# *Cogitor ergo sum*: The origin of self-awareness in dyadic interaction

# Stephen Langfur

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*Abstract:* When I see a mountain to be far away, there is non-reflective awareness of myself as that from which distance is measured. Likewise, there is self-awareness when I see a tree as offering shade or a hiding place. In such cases, how can the self I am aware of be the same as I who am aware of it? Can the perceived be its perceiver? Mobilizing infancy research, I offer the following thesis as to how one can be aware of oneself, at a single stroke, as perceiver and as embodied entity. During face-to-face interaction at 2 or 3 months, the infant has a sensuous perception of the caregiver as well as a non-sensuous impression of something she is eyeing and vocalizing toward. This implicit target is the self as it first becomes present to the child. It is shown how the target of her attending is experienced by him as embodied, active, affective, and continuous. After acquiring language, however, the child becomes capable of playing the caregiver toward himself: He can speak in her manner while listening as the one addressed. Thus the relation is internalized. The outcome is the independent and secure self-awareness that typifies post-infancy life. Independence bears a price, which is assessed.

*Keywords:* self-awareness; intersubjectivity; interaction; other minds; second-person; dialogical

## Part One: The source of non-reflective self-awareness

Mobilizing evidence from infancy studies, I shall argue that self-awareness comes about through the attending of a caregiver (henceforth *carer*) and that such dependence continues in modified form throughout life. I shall follow the ontogenesis of other-centered self-awareness through the early epochs of development, including reciprocal play, self-locomotion, joint attention, and the acquisition of language.[[1]](#footnote-1)

Self-awareness comes in various kinds. The kind I have in mind requires no deliberate cognitive process (such as reflection) but occurs as a basic part of experience. Let me indicate it with examples from early infancy:

1. By the age of 15 weeks, an infant tends to reach only for things that are within arm's length (Field, J. 1976). To discriminate between the reachable and the unreachable, he must know where things are vis-à-vis himself.[[2]](#footnote-2) Hence he must be present to himself as a bounded physical whole in relation to other bounded physical wholes.

2. During playful interaction with an infant, if the carer assumes a neutral expression ("still-face"), the 3-month-old typically shows distress and sometimes tries to restart the exchange (Tronick 1989). Furthermore, in a famous experiment by Murray and Trevarthen (1985), 2-month-olds and their mothers interacted via TV monitors from separate rooms. After a minute of lively play back and forth, the researchers substituted a video recording of the mother from moments earlier, so that her gestures ceased to be *contingent* with her baby's (i.e., they ceased to mesh with his in nature, intensity, direction, and timing). He became confused, "showed fewer smiles, looked away more, exhibited more close-mouthed expressions, and intermittently attempted to regain interaction" (Reddy 2008: 75). It would seem then that a 2-month-old is able to differentiate between his actions and his mother's. He must be self-aware.[[3]](#footnote-3)

(3) Coyness betokens self-awareness. Vasudevi Reddy has found the behavioral signs of coyness in infants aged 2 to 3 months: "smiles with simultaneous gaze and head aversion and the curving of both arms in front of the face," especially "following the renewed onset of attention" (2000: 187, 190).

The general picture has been painted by Daniel Stern:

At the age of two to three months, infants…. seem to approach interpersonal relatedness with an organizing perspective that makes it feel as if there is now an integrated sense of themselves as distinct and coherent bodies, with…a sense of other people as distinct and separate interactants. (Stern 1985: 69)

Stern holds that certain *invariants* in the infant's experience by 2 or 3 months enable him to distinguish himself from others. The invariants generate four components of what he calls the "core self": The infant experiences self-agency (e.g., authorship of his actions), self-coherence ("being a nonfragmented physical whole with boundaries"), self-affectivity (experiencing affects as his own), and self-history (having a sense of enduring amid change) (ibid: 71). However, if invariants are to function as criteria for distinguishing oneself from others, what enables an awareness of the self who senses the invariants? Dan Zahavi rightly criticizes Stern on this point (Zahavi 1999: 179–80). Nevertheless, after we have found the self who senses the invariants, we shall need to include Stern's four components in an account of early self-awareness.

When we think about self-awareness as exemplified above, we encounter a well-known enigma. Take the first example: To distinguish between the reachable and the unreachable, the infant must be aware of himself as a bounded physical whole. Philosophizing adults tend to think of any such whole as an object—above all, an object of perception. When we do this in the case of the self, we encounter a problem: How can an object of which I am aware be me, the subject who is aware of it? Suppose I am aware of a tree. I am a subject and the tree is an object. But in the same perception I'm also aware of the tree's distance from me, that it's taller than I am, perhaps (depending on my situation) that it offers me shade or a hiding place or wood for the winter. Shall we understand the co-present self as something I perceive with the mind's eye (on the model of the way I perceive the tree with my bodily eyes)? If we do understand it thus, how shall we stuff the mentally perceived self back into me, its perceiver? "[T]here is no object of experience that one could perceive as the self that is doing the perceiving" (Castañeda 2001: 64).

So here is a riddle: Even in early infancy, the self is present to itself both as perceiver and as a bounded physical whole, but it cannot be present to itself in the manner of a perceptual object. How then *can* it be present to itself?

1. Among philosophers and psychologists, answers have focused on one of two aspects: the self's presence to itself as perceiver *or* as a bounded physical whole. As far as I know, the two aspects have never been encompassed in a single explanation. Developing an insight of Husserl's, for instance, Dan Zahavi shows that a non-objectifying consciousness of consciousness is attested in the experience of temporal succession (Husserl 1991: 85; Zahavi 1999: Ch. 5; for a criticism, see Langfur 2016). The analysis is ingenious, but it does not account for the self as a bounded physical whole. In an attempt to incorporate this aspect, Zahavi introduces passages from Husserl's *Nachlass* that prioritize the other person much as I shall do in this paper (Zahavi 1999: 161–65). For instance: "I cannot possibly perceive myself as a human being directly, on my own, independently of the Other" (Zahavi 1999: 161). Having opened a door, however, Zahavi does not usher us through. Instead he quotes other passages reasserting the priority of "the absolute ego" (ibid.: 165). Now, if I may anticipate: in the present paper I shall neglect the absolute ego, which I take to be an illusion (with Peacocke 2001). We shall get all we want—the self as perceiver and the self as bounded physical whole—if we go through the neglected door.
2. Zahavi also holds that the self of which one is aware consists minimally in "the distinct manner, or *how,* of experiencing" (2014: 22). When I perceive a tree, my experience is not only of the tree but also of what it is like to experience it, and this non-perceived *extra,* this "what it is like," is my subjectivity. The latter is not present to me in the manner of an object, rather it is present to me as the experiencing of objects. In other words, minimal self-awareness is not two-level, it is transparent to itself—just as, when you feel anger, you need not stand apart from your anger and observe it in order to know you feel angry. Furthermore, one is aware of "something experiential that remains the same" as one switches among modes of experiencing (e.g., from perception to fantasy) and as changes occur in the phenomenal qualities of experiences (e.g., what it is like to smell a rose followed by what it is like to taste a lemon) (ibid.: 19). "[T]he very subjectivity of experience, its first-personal character…amounts to a kind of self" (ibid.: 23).

The subjectivity of experience is certainly part of what one is aware of in being self-aware, but the examples from early infancy show there is more. Consider again the 15-week-old baby's decision to reach for a toy or not, depending on its distance from himself. The distance isn't measured from a "manner, or *how*, of experiencing." He must be aware of himself as a bounded physical whole. How then—if not on the model of the subject and its perceptual object?

Some thinkers find an answer in proprioception (e.g., Musholt 2015: 80; Rochat 2001: 35; note also Castañeda 2001: 63; Evans 2001: 109–10). The term is misleading, because *proprio*- suggests the self's presence to itself, which is what we need to explain. Philippe Rochat avoids this connotation: Proprioception is "the act of perceiving based on information carried by receptors in contact with muscles and at the joints, which provide an on-line tracking of the variations in tensions and torque" (2001: 35) He then brings in the self: "Proprioception is the system by which you know where each of *your* limbs are in relation to the rest of your body and that informs you of *your own* bodily movements" (ibid.; emphasis added). There is no disputing this. Dispute arises, however, if one takes proprioceptive sensations to be the *source* of self-awareness. To see why they cannot be, consider the way you know your legs are crossed. The sensation is distinctive, but there is nothing in it that indicates to you your existence as one sensing it. A sensation doesn't point beyond itself to a sensor. The same holds for invariants like the perfect contingency between the kinesthesis of kicking and the visible moving legs. These may "provide a good reason why a subject of experience should have a very special regard for just one body, why he should think of it as unique and perhaps more important than any other" (Strawson 1959: 93), but nothing in them suggests to their perceiver her existence *as* their perceiver. "[P]roprioceptive awareness, on its own, provides an awareness of one's own body but not of one's own body *as one's own*" (Gallagher 1996: 135; his emphasis).

Let me elaborate on this last, using an example from Rochat and Hespos (1997). A newborn has a rooting response: When the corner of his mouth is touched by the nipple or an adult's finger, he turns his head toward the source of stimulation as if to start feeding. However, when the same place is touched by his own hand (more exactly, by a hand that adult observers view to be his own), he is much less likely to root. One is tempted to conclude that the newborn distinguishes between sensations that do not originate from the self and ones that do (the proprioceptive ones), hence that he has a sense of himself. If this is true it is puzzling, for how would he have become self-aware? To repeat: nothing in a sensation *per se* singles one out as sensing it. Nor does so-called double touch. Try touching your lip. The sensation is single, not double.[[4]](#footnote-4) Of course this kind of sensation has a distinctive quality, and one day you will learn that the quality belongs to sensations originating from yourself. But you don't necessarily know this from the start. These are simply different qualities of sensation.

As for the newborn's difference in rooting behavior depending on the source of touch, we need not suppose that it depends on innate self-awareness. A less puzzling explanation is available. The sensation of his hand (better, what *we* know to be his hand) at the skin near his mouth is familiar to him from the time in the womb, where it lacked association with nutrition. After the 24th week, fetuses touch the area near the mouth quite often (Reissland et al. 2014). No wonder then that in response to a similar sensation, the newborn does not expect nutrition—and does not root.[[5]](#footnote-5)

Having excluded so-called proprioception as the source of self-awareness, we return to our quest.

Four decades ago, James J. Gibson gave us a new direction in which to look (2015: 114–118). Assume an environment in which many items are stable in relation to one another (e.g., the ground, the sky, a distant house, trees). Within such a setting, an animal's locomotion gives rise to patterns in the ambient optic array. As the animal moves forward, visible surfaces expand from the center on which it is focusing; the target of its movement remains at this center, looming ever larger, while the expanding surfaces run to the sides, finally disappearing. Moreover, as the animal moves, some items vanish behind others while new ones appear. The animal's locomotion, then, has an immediate effect on the flow of the optic array as well as on appearances and disappearances. The shifting surfaces *specify* the entity that is moving. Moreover, the specified entity is experienced as the very one to which items are appearing and disappearing—in other words, as their perceiver. "Egoreception accompanies exteroception, like the other side of a coin..." (ibid.: 116).

The Gibsonian self is not an *object* of perception. The objects are the entities of the shifting optic array—and not the entity they specify. The presence of the latter is of a special sort, implied and reconfirmed with each movement. Once the self is specified, then visible invariants like the eye sockets, nose, and limbs, as well as recurrent sensations from muscles and joints, can be experienced as belonging to it. So here we have a theory of self-awareness that accounts for the self as an experiencing, bounded physical whole without treating it as an object of perception.

Why not be satisfied with Gibson's theory, taking it as the basis for the further development of self-awareness? For a time, in fact, some *were* satisfied. The theory has had great influence, especially through the work of Ulric Neisser (e.g., 1988), and it functions crucially in José Bermúdez's book on self-awareness (1998: Ch. 5). Note, however, that the Gibsonian solution applies to animals that are locomoting on their own. Being carried about is not enough (Bertenthal 1992). The impression of the self cannot include the sensed body unless the muscles are involved in changing the optic array. "Visual kinesthesis goes along with muscular kinesthesis" (Gibson 2015: 175). Now, most human infants begin to self-locomote between 6 and 10 months. We have seen, however, that at 2 or 3 months they are already aware of themselves in a way that includes their bodies. Self-locomotion cannot be the main factor in the human case.[[6]](#footnote-6)

### The ontogenesis of self-awareness

Even if Gibson's theory of self-awareness won't do for humans, he gives us a promising direction in which to look: Suppose that the infant is oriented entirely outward and that something in the environment "specifies" him. The earliest human environment must be a caring one if the infant is to survive. Could caring create self-awareness?

Picture a common situation: Frontally positioned toward a 2- or 3-month-old, the carer is making eye-contact with him, fondling him, and talking in a special kind of speech called *motherese* or *parentese* (she heightens the pitch but varies it greatly, using a slow tempo with strong emphases and repeating phrases often). Now let us make what will seem at first a big supposition: Suppose that the infant in this situation is not initially self-aware, but that he does experience the carer as attending. When we adults perceive someone as attending, we see her as attending to something. I shall argue that the same is true for the infant. In the face-to-face position, while the carer is making eye-contact and vocalizing, what does the infant experience her as attending to? To nothing he perceives, but neverthelessto something. Along with the sensuous perception of the carer, there is the non-sensuous impression of something she is eyeing and vocalizing toward. This non-perceptible something is the nucleus of what will henceforth be known by the infant as himself. The baby first becomes aware of himself as the carer's implicit target.

The implicit target is experienced by the baby, moreover, as perceiver. For the attending carer appears, disappears, and again appears. (We shall see how self-awareness is maintained when the carer disappears.) If one is present to oneself as one to whom she appears or not, then one is present to oneself as perceiving her or not.

Someone may object: "Before the 6th month a baby does not follow a carer's gaze unless he has its target within his visual field, and when the carer's target is himself, he's not within that field; therefore, he cannot feel attended to." However, Bruce Hood and colleagues (1998) found that for 3-month-olds, a sideways shift of the adult's glance (immediately following eye-contact) cues a corresponding shift in the infant's, even when the adult's target is not yet in sight (also Carey 2009: 173–77).

Someone may also object: "Your thesis depends on the infant's recognition of a carer as such. But according to Piaget (1954: 11), a 7-month-old baby doesn't even have a concept of object-permanence." In reply: more recent studies have dated this concept back to the 2nd or 3d month (Baillargeon et al. 1985; Carey 2009: 40–48, 61–63; Rochat 2001: 96–107).

Still someone may object: "You say the baby perceives the carer as attending. Attending is mental. You bypass the problem of how a baby can know other minds exist. If we don't bypass it, we find that we can only solve it by some form of analogy theory: Given the physical similarities between my behaving body and certain other moving bodies, I infer that they have minds as I do."

In reply: The basis for the analogy theory is independent self-awareness, for which we have not found a satisfactory explanation that includes both the self as perceiver and the self as a bounded physical whole.[[7]](#footnote-7) With regard to our conviction that certain beings have minds, admittedly we cannot explain it within the limits of current knowledge, but it enables, we shall see, a satisfactory account of self-awareness in both respects.

The causes of our conviction concerning other minds are probably hidden in the mists of evolution. For we don't start life with a blank slate. Compared to a creature that must organize sense impressions and somehow rise from them to the belief that it is being watched, one that quickly perceives an attending predator will have a better chance of living long enough to reproduce. Nor is it just we humans who are aware of being attended to; the same has been documented for plovers, snakes, chickens, ducks, lizards, monkeys, and apes (see the review in Baron-Cohen 1997). "[E]volution apparently solved the 'other minds problem' before anyone formulated it […]" (Sloman and Chrisley 2003).

However, I don't want to end my argument with a relay to Darwin and Co. True, we can't yet explain the evolution of our capacity to perceive persons as attending, but we do have evidence for its *innateness*. I have already mentioned its presence at 2–3 months, citing Hains and Muir (1996a, 1996b), Murray and Trevarthen (1985), Nadel and Tremblay-Leveau (1999), Reddy (2000: 187, 190; 2008: 76–82), and Tronick (1989). There is also evidence for newborns: Condon and Sander (1974), Nagy (2008). Furthermore, the discovery that newborns imitate adult orofacial gestures, matching what they feel but don't see to what they see but don't feel, indicates an evolved connectedness with other humans (more about this below).

On the innateness of the capacity to know one is being attended to, let me detail further findings presented by Gergely Csibra (2010). Following Paul Grice, he speaks of *ostensive signals*, meaning actions which convey to the perceiver that the actor is addressing him with an intention to communicate. What could serve as proof that the newborn innately understands such signals? Csibra lists three points. The signals "(1) must unambiguously specify that the infant is the addressee of a communicative act, (2) must be discriminable by newborns, and (3) must induce preferential orientation towards their source" (ibid.: 144). He describes three types of stimuli that satisfy these criteria: eye-contact, parentese, and contingent responsiveness in turn-taking.

**Eye-contact.** Newborns prefer upright human faces in which the eyes appear to look straight at them (Farroni et al. 2002), especially the mother's (Field, T. 1985).By contrast, wild animals react negatively to being looked at: They freeze, seek escape, or prepare to fight (Baron-Cohen 1997). It has been suggested that the darkly colored sclera of nonhuman adult primates helps camouflage their gaze. For humans, the establishment of a bond has precedence: Our uniquely white sclera enhances the gaze (ibid.).

**Parentese.** As a way of addressing babies, parentese is universal (with cultural variations). At the age of 2 days, babies typically pay more attention to a source addressing them in it rather than adult speech (Cooper and Aslin 1990). The same has proved to be the case even for 2-day-olds whose parents are congenitally deaf and who had probably not been exposed to parentese before the experiment (Masataka 2003: 136–37).

**Turn-taking.** Nonhuman infant mammals suck continuously at the nipple until they are full. Uniquely, the human infant, even the newborn, makes a burst of sucking followed by a pause—and for no physiologically obvious reason (e.g., he can suck and breathe simultaneously). When he pauses, his mother tends to respond by jiggling him (or the bottle), although this does not increase milk intake (Kaye 1977). He waits until the jiggling stops before sucking again. His sucking inhibits her jiggling, but when he stops sucking he gets a jiggle; likewise, her jiggling inhibits his sucking, but when she stops jiggling, his sucking resumes. Like tapping on a prison wall and then ceasing to tap, the pause in sucking seems to be a signal testing whether the mother will respond by jiggling. To apply Csibra's criteria for an innate ostensive signal: the newborn *discerns* the jiggle as a response *specifically directed* toward himself; he responds to it by sucking, and then he *actively seeks it* by pausing again.

Psychologists have noted that this uniquely human feeding pattern resembles conversational turn-taking (Kaye 1977; Locke 1993: 114ff.). Masataka traces the transition, at around 2 months, to mutually responsive vocalization. "After stopping their bursts [of sucking], infants learn to wait for the jiggling. If caregivers remain unresponsive, infants then coo" (2003: 59; my brackets). Masataka elaborates on his interpretation: The lack of a jiggling response amounts to the violation of an interactional rule. This leads to a new behavior by the infant: cooing. In return he gets a *vocal* response from the mother. The pattern of address and response is liberated from the context of feeding.

**In sum**: Our species has evolved in such a way that a baby is equipped to recognize a potential dialogue partner from the moment of birth. On the infant's side, there is no "inborn Thou," but there is an inborn capacity to perceive a person attending. Subpersonal factors, such as evolved nervous systems, may create this capacity and contribute to its use. But subpersonal factors cannot bring about self-awareness. This requires an encounter of one nervous system with another, that is, a meeting of persons.

Csibra points out that the three innately understood ostensive signals tend to occur together: "The mother looks into her child’s eyes, starts a contingent play with him, and calls his name in motherese. Flooding infants with all these stimuli concurrently…helps them to recognize the presence of a communicative intention" (Csibra 2010: 153). But what end is served by the infant's innate receptivity to the communicative intention? Following Grice, Csibra thinks the ostensive signals alert the infant that useful information is about to be delivered. The examples of information that he gives, however, date (robustly at least) to the 9th month or later, when carer and infant start drawing each other's attention informatively to things—for instance, by pointing at them (Csibra 2010: 155, 159–60). We have seen, though, that the signals are received by the infant with smiles and coos from the *2nd* month. Is no content being communicated at this earlier time? I hold that a very definite content is being communicated. It is the content: *You!*

On this content, namely the self as the carer's implicit target, is built the awareness of the self as a bounded physical whole, a locus of interaction, affective, and enduring. I shall now sketch how the buildup occurs.

##### The self as a bounded, active physical whole

As we saw in the discussion of proprioception, there is nothing in bodily sensations *per se* to indicate to the infant that they belong to one who senses them. How then can the body be recognized as his own?

At the age of 2 months, the child begins to make the *social smile*. This is universal (though not all cultures encourage it). The carer tends to smile in response. We have seen that a typical 2-month-old is sensitive to contingent responsiveness. In the case of reciprocal smiling, the orofacial kinesthesis is part of what the carer is attending to when she smiles back. But how is it singled out for the infant among the many sensations? Here we are helped by research into neonatal imitation. In the days after birth, when an experimenter models an orofacial gesture such as tongue protrusion or mouth opening, the newborn typically imitates, although he has no sensory means for perceiving a correspondence between the experimenter's visible face and his felt face (Meltzoff and Moore 1977; 1994; see the meta-analysis by Simpson et al. 2014, which stresses the importance of sample size).[[8]](#footnote-8) The finding suggests an intermodal connection (probably grounded in the mirror neuron system) between the model's visible face and the newborn's orofacial kinesthesis. Now let us jump to 2 months and reciprocal smiling. Because of the intermodal link, the carer's visible smile is echoed in the infant's orofacial sensation (as a tightrope walker's balancing act is echoed in the onlooker's muscular tensions), singling out that sensation from others. The rest then follows: Smiling is, at the moment, the manner of the carer's attending. Consequently, the singled-out orofacial sensation is experienced by the infant as included in the target of her attending. The latter is the self. He becomes present to himself as carnal.[[9]](#footnote-9)

But what about the infant's sense of himself *as agent*? Granting that he feels the kinesthesis of smiling to be his own, how does it change from something sensed passively to something he actively wills and exerts? This question assumes too radical a split between the implicit target and the kinesthesis. The baby's action is already underway. He doesn't have to take over the kinesthesis and exert it. The carer's responding smile makes him present to himself as already exerting it. He is revealed to himself in the midst of action. Although his smile was not at first the product of a decision to smile, he requires no lesson in how to repeat it deliberately.

Reciprocal smiling ought not to be confused with imitation, although an intermodal connection plays a part in both. Smiling is a natural expression of happiness. What's there to be happy about? Nothing except the interaction itself. Each partner finds joy in connectedness. In the same way that the infant discovers the kinesthetic smile to be his own—namely, because the carer smiles in response—he discovers the joy to be his own. And since joy is felt throughout the body, the body too, as feeling and felt, enters the ambit of ownness.

In reciprocal smiling, to repeat, the infant is revealed to himself as a carnal agent smiling joyfully at the carer. We need not picture this as two moments, not (1) a moment in which the implicit target of the carer's attending enters the infant's awareness, followed by (2) a moment in which the sensations and the joy are recognized as part of that target. The discovery occurs, I suggest, as a single articulated moment: In the face-to-face situation, as soon as you-the-carer are perceived as attending, the self comes into awareness as an active, bodily entity. Nevertheless, a distinction is in order. Your implicit target (me-the-infant) is not identical with the kinesthesis of smiling, although the latter is included in the target. In support of this non-identity: firstly, the target remains when the kinesthesis changes—for instance, when you and I cease to smile but continue to gaze or vocalize. Secondly, the target comes into awareness because of your attending, whereas kinesthetic sensations may have been in awareness before being recognized as belonging to a self sensing them. The inclusion of the body begins in the very first experience of being attended to, but the self always has a non-sensuous core. One is more than one's body.

Amid varied interactions, various aspects of the body accrue to the carer's implicit target. They enter the ambit of ownness. The carer is experienced as responding not just to isolated acts, but to one who is an entity as she is (more at Langfur 2013). In the following passage from Heinz Kohut, the baby's toes are brought into the ambit of ownness (or if they have already been brought in, they are re-confirmed as belonging there); the carer picks out each toe in turn, touching it while glancing back and forth between it and the baby (who feels her touch there). In the end she "walks" her hand toward his stomach:

"This little piggy went to market, this little piggy stayed home, this little piggy ate roast beef, this little piggy had none, and this little piggy cried wee-wee all the way home." Such games seem to rest on the setting up of slight fragmentation fears at a period when the cohesiveness of the self has not yet become totally entrenched. The tension, however, is kept in bounds (like the separation anxiety in the peek-a-boo game (Kleeman, 1967)), and when the last toe is reached, empathic mother and child undo the fragmentation by uniting in laughter and embrace. (Kohut 1971: 118–19)

##### The affective self

We have seen how the infant's active body can become part of the carer's implicit target, thus entering the ambit of ownness. We shall now see how something similar can happen with feelings.

As the first year progresses, the carer spends less time in direct imitation (matching her vocalization to the baby's, her hand-movements to his, etc.) and more time in what Stern has termed *affect-attunement* (1985: 138–161): Responding to what she believes the baby to be feeling at a given moment, she uses a behavior different from his to match it in intensity, shape, and/or timing, thus signaling to him that she shares it. (Stern cites evidence that intensity, shape, and timing can each be perceived by infants across different sensory modes (ibid.: 153–54).) For example, as the baby stretches his arm toward a ball, the carer verbally expresses his feeling of effort by exclaiming "ohhh" (Jonsson and Clinton 2006: 388). Or as he kicks in the air, she "says 'Uhuhuhuh' with the same intensity, rhythm and duration" (ibid: 395). Mothers attune most often to "behaviours expressing excitement and happiness, together with strong motor efforts, or rhythmic movements" (ibid.: 397). They also attune to displeasure, loss of balance, sneezing, burping, almost falling, or dropping things. At 2–3 months, instances of direct imitation outnumber affect-attunements, but by 6 months the relation is reversed: "[M]others engaged in episodes of affect attunement…almost once a minute during playful interaction" (Jonsson et al. 2001: 379; Stern 1985: 147).

Note that the examples given so far pertain not so much to discrete categorical affects like joy, anger, and fear as to the much more frequent, dynamic, kinetic feelings that accompany motor efforts and involuntary acts. Stern calls these *vitality affects* (1985: 53–61, 156–57). To elaborate on a suggestion by him (1985: 151): the carer's use of a different behavior has the consequence of distinguishing the feeling from the perceptible behaviors that accompany it. In other words, because the carer's "Uhuhuhuh" differs from the infant's kicking in the air, although similar in shape, intensity, and timing, the affect is singled out from the behaviors. The similarities convey to the infant that the carer has identified what he feels. The more accurate her attunement is, the better it affirms for him a connection with her that exists beneath the surface of perceptible behavior. The carer often explains her act by saying she is "being with" the child (Stern 1985: 148), and this is deeply true. Affect-attunement is probably crucial to the establishment, by 7 or 8 months, of an especially strong attachment to one or two carers. The attachment coincides in time with the onset of *stranger anxiety* and *separation anxiety*.

But what about categorical affects? Joy is directly felt throughout the body on the infant's side, while he perceives it in the carer's responding smile. As for negative categorical affects such as fear, pain, and anger, Peter Fonagy and colleagues have studied instances where the carer does not use an entirely different behavior but varies the child's in a special way:

[W]e have confirmed that mothers who soothe their distressed 8-month-olds most effectively following an injection rapidly reflect the child's emotion, but this mirroring is contaminated by displays of affect that are incompatible with the child’s current feeling (smiling, questioning, mocking display, and the like). (Fonagy et al. 2004: 35–36)

In addition, the carer may shape her reflecting expression into an exaggeration (ibid.: 177–78). By such means, she "quarantines" her mix of expressions from those that normally display her own feelings. It is as if she were saying, "Here on my face is what you look like, feeling what you feel, but you can see that it's not what I feel and you can see that I'm not worried."

In cases like these, how does the infant know that the carer's main facial expression reflects what he feels? For one thing, accurate attunements to vitality affects establish her authority in matters of feeling. But I also think that the child feels fundamentally known by her. Since her act of attending makes him present to himself, he can have no doubt that it reaches all the way to him, because such doubt would have to include his existence, which is not in doubt. During much of infancy, therefore, he probably feels known by her through and through. When she fails to understand what he wants and he flies into a rage, this may baffle her ("Doesn't he see I'm trying to understand him?"), but his rage is quite comprehensible if he believes that she knows his every desire and is frustrating him (cf. Fonagy et al. 2007: 311).

Attunements to the child's affects will later serve as the foundation for a structural feature of *language*: The predicates in statements like "I'm in pain" or "I'm so happy!" "are both self-ascribable otherwise than on the basis of observation of the behaviour of the subject of them, and other-ascribable on the basis of behaviour criteria. To learn their use is to learn both aspects of their use" (Strawson 1959: 108). For example:

X's depression *is* something, one and the same thing, which is felt, but not observed, by X, and observed, but not felt, by others than X. (Of course, what can be observed can also be faked or disguised.) To refuse to accept this is to refuse to accept the *structure* of the language in which we talk about depression. (Strawson 1959: 109, his emphases)

Predicates like *depressed*, *happy*, and *in pain* are asymmetrical(McGinn 1997: 122). Each must be learned with two conditions of application, one for me and a second for others. We can now see how the learning of both conditions can occur in a single event of affect-attunement.

In sum, the carer reveals the baby to himself not only as carnal and active, but also as having feelings that are known by her, despite the fact that only the baby feels them in the exclusive way he does.

##### Self-continuity (early stage)

The reader may ask, "If there are various carers, then wouldn't there be various selves, a different self for each? How could the self have consistency over time?" I need to present more material before I can answer fully, but the following may be mentioned for now. From 2 months of age, with regard to smiling, vocalizing, and attentiveness, infants will be most responsive to people whose level of contingency is like that of their parents (Bigelow and Rochat: 2006). By 7 or 8 months, as said, affect-attunement will have established a strong attachment to one or two carers. In other words, the infant tends to be picky about those with whom he interacts, preferring people who reaffirm the self to which he is accustomed.

##### Summing up so far

The thesis of the implicit target explains how the young infant can become aware of himself as perceiving, embodied, agentive, affective, and enduring amid change. I refer to the events in which one becomes self-aware in this way as *You-I events*. This explanation of human self-awareness avoids the problems outlined at the start. Note that it does not propose an alternative to the perceptual model of awareness; it does not attempt to replace that model with another based on awareness of feelings such as "what it is like to experience X." It accommodates the awareness of such feelings, and it also accommodates the self as a bounded physical whole, as perceiver, as author of its actions, etc. To be sure, if our model were *straightforwardly* perceptual, then we would fall into the logical problem. But it is perceptual with a twist: I-the-infant am not aware of myself as an object of *my* perception, rather as an object of *yours*.

## Part Two: Self-awareness when the carer goes absent

Among the questions raised by the You-I account are some that I've discussed in Langfur (2013) and will not treat here, namely: "The fetus has not yet experienced a You-I event, but isn't he self-aware when he brings his hand to his mouth? And what about infants who are severely neglected? Or not raised by humans? And how do congenital blindness or deafness affect the thesis?"

There is one obvious objection, however, which strikes so sharply at the heart of the You-I account that it must be addressed: "I don't require the presence of another person in order to be self-aware!"

There are two successive ways in which a child can remain self-aware when the carer goes absent. The first way applies to the prelinguistic period and occupies the present section. The second way, which is discussed in the section called "Internalization of the You-I event," completely restructures experience, providing an almost impregnable defense against being left alone.

Before discussing the prelinguistic period, let us briefly consider our adult experience of absence—say, the absence of the beloved. The spaces she occupied at home are empty. The perceptible surroundings do not grow dim, as when I contemplate her image; rather the furniture is insistently present in its lack of habitation by her (See Sartre 1966: 42 ff., beginning, "I have an appointment with Pierre […]"). A similar *presence-in-absence* is felt after a death. The hat tossed over a peg, the dress in the closet, the open book, the neatly-ordered desk, seem charged with the person (Stern 1985: 100).

 But does the same hold for the infant when the carer leaves the room? May we suppose that the items which remain keep her present-in-absence to him? We may. Campanella and Rovee-Collier (2005) established that infants as young as 3 months make an *association* between two puppets, A and B, when these are shown together for an hour per day over seven consecutive days. Subsequently, on condition that A alone reappears now and then, the association with B is preserved in memory for at least three months. If that is the case with puppets, surely the items that are present amid the carer's frequent appearances continue to be associated with her when she turns away or leaves the room. I have in mind the sides of the crib, the ceiling, the curtains, things imbued with her scent, a pacifier. But I also have in mind the items that have come to be recognized as parts of the infant's self through the carer's acts of attending, such as his voice, his toes, and kinesthetic sensations. By association with her, they too keep her present to him in absence. Each item, be it crib or voice, retains something of her, and only because of this retention can she be absent for him.

Because of the items that remain during the carer's absence, the child is prevented from reverting to a state of non-self-awareness. The items keep him present to himself in a kind of limbo, an emptiness waiting to be filled. The give-and-take of the You-I event is missing. Is there an equivalent in the items that remain?

Lacking the targeted *responses* of the carer, the infant (starting at around the 4th month) finds a substitute in *effects* he makes with his voice or on parts of his body or on inanimate things. Responses and effects are importantly different, but nevertheless an effect can make a child aware of himself as its cause. It can also make him aware of what he is doing or just did in getting it. In the 5th and 6th months, for instance, "when he tears paper there appears, on the one hand, the lessening in size, on the other hand, the noise. The patience with which this occupation …is continued with pleasure is explained by the gratification at being a cause […]" (Preyer 1890: 191).

In the making of effects, more is afoot than "the gratification at being a cause." At stake is self-awareness. Within the context provided by the present-in-absence carer, an effect reconfirms one's existence. The limbo is *creative*. The satisfaction of ripping paper does not measure up to the joy of the original event, but it *is* satisfaction after all. The importance of such effects is hard for me-the-adult to understand, because when I regard a sheet of paper it does not seem essentially connected to the sense of my existence (unless I'm an artist, but that's a theme we cannot enter here); the paper is just dully there, pat before me. In contrast, the paper-ripping child completes a derivative You-I event. The structure of experience is unfulfilled—he is unreal to himself—until he makes an effect. He will continue to rip the paper until his effects have become predictable, and then he will have to seek new things.

With regard to self-awareness, inanimate things have certain advantages for the infant. One is that they don't autonomously pick themselves up and disappear as a carer can. Also, the face-to-face You-I event is tiring: It requires attention and activity, including correction of mismatches, and these demand a degree of energy that inanimate things do not. Thirdly, the interaction with a carer may quickly reach a point of satiety, where a further increase in joy would flood the child's capacities to receive and respond. And fourthly, quite in the opposite direction, there is just so much one can do week after week in face-to-face play. Boredom threatens the You-I event: A predictable other is not fully other. Wanting to maintain the infant's interest, carers seek new means, including toys.

In the baby's turn to inanimate things, earlier affect-attunements play a role: Recall that they presented the carer as being with the baby at a level deeper than perceptible behavior. Therefore, her occasional imperceptibility need not prevent him from feeling attended to, even when she leaves the room. While she is in it, he checks back: "[T]ypically, a four- to six-month-old infant will glance rapidly at and smile toward an engaging social partner, then quickly return to his involvement with objects" (Rochat 2001, 160).

Frequent affect-attunements establish the baby's *faith* that he continues to be the apple of the carer's eye even when that eye or his own is turned elsewhere. For some children, though, faith may never be established, or it may be ruptured. Even then, the solitary infant is prevented from reversion to non-self-awareness: The items that remain keep the carer present-in-absence *as not responding*, that is, not caring, and they keep him present to himself as not-cared-about, a negative focal center. He may use things not as substitutes for the (non)carer but rather as alternatives to her.

Someone may object: "Your explanation ties self-awareness too much to a certain spatial location. What if the carer is absent and the infant is in a different environment, which is not imbued with the former's presence?" I reply, firstly, that the child still has his voice and body, which are associated with the carer, and he can make effects on them. You are right, however, that he finds nothing in the nearby things that can substitute for the give-and-take with her. This fits, I believe, what Mary Ainsworth discovered after devising the twenty-minute *Strange Situation*. In the unfamiliar lab amid unfamiliar toys, the infants who show distress when the mother goes absent include those who are observed to be secure at home, where they endure her absence easily. In contrast, infants who are unruffled by the mother's absence during the Strange Situation are observed to be insecure at home, where the mothers are "substantially more rejecting" (Karen 1998: 155). For the unruffled infant, I suggest, the unfamiliar toys count as welcome alternatives to those at home, the latter being imbued with a mother who rejects him.[[10]](#footnote-10)

The point touches on the question of self-continuity, which was left partly open. Once there is a principal carer, the You-I event is renewed in her absence by means of the items imbued with her. With inanimate things, the infant is the initiator and eventual master. If a stranger turns up, offering a style of interaction unlike the carer's, the child may ignore her, continuing to get himself from the things. With Shakespeare he might sing, "…and, you away,/ As with your shadow I with these did play."

### Transition to language

As said, because the carer creates the infant's self-awareness, he feels known by her. From his viewpoint, he need not communicate desires. Why then bother to learn language? Indeed, how and when does he come to understand that language *is* language? Why should he think that vocalizations communicate more than *You!*? Why, for instance, should a thing have a name? A name adds no property to it. Until infants are about a year old, most do not correctly and consistently apply names like *bottle*, *shoe*, *cup*, or *ball* (Carey 2009: 267–68).

In the previous section we saw that an inanimate thing can function as an ersatz You. Before the 9th month or so, the child deals either with a real You or a thing, seldom with both together (Tomasello 1999: 62). One day, however, for reasons we shall see, I-the-infant understand that a thing you are pointing to while vocalizing toward me is included in what you're attending to—and without diminishment of your attending to me. The thing comes to be included in the You-I event. Such *joint attention* to a thing is not well described as a shift from dyad to triad, but rather as an elaboration and expansion of the dyad, enabling greater variation within it (hence overcoming the threat of boredom). The terms *elaboration* and *expansion* are Reddy's: "[T]he changes in the infant’s relation to the object of others' attention...are in each case expansions and elaborations of an existing mutuality—that between self and other expanding to involve other 'topics'" (2009: 102).

During joint attention, when the carer uses words like *bottle*, *shoe*, or *cup*, the child comes to understand that these sounds have particular meanings and proceeds to learn them (Sabbagh and Baldwin 2009). So we face two questions: What happens to bring about joint attention to things? And what enables the discovery that vocalizations are language?

In both cases the answer includes self-propelled locomotion, typically crawling. Joseph Campos and colleagues (2000) discovered that joint attention is preceded by the onset of self-propelled locomotion, even when the latter begins months later than usual. Now, in the previous section we noted the importance of inanimate things as stand-ins for the You (or alternatives to her). Once a child is able to crawl, he is lured by things that were formerly out of reach. The developmental consequences of crawling include the means-ends distinction and new spatial understanding, as well as a higher level of attentiveness to distal things and the capacity to bear a goal in mind when one isn't able to see it. "[W]hen the infant begins to locomote, the infant inevitably encounters prohibitable objects and contexts. …[T]hese encounters typically result in the parent using distal affective information to distract or inhibit the infant from the behavior" (ibid.: 163). The infant can figure out which object the carer is prohibiting because it is the goal toward which he has been crawling: He is bearing it in mind at the moment her vocalization moves him to interrupt his quest and look at her. These factors lead him to understand that the prohibiting carer is including the goal in her ken as part of her attending to him. He experiences her to be engaged with him in an act of joint attention toward the goal.

That seems a likely way in which joint attention to things can begin. From here it can develop in non-prohibitive directions. A further motivation has been pointed out by Rochat: Crawling puts the child in a dilemma: "On the one hand, infants are pulled toward exploring things and away from caregivers. On the other hand, they need their caregivers' presence and proximity" (2001: 162). Joint attention resolves the dilemma.

We come to our second question: When the carer talks about the things that are jointly attended to, what enables the child to *understand* that she is talking about them?

Initially, as said, the infant feels known. An opening for doubt first appears when he begins exploring things in the carer's absence. By making and getting effects, he discovers aspects of himself (e.g., increasing balance and coordination) which were not revealed to him in face-to-face events. The discovery of a self that is not entirely known to the carer becomes increasingly pronounced through crawling. This adds a Gibsonian dimension: Changes in the optic array specify the self whose movements bring the changes about. The child's experience of being specified in this new way (for instance while crawling toward the toy giraffe across the room) creates an alternative kind of self-awareness. The latter lacks the depth of the original kind (there are no affect-attunements in Gibson's scheme), but it is more easily within the child's control. Since the new form of self-awareness is not provided by the carer, from the infant's viewpoint it is outside her ken. Crawling increases both physical separation and separation of another kind, which consists in no longer feeling completely known.

On the one hand, then, affect-attunements make the child feel known by the carer at a level deeper than perceptible behavior; on the other hand, the making of effects, especially through crawling, reveals him to himself as not entirely known by her. Only now can he begin to understand that he must communicate desires—for example, by pointing toward his cup or saying "Water!" The stage is set for language.

Let us return to the fact that you-the-carer, while bringing new items into the dyad, *talk* about them. Your mentions of the ball to me-the-toddler, for example, make it part of your attending to me, hence part of your bestowal of self-awareness on me. My echoes of your mentions are a way of staying with you in the dyad while you expand and elaborate it. *Language enables us to keep our attention on one another while attending to additional entities.* Its function is not just to inform or request, but to include. Because of the multitude of items that can be brought into the You-I event through language, the event may recur without going stale.

In order that a word may be mastered, it must be heard in joint attentional scenes and subsequently freed from these contexts, as happened for instance with Helen Keller at the water pump (Keller 2003: 312–16). Michael Tomasello puts it thus: Even to learn a single word, a child must "isolate both the to-be-learned word and the to-be-learned referent, each of which is embedded in its own set of complexities" (1999: 145). Children experience an accumulation of related but contrasting joint-attentional scenes that can lead, typically in the 2nd year, to the discovery that each thing has a name.

Through a carer's words the linguistic community enters into joint attentional You-I events. However, most of the specific meanings are unknown to the child (only now can he realize this). The revelation of his ignorance concerning what is being said between the carer and others must increase the feeling of separation, even as he begins to gain means for overcoming it. Things cry out for names and names cry out for things. A vocabulary spurt begins, and there arrives a time when he can learn just by listening in, without a concrete joint-attentional scene.

 Between 1 and 3 years, writes Tomasello, children "learn to talk about the relational or event structure of the scenes of their life in exactly the same way they hear adults talking about them, using exactly the same words and linguistic constructions" (1999: 145). They are "virtual 'imitation machines'" (ibid.: 159). To pile up the inventory of words and phrases, the toddler must engage in *role-reversal imitation*, taking up the carer's constructions and directing them back to her or someone else (Tomasello 2003: 25ff.). The creation of the inventory is energized by the need to narrow the gaps that have opened between self and carer (Wilson and Weinstein 1990)*.* In learning a phrase of hers, the child adopts not just the words but her style. "At the end of infancy and in early childhood, children *duplicate social roles*: behaving 'as if' they were mommy, acting from a mommy-like perspective, and expressing mommy-like desires and beliefs, even if they are not the child’s own" (Meltzoff and Moore 1994; italics added).

### Internalization of the You-I event

During the 2nd and 3d years, experiences of separation accumulate. The child may be weaned, the carer may return to her job, a sibling may be born, and more. If the You-I account is correct, the separations must threaten self-awareness, hence the very sense of one's existence as an entity in a world. Language makes possible the ultimate defense against this threat.

In the role-reversal imitation required for learning linguistic constructions, I-the-child speak as if I were you-the-carer, but at the same time I hear myself talking. From this it is a short step to a new behavior: I can speak as if I were you and at the same time *hear as the one being addressed*. Formerly, in order to be present to myself, I needed a flesh-and-blood You, or in her absence an inanimate stand-in. But once I can play you toward myself in rich detail (thanks to the increasing richness of my language), I am able to bestow and receive self-awareness without you.

We have evidence from a child named Emily, who was recorded nightly between her 2nd and 3d year (Nelson 1989). Each taped session features a bedtime conversation with one of her parents, followed by Emily's talk after being left alone. One evening, close to her second birthday, she is brought to her new bed by her father (a baby brother has received her crib). She weeps. Her father tries to fortify her, talking about what they will do the next day and reminding her from time to time that big kids like her don't cry (Dore 1989). After he leaves the room, Emily repeats much of what he said, using his intonation, duplicating peculiarities of his speech, and struggling to master the word "intercom," which he had introduced (ibid.). Thrice, in his voice, she repeats with variations, "Big kids like Emmy don't cry." In terms of the present account: Without giving up her identity, she adopts the style and content of her father's utterances in order to keep from crying. Alone in the dark, she hears herself speaking like him and is fortified as she was by him in the flesh. This is what I mean by *playing the carer toward oneself*.

On hearing the tapes of Emily speaking like her father, Stern wrote that it was "like watching 'internalization' happen right before our eyes and ears" (1985: 173). The psychoanalytic concept of internalization is well known (it is also dubbed *introjection* or *identification*, although some draw distinctions among the terms). Freud calls the process a "setting up of the object inside the ego" (1960: 28–31); he interprets it as a defense against the possible loss of the carer or her love. Donald Winnicott formulates it thus:

Gradually, the ego-supportive environment is introjected and built into the individual's personality, so that there comes about a capacity actually to be alone. Even so, theoretically, there is always someone present, someone who is equated ultimately and unconsciously with the mother,… (Winnicott 1965: 35)

The idea, then, is well-known, but in the context of the present account it takes on new significance. It enables us to understand how a child makes the transition from the You-I event to the kind of self-awareness that we commonly have after infancy. The main technique is to play the You toward oneself in speech. This creates self-awareness without the need for a flesh-and-blood You. The played You is not truly other, of course, and so there is no suspense. We may name it the *mock You*, and we may name its implicit target the *secure self*. It is perhaps no coincidence that separation anxiety has usually evaporated by the 3d birthday.

After the principal carer is internalized, the model for the mock You may undergo variations. Anyone who makes an impression on the child is likely to be internalized too, often temporarily and superficially. I-the-child can slip into the persona of an impressive companion, or Wonder Woman, simultaneously playing the part of a silent, admiring You. Nor is the tendency confined to childhood. Our long-played carers may merge into a generalized Other (Mead 1967: 152–64). If I think, "Remember to hang the laundry," I am speaking as a You to myself. If I snap my fingers and think, "Damn! Forgot to hang the laundry!" I am addressing a mock You. Hubert Hermans, originator of Dialogical Self Theory, writes of "an affectively charged, gist-like sense of an interpersonal respondent, which is based on stabilized expectancies from many past interactions" (2004: 6).

Self-talk is sometimes structured like the early You-I events ("You're great!" "You're an idiot!"), but it is often focused on a thing or person outside, as in a joint attentional scene ("Damn Fritz! Why's he taking so long!?!").

When self-talk proceeds in silence, it is called *inner speech*. Many have noted its benefits. It is the form that much of our thinking takes; it helps us solve problems, control our emotions, and plan; some claim it is the unifying thread on which we string the varied beads of experience, forming a narrative self. But it often degenerates into blather, and precisely as such it reveals its most important function: to keep one present to oneself, or in other words, to preserve awareness of one's own existence. The innermost meaning of self-talk is always "*You!"* followed by *"You!"* and then *"You!*" again.

We are a gabby species. The urge to talk to ourselves is remarkably compelling, as we can easily see by trying to *stop* the inner voice as long as possible. My limit for self-imposed inner silence seems to be about five seconds. (Baars 1997: 75)

Taking stock so far: When Emily adopts the vocal attributes of her father, repeating "Big kids like Emmy don't cry," she is playing him toward herself. I claim that such play becomes a ruling force in life. The You-I event is internalized, and one appears to oneself as ontologically self-sufficient. Moreover, just as self-talk is enabled by the fact that one hears oneself talking, so, by an act of attention, one can hear one's own self-talk. The result, I suggest, is what Descartes reported as "*Cogito!*" The hearer of self-talk can himself come into a thinker's ken as a pure, absolute, or transcendental ego.[[11]](#footnote-11)

An objection arises: "The frequency of inner speech varies widely among adults (Hurlburt et al. 2013). How do you explain the fact that we remain self-aware during stretches when we do not talk with ourselves?"

I make one point in answer and allude to a second. Firstly, one identifies not just with a voice but with a person. "Ultimately a heard voice is something that communicates, and an entity that communicates can be represented separately from its actual utterances" (Fernyhough 2016: Location 3224). When one has long played various others toward oneself, one may sense their attending presences even when no inner speech is underway (Baldwin and Holmes 1987; Fernyhough 2016: Locations 3078–3089; James 1902: 64, 113, 270). Furthermore, my argument does not depend on actual occurrences of inner speech, but rather on the fact that, after the first internalizations, one always has the *option* of engaging in it: It "is reassuringly or irritatingly there on tap….. It offers us the unfailing if ambiguous company of a guest who does not plan to leave" (Lecercle and Riley 2004: 8).

The objection will also be met if it can be shown that many of our post-infancy involvements—for example, in a work-project or novel—are derivative forms of the You-I event, providing derivative forms of self-awareness and relieving us temporarily of the need for self-talk. These topics are beyond the scope of the present paper.

### Self-talk restructures experience

Playing the carer toward myself in self-talk, I-the-child still need flesh-and-blood others for many essentials, but no longer for self-awareness. In this situation, suppose the carer re-enters the room. The aura of importance surrounding her has faded somewhat. Chatting with one another, the mock You and the secure self form a loop apart. This brings about a change in the experience of space. Originally, space was spanned distance: The You was *there*, but in bestowing self-awareness she reached through to me *here*. After internalization, space is restructured into (1) the loop formed by the mock interlocutors and (2) a space outside the loop, in which appear persons and things that have ceased to be essential to self-awareness. The inner loop of self-talk forms what is known in modern philosophy as the *subject*, while the entities outside it are the *objects* about which the mock interlocutors talk and toward which they act. (For this reason, the term *intersubjectivity* should not be applied to the original You-I event.) Only now does a question arise as to how one is able to cross the divide between the subjective inside and the objects outside in order to pick up knowledge of them.

Furthermore, the You-I event is the basis for our conviction that other minds exist. Upon the baby's experience of a person attending is founded all knowing that includes a knower. No question can arise, for a knower, as to whether the experience of other minds is grounded in an objective reality. Only after self-talk, with its inner space, can the "other minds problem" pop up.

In a word, the internalization of the You-I event *restructures* experience. Self-awareness now recurs quickly and securely; there is no longer an experience of the dawning of the self through another's attending. Gone too is the deepest part of the dread of losing the carer. One is shielded from the absolute dependence that characterized the You-I event. The ever-ready option of self-talk keeps other people from appearing in fullness. It *precludes* a You. So here is a new function for it: In addition to assuring oneself of existence, self-talk blocks any potential approach by a You.

Inured as we are to self-talk, we have no idea of what life would be like without it. Yet there must be an experiential difference between (1) a self that becomes self-aware only through the attending of another person and (2) a self whose presence to itself is guaranteed. The gain in security comes, one would think, at the price of the wonder of being.

One would think! In fact there are glimmers. I have in mind occurrences in which the original You-I event seems to break into adult life. This is how I understand the rare and delicate moments to which Martin Buber alludes in *I and Thou*: "If I face a human being as my *Thou*….he…fills the heavens. This does not mean that nothing exists except himself. But all else lives in *his* light" (1958:8; his emphases, as also in what follows). "I become through my relation to the *Thou*; as I become *I*, I say *Thou.*" (ibid.: 11).

A weighty objection arises: "Who initiates self-talk each time it occurs? It cannot be the secure self, because this is the product. Is there another self hidden in the wings, and is there a hidden You that makes it present to itself, so that it is constantly motivated to produce more self-talk in order to feel secure? It seems you are forced to split the self into one that initiates self-talk and another that becomes present as a result."

In reply: the self *is* split. Consider slips of the tongue, which are often significant. For instance, an academic says to a colleague, "I'm trying to get my article punished." He or she didn't mean to say "punished," so who did mean to? One self is up front (conscious), intending to say "published," and another self, who fears success perhaps, takes advantage of an unguarded moment to smuggle that fear into the vocal cords, embarrassing the speaker. "Ourself, behind ourself concealed,/ Should startle most" (E. Dickinson).

The concealed self (concealed by the preoccupations of the mock interlocutors) is a good candidate for the self who initiates self-talk. If the concealed self can surprise the secure one with "punished," then he can also play the You while the secure one is busily unaware of him.

The objection has weight, though: The concealed self must be self-aware, so there must be a You who makes it so. Who could this You be? We have already seen, in connection with the infant, how self-awareness can be maintained when no You is in sight. We studied this under the rubric of presence-in-absence. Might we be dealing, then, with a kind of absent You? For when self-talk is established as an ever-ready option, it precludes, as said,the appearance of a You.

Just as the absent You imbued things in infancy, so does the precluded You in later life. It imbues them in the form of felt insufficiencies, as in Peggy Lee's "Is that all there is?" or Joni Mitchell's "[Y]ou don't know what you've got / 'till it's gone," or the Ellen Gilchrist title, "I cannot get you close enough." Of the delicate and rare irruptions of a full You into adult life, Buber writes:

This is certainly something which comes to a man in the course of his life only by a kind of grace, and many will say that they do not know it; but even he to whom it has not come has it in his existence as a constitutive principle, because the conscious or unconscious *lack* of it plays an essential part in determining the nature and character of his existence. (Buber 2002: 202; his emphasis)

If one feels that one cannot get the beloved close enough, one must have a standard of what close enough would be. The standard was created, I suggest, at a time when life occupied a wider span of joy and distress than the span we know in adulthood. Self-talk cuts off both extremes. There remains a yearning for the lost joy, but it is countered by a dread of again depending absolutely on a person one might lose. Who yearns? Who dreads? It is, I suggest, the concealed self who repeatedly plays the You, yearning to get published but dreading to be punished.

## In conclusion

Let us cast an eye back. We began with certain problems raised by the phenomenon of everyday, non-reflective self-awareness: How can the self be present to itself both in its being aware and as a bounded physical whole of which it is aware? We saw that a straightforward perceptual model of awareness cannot help to answer this question, while a more minimal model does not account for the early awareness of the self as a physical whole. Using recent findings from infancy research, we then explored a type of event in which the self can be aware of itself not as its own perceptual object, rather as another's. Here the self is present as the implicit target of carer's attending. Such a *You-I event* was seen to satisfy the above requirements. However, it corresponds to almost nothing in adult experience, since adults don't need others to be self-aware. The discrepancy is explained, we saw, by the fact that a child learns to talk with himself in the culture's language: Self-talk enables him to duplicate roles, speaking as the carer while hearing as himself, or vice-versa. Such internalization amounts to a total restructuring of experience. During the remainder of life, self-awareness comes about largely through internalized You-I events.

We also saw that certain philosophical problems arise only after internalization. These include the question of how we can be sure other minds exist and the question of how a subject can go out to objects and bring back knowledge of them. I would add the question of life's meaning or purpose. It arises on the basis of both structures of experience, the original You-I structure and its internalized derivative. The life to which one refers when asking about life's meaning is life as one knows it, a life that is structured by self-talk. But the life that covertly motivates the question is life as it was before self-talk, when the self was wholly focused on another from whom one received oneself or not. The question is an expression of yearning for a long forgotten life that one dreads to live. On the rare occasions when a You-I event breaks through, "[t]he question about the meaning of life is no longer there" (Buber 1958: 110).

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1. I have argued the main points of the thesis, called the You-I account, in previous papers to which I'll be referring. Langfur (2013) focused on the first three months of life. A paper of 2014 followed the carer-infant relation through the first three years, pitting the account against Heidegger's analysis of Dasein. Another of 2016 explained time-consciousness in terms of the account, comparing the latter with Husserl's view. What then justifies a new treatment? There has been further thought, stimulated by readings in the work of Susan Carey (2009), Gergely Csibra (2014), and Michael Tomasello (2014). The result has been to strengthen the main pillar of the argument, namely, the claim that the human infant is born with the capacity to recognize a person as attending. Secondly, the decision to present the thesis directly, without comparisons, has provided me the scope to work out a number of topics more fully: the maintenance of self-awareness during the carer's absence; the effect of the carer's affect-attunements on the learning of psychological concepts in their twofold application (to self and others); and the power of the You-I account in explaining the developmental sequence of crawling, joint attention, and language acquisition. The article does not presuppose acquaintance with the earlier ones. [↑](#footnote-ref-1)
2. Because much of the material I'll be citing is based on studies of mother-infant behavior, to avoid confusion I'll use masculine pronouns for the infant and feminine for the caregiver. [↑](#footnote-ref-2)
3. The Murray-Trevarthen experiment is replicable only when the experimenter waits for lively interaction before switching on the replay condition. See Nadel, Carchon, et al. (1999); Reddy (2008:76). Also, György Gergeley (2002) has claimed that the Murray-Trevarthen data can be explained on the basis of sheer contingency (like that between a baby and a mobile that is set in motion by a string tied to his foot) without supposing that the infant perceives a person interacting with him. However, the baby smiles only half as much when contingency is not accompanied by eye contact (Hains and Muir 1996b: 1949; also Markova and Legerstee 2006; Reddy 2008: 77–82). [↑](#footnote-ref-3)
4. Merleau-Ponty (2005: 106): "[T]he two hands are never simultaneously in the relationship of touched and touching to each other." [↑](#footnote-ref-4)
5. Familiarity comes quickly to newborns (and probably to third-trimester fetuses): They "form 'prototypes' in less than 1 minute" (Walton and Bower 1993). Quick familiarity can account for another finding that might also mislead us into positing innate self-awareness: When newborns hear a tape of their own crying, they do not cry or show distress, but they do in response to tapes of other newborns crying. According to Dondi and colleagues (1999), the ability to resist contagion from familiar ("own") crying is probably an evolutionary inheritance; without it there would be an ever-intensifying spiral of wails, which would damage the baby's health (Malatesta 1985), not to mention that of the parents. [↑](#footnote-ref-5)
6. Newborns adjust head positions according to optic flow (Jouen and Gapenne 1995). Could self-awareness arise on the basis of head adjustments alone? This seems unlikely. Referring to upper and lower pathways in the brain, Bertenthal and Rose write that the information from the optic flow in this case "is restricted to its visuomotor function and not accessible to the infant in the form of self-knowledge" (1995: 309). Nor could head movements create a form of self-awareness at 2–3 months that would include the body as a whole. [↑](#footnote-ref-6)
7. In a thought he left undeveloped (1989: 101, n. 1), Husserl suggests that, even without independent self-awareness, imitative vocalizations between carer and infant can serve as a bridge both joining and differentiating them. Such vocalizations can indeed explain the perception of the carer as animated, but not as attending. See Langfur (2016). [↑](#footnote-ref-7)
8. When the experimenter protrudes her tongue, the newborn is being attended to. Such a moment could create a fleeting self-awareness, although the newborn is not in sufficient control of his gaze to sustain perception of the adult's attending. [↑](#footnote-ref-8)
9. A fuller account appears in Langfur (2013). [↑](#footnote-ref-9)
10. There are more patterns of response to the Strange Situation than the two I have named. See Karen 1998: 147–155. [↑](#footnote-ref-10)
11. About the transcendental ego: writing of "the understanding and its original power of combining the manifold of intuition," Kant says that "its synthesis…is nothing but the unity of the act, of which, as an act, it is conscious to itself" (1970: B153). But the newborn first opens his eyes on a manifold that is largely combined already (Carey 2009: 10–12, 40–46, 61–63), and further syntheses depend on interaction with carers (Langfur 2014). [↑](#footnote-ref-11)