Carlson, & Toth, in press, for further discussion of this point in relation to the development of self). We should be able to see why it is that in a given psychopathological condition, certain faculties are impaired while others are spared or even augmented. In the present context, I select early childhood autism as a prime case in point.

Early childhood autism is defined by a unique constellation of clinical phenomena, of which the most notable are a particular kind of impairment in social relations, patterns of communication (including language) that are frequently delayed but also abnormal in form and usage, a typical profile of cognitive impairments that include deficits in symbolic play and imaginative activity, and repetitive stereotyped behavior (American Psychiatric Association, 1987; Rutter & Schopler, 1987). Rather than listing the phenomena in detail, I shall set the most relevant of these in the context of the foregoing accounts of the development of self. My aim is both to elucidate the nature of autism and to indicate how autism may inform our understanding of the normal development of self.

I suggest that autism illustrates the value in differentiating between I-Thou and I-It developmental lines (Hobson, 1983a), and I agree with Neisser (1988) that autism involves a specific impairment in the development of an "interpersonal self." In order to
examine this hypothesis, it is necessary to distinguish three sets of phenomena: (a) those that reflect "I—It" child–environment relations; (b) those that reflect a child's concept of him- or herself as one person among many, a subject of experience with his or her own individual viewpoint and characteristics; and (c) those that reflect earlier aspects of "I–Thou" development, prior to the achievement of a mature concept of persons. The major points of contention are whether the origins of I–Thou and I–It relations are separable, and whether a child's emergent concept of self and others as individuals with mental states requires that he or she has prior experience of "personal relatedness."

The first step is to trace those I–It capacities that are relatively intact among autistic children, at least when their more general mental retardation is taken into account. Included here are such abilities as visuo-spatial pattern recognition (Bartak, Rutter, & Cox, 1975), their understanding of means–end relations (Curcio, 1978; Wetherby & Prutting, 1984), and their awareness of object permanence (Dawson & McKissick, 1984; Wetherby & Gaines, 1982). Although there may be limitations to their concept of people as agents (to be discussed), autistic children do appear to draw some distinctions between themselves as beings who can act, and things in the world that they act upon. The "I" of Kant and of William James, a self with some sense of power and appropriation vis-à-vis the object-world (Cooley, Baldwin), might exist for autistic children simply by virtue of an awareness of the contrast between "I" and "It." An "ecological self" (Neisser) seems to confer sufficient "sciouness" to allow autistic children to pursue goals in a coherent manner, for instance, to seek and consume food. Whether it enables them to develop self-consciousness is another matter.

Mirror self-recognition is particularly revealing here. As a preface, it may be noted that autistic children do succeed in line-of-sight tasks such as hide-and-seek involving miniature figures (Hobson, 1984; Leslie & Frith, 1988). Correspondingly, autistic children who are not severely cognitively impaired do remove rouge from their faces when they perceive themselves in a mirror—what generally they do not do is to show the signs of coyness so typical of young normal and nonautistic retarded children (Dawson & McKissick, 1978; Neuman & Hill, 1978; Spiker & Ricks, 1984). Thus autistic children show evidence that they have some sense both of what it means to "see" and of own-body-as-visually-perceived (and of that body perceived to be altered, as by a rouge mark). However, it does not follow that they have an elaborated concept of a person's seeing experiences, for instance, seeing an object "as" a this or a that, or seeing with personally significant judgment. In the present instance, what autistic children seem to lack is a sense of "themselves" as potential objects of other people's evaluations.

Thus, we are led to consider those phenomena of autism that seem to reflect impairments on a specifically interpersonal developmental line. I propose that autistic children fail to be aware of themselves in the minds of others, and to arrive at a concept of self, insofar as they fail to understand the nature of other persons who have their own psychological orientations toward the world. Autistic children's lack of self-consciousness is but one manifestation of their failure to acquire such a concept. They perceive but do not conceive of "themselves" in the mirror; they show neither pride nor shame. Autistic children's lack of involvement in, and probably appreciation of, the subjective lives of others is also reflected in their tendency not to share or exchange experiences or thoughts with others, for example, in failing to show or to tell people things (Curcio, 1978; Landry & Loveland, 1988; Loveland & Landry, 1986; Sigman, Mundy, Sherman, & Ungerer, 1986) and in the delay that often occurs in their asking questions and giving answers (Bosch, 1970; Tager-Flusberg, 1989). Then there are observations that seem to indicate how at least some autistic children contrast with normal 1-year-olds in having little awareness of others as centers
of opposition; for example, they show little possessiveness or sense of property, little competition or focused self-defense or counterattack (Bosch, 1970), and they may be delayed in saying “No” and “Yes.” Their understanding of people as agents responsible for actions often appears to be delayed and/or deficient, as observed when the children act toward (and thus manifest some sense of agency towards) the body parts of people rather than the people themselves (Kanner, 1943). The oft-noted observation that autistic children fail to raise their arms in anticipation of being lifted—they do not make eye contact with another person and gesture an appeal to be picked up—probably reflects such incomprehension of people as agents. The children appear to be unaware of the ways that other people have psychological orientations to the world—feelings, wishes, beliefs, thoughts, and so on—that are differentiated from, but complementary to, their own (e.g., Baron-Cohen, Leslie, & Frith, 1985, 1986; Hobson, 1989b, 1990; Leslie & Frith, 1988). As we have seen, a concept such as that of belief presupposes a concept of persons. “Belief” could have no meaning for autistic children, to the extent that they lack a concept of “selves” as persons who are able to hold beliefs. As Bosch (1970) starkly indicated, autistic individuals’ mode of existence approximates to that of solipsistically conceived subjects.

Additional phenomena of autism now fall into place. The children’s difficulties with imitation (e.g., Dawson & Adams, 1984; DeMyer et al., 1972) seem to disclose a poverty of basic intra- and interpersonal structures of bodily coordination, but also at a later stage to reflect the children’s failure to identify with the personal meanings of those activities and attitudes of mind which normal children imitate (e.g., Hay, Stimson, & Castle, in press). In order to identify with others and “assume” the others’ actions, the children would need to recognize those others as having minds that are both similar to and distinct from their own—and it is here that their awareness is severely limited. Not only this, but they do not have the developmental substrate for reflection, for the capacity to think of themselves as thinkers. As Baldwin (1902) suggested, “If there were no alter thought, there would be no reflection . . .” (loc. cit.). Being unable to grasp the attitudes of other people, autistic children cannot achieve an objective stance, nor can they come to appreciate the multiple meanings or “co-orientations” intrinsic to metaphors and the materials of symbolic pretend play (Hobson, 1990). They cannot acquire the flexible symbolic attitude that in turn might enrich their concept of selves. Thus, as both the source and expression of the failure to acquire objectivity, autistic children are unable to reflect on themselves from the viewpoints of others.

There is also the matter of personal pronouns to consider. These are characteristically misused by autistic individuals until relatively late in development (Fay, 1979; Jordan, 1989; Kanner, 1943; Silberg, 1978; Simmons & Baltaxe, 1975; Tager-Flusberg, 1989). I have already observed that autistic children appear to have little difficulty in recognizing the visuo-spatial perspectives of other people (although this has yet to be investigated with very young or very retarded autistic subjects), and such primitive knowledge of what it means to “see” might reflect structures of “I–It” perception and understanding. As yet there is no evidence that autistic children are slow to attain the cognitive prerequisite that Loveland (1984) identified as the factor constraining mature personal pronoun use in normal children. What autistic children fail to apprehend is a commonality between the experiences of themselves and others and then to appreciate the differentiation of people's affective-conative perspectives. It is this that results in their relative inability or delay in recognizing reciprocal roles in dialogue or even in recognizing their own position as addressee (whether or not role reversible) in relation to other people as speakers (Charney, 1981; Tager-Flusberg [1989] has also adopted a related approach). Insofar as the children cannot comprehend the nature of other selves, for example, they will not claim ob-
jects in the way that seems to typify the contexts of early pronoun use in normal children (Charney, 1980). Most important, they will be less prone to identify with the other person who says “I” or “my” when acting or expressing attitudes, or adopt the pronoun-anchoring stance of being an agent, a possessor, or, more generally, a subject of experience.

Instead of proceeding to an early grasp of nonegocentric personal pronoun meanings, therefore, autistic children tend to associate segments of speech with particular events experienced without reference to the role of speaker or addressee. One result is that they retain unmodified and frequently incorrect pronoun forms. Bartak and Rutter (1974) supposed that the autistic child's misuse of personal pronouns occurs as a result of echolalia. Such an explanation not only fails to account for autistic children's probable delay in comprehending the shifting meanings of personal pronouns when these word forms are used by others, it also fails to address how a lack of understanding of “I” in relation to “you” may be a cause of echolalia. Echolalia is the use of language unmodified to accommodate to the vantage point of the new speaker in that speaker's setting, so in some instances echolalia itself may reflect underlying impairment in recognizing the differentiation and complementarity of self and other (Mahler, 1968).

Autistic children's (probable) difficulty with other deictic meanings (Bartolucci & Albers, 1974) would also indicate their incomprehension of individual people as reference points of consciousness.

I have suggested that the phenomena listed above are manifestations of autistic children's lack of a developed self-concept. The next issue concerns the epistemological thesis that children's concepts of themselves and others as “persons” is founded on prior modes of affectively charged personal relatedness with others. I have already noted the suggested biological underpinnings to what Baldwin called “the bipolar self . . . the higher sense of commonality, personal implication, mutual interest” that social intercourse arouses in normal infants. We have also observed Stern's emphasis on the affective contribution to the “core” self and, therefore, the subsequent “subjective” and “verbal” selves (also Emde, 1983). My suggestion is that because autistic children lack the biological basis for coherent, affectively patterned experience and interpersonal relatedness, they are not only handicapped in arriving at an affectively centered “core” self, but also partly or wholly deprived of the experience of being invested in, and having commonality with, other people. As one result of this, they have serious difficulty in acquiring the concept of other persons as persons with their own subjective life (Hobson, 1982, 1989b).

A further implication is that they might not establish early representations of social experience in terms of self–other relationships (Cohen, 1980), or what psychoanalysts call configurations of “object relations” (Greenberg & Mitchell, 1983). How do such propositions accord with clinical and experimental studies of autism?

Autistic children's lack of “personal implication” with others is a defining characteristic of their disorder. For example, their inattentiveness to and lack of involvement with people is expressed not only in behavior (e.g., Kanner, 1943), but also in performance on experimental tasks (Weeks & Hobson, 1987) and in first-person accounts of their own experiences (Bemporad, 1979; Cohen, 1980; Volkmar & Cohen, 1985). Particularly striking is the children's impairment in affective responsiveness to people, an impairment that is often both receptive and expressive (e.g., Hobson, 1986a, 1986b; Hobson & Lee, 1990; Hobson, Ous- ton, & Lee, 1988a, 1988b, 1989; Langdell, 1981; Ricks, 1975). They seem not to have Baldwin's “organic capacity for sympathy with other persons,” nor do they benefit from Cooley's “primary communication or entering into and sharing the mind of someone else.” Preconceptual forms of affectively toned nonverbal communication that characterize a normal person's interpersonal contacts from infancy onward, and that may be essential foundations for a child's concept of other persons, are pro-
foundly aberrant in autism. Psychodynamic writers such as Mahler (1968) and Tustin (1981) contributed clinical evidence that autistic children's early social experiences and representations are not of the usual "object-relations" kind (Hobson, in press-b).

It remains to consider whether there might be additional aspects of the normal child's self-concept rooted in early forms of personal relatedness that are specifically deficient in autism. It has already been noted that for normal children, age and sex are two early features of self- and other-categorization. Just as Gibson (1979) emphasized the subjective and objective poles of perception, so one might consider the "self" and "other" poles of age- and sex-related patterns of human intercourse. In these respects, early forms of knowledge of self would neither precede nor succeed knowledge of others: "In the beginning is relation" (Buber, 1958, p. 18). I suggest that an infant might come to discover what it means to be an infant vis-à-vis adults by "finding itself" relating to other infants and adults in rather different ways; or again, a female might come to know what a female or male is through acquaintance with what is involved in relating as a female to females and males. These modes of relatedness have biological foundations (e.g., Diamond, 1965). Although to date the evidence is only suggestive (Hobson, 1983b, 1987), autistic children appear to have difficulty in recognizing the age- and sex-related characteristics of themselves and other people. It is at least plausible to suppose that lacking the biologically based patterns of differentiated relatedness to young and old, male and female individuals, autistic children are deprived of the forms of experience through which they might discover selves and others of complementary age and sex groupings. Autism may reveal such categories of knowledge to be a further outcome of the interpersonal developmental line.

The account I have given is too black and white to be an accurate portrayal of the state of any given autistic child. Many autistic individuals do achieve limited forms of reflective self-awareness, and intact cognitive capacities subserving the ecological self might provide developmental pathways to circumvent and in part relieve their deficiencies in the social-affective realm. Yet I wish to argue that what is unique and essential to autism, and what is at the root of the children's deficient awareness of self, is their relative incapacity for normally patterned affective-conative relations with other people. To the extent that this limits awareness of other people as persons with their own subjective life, and insofar as this means that they are barely aware of themselves in the hearts and minds of other people, autistic children are unable to acquire a reflective attitude to the world and to themselves. This compromises their cognitive and language development in ways that are characteristically "autistic" (Hobson, 1989b), as well as severely restricting their opportunities to develop self-concepts. They fail to construct a concept of self through their inability to constitute "an own and common world" (Bosch, 1970, p. 115).

Conclusion

The aim of this article has been to discern the origins and early development of an individual's sense of self and concept of self. Modern perspectives have refined and extended, and to some extent revised, the classic accounts of James, Cooley, and Baldwin. The sustained relevance of Buber's (1958) distinction between I-Thou and I-It relations, recast in Neisser's (1988) conception of the interpersonal and ecological domains of experience, is suggested not only by the patterning of infant development, but also by the cluster of psychopathological phenomena characteristic of early childhood autism.

I have argued that autistic children's awareness of themselves and other persons as subjects of experience, and ultimately their capacity to think of themselves as thinkers, is limited by disruption in their affectively patterned interpersonal relations. Their perceptually anchored understanding of affective-conative relatedness
between people and the outside world is also deficient. Together, these impairments restrict the child's grasp of the manifold ways a person may "take" (construe) reality, and both be a self and relate to other selves. The fact that in spite of this they show little delay in evolving certain forms of self-experience seems to imply that not all senses of self entail recognition of others. On the other hand, autism reveals how far both the quality of a child's self-consciousness and the concept of self he or she acquires is dependent on interpersonal experience. Thus, the line of cleavage between I–Thou and I–It relations corresponds quite closely with the boundary between the domains of relative disability and ability in autism (Hobson, 1983a). As Neisser (1988) also argued, autism may be a condition that primarily afflicts the interpersonal self; the ecological self is more or less spared.

If this account is broadly correct, then it illustrates how the study of a psychopathological condition may illuminate the nature and course of normal development (Cicchetti, 1984; Rutter & Garmezy, 1983). In particular, the case of autism raises doubt about Stern's (1985) characterization of the basis for and associations among features of the "verbal self," in that emergent cognitive capacities in 15-month-old children might reflect rather than underpin some of the factors leading to self-consciousness, personal pronoun usage, and acts of empathy toward others. Autism points to limitations in Kagan's (1982) restricted focus on physical maturational constraints to the development of self-consciousness, and suggests that some modification may be needed to Lewis and Brooks-Gunn's (1979) account of children's preferences for others "like me." Above all, autism serves to highlight how the young child's capacities to perceive the quality and directedness of human forms of relatedness, and particularly to experience interpersonal relatedness, have far-reaching consequences for cognitive development as well as for the emergence of reflective self-awareness.

References


