Chapter 24

Sense of ‘sameness’ as foundation of infants’ embodied subjectivity and intersubjectivity¹

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Abstract

Early experience is embodied, as first proposed by Freud in his pulsion theory. More recent research show, however, that early experience is not just auto-erotic, not the expression of a primary narcissism, self-centred, and simply driven by excitation and satisfaction turned towards the own body. Current infancy research demonstrates that from the start early experience is also fundamentally relational: oriented towards objects, in particular the people infants rely on to survive. Here, I address the question of what kind of mechanism might drive early experience, considering that such experience is from the outset relational and cannot be simply reduced to auto-eroticism and embodied tension reduction. The idea is that the process underlying early relational experience is the innate propensity to detect what is alike and what is not. What underlies early experience would be the process of detecting similarities among things, including the inclination to experience sameness of feelings across sensory modalities (embodied ‘synaesthetic’ subjectivity) and the embodied vicariousness of experience with others (embodied intersubjectivity). There is now converging empirical evidence in support of the idea that from the outset, the detection, and eventually also the creation, of sameness in experiences with others is a cornerstone of human psychology, what William James (1890) already recognized as ‘the keel and backbone of our thinking’.

Keywords: synaesthesia; mirror systems; sameness; invariance detector; intersubjectivity.

Introduction

What is it like to be a baby? Is it ‘like something’? Do babies have subjective experience? Until a few years ago, the zeitgeist was to deny infants of any form of worthwhile awareness. This was not just an intellectual innuendo. In the 1940s and 1950s, surgery without anaesthesia was routinely

¹ Based on ideas presented at the 10th International Neuropsychoanalysis Society Conference in Paris, June 2009.
performed on infants and young children. Modern surgeons conveniently paralysed squirming
infants by injection of curare or similar paralytic agents. Under such circumstances, adults recalled
excruciating pain during surgery, but patients were not believed and the practice went on for 20 years.
As pointed by Dennett: ‘The fact that most of the patients were infants and small children may
explain this credibility gap’ (1981, p. 201).

Less dramatic, but still revealing of the mainstream outlook on early affective life, until a few years
ago, (and probably still practised in some hospitals today) local anaesthesia was not automatically
used prior to routine painful procedures on newborns such as heel prick and circumcision, even
by paediatricians practising in state-of-the-art maternity hospitals. Despite the fact that from
birth infants cry when hungry or smile after a good feed, there has historically been a formidable
resistance to attribute the rich affective and mindful life that we now know infants do have from
birth, even prior to birth during the last four weeks of gestation (see Rochat, 2001 for a review of
empirical evidence accumulated in the past 30 years). In this historical context, we measure the
paradigm shift that Freud produced with his ‘pulsion theory’ of psychosexual development
outlined in his Three Essays on the Theory of Sexuality (Freud, 1905/2000). When Freud took on
the taboo idea that infants from birth might be driven by erotic desires that quickly prolong and
transcend survival instincts evolved by the species (the taboo idea of infantile sexuality), he
offered the most comprehensive account of what might drive behaviour at birth aside from
conditioning.

Obviously, Freud’s theory was not the first published account on the questions of early experience
and what it might be like to be an infant (see St Augustine’s confessions written 1600 years prior,
not to mention the influential writings on education of Rabelais, Locke, and Rousseau). But
Freud’s account was the most thorough and inquisitive to be proposed on what might constitute
the psycho-affective forces driving behaviour at birth. This account, as we know, opened a whole
new vista on what might be the constitutive elements of subjective life. As critical as we might be
of Freud’s 1905 pulsion theory, we need to recognize that it pioneered an idea that is very much
vindicated by current progress in both the behavioural and brain sciences. This idea is that from
the outset, subjective life is ‘embodied’, grounded in the experience of the body as we perceive and
act in the world. As we know, Freud pulsion theory grounds psychic life in the feeling of the body,
particularly certain bodily regions (oral, anal, genital) invested successively by the young child in his or her development. At the core of this theory, there is the pleasurable quest for bodily feelings (excitability) and its control (search and suppression).

The libido concept stands for the erotic force that drives psychic life from birth on, above and beyond basic survival instincts expressed at birth in feeding, orienting, exploring, or habituating. This force, for Freud, has a source and a goal that is somatic, grounded in bodily sensations (Freud, 1905/2000, first essay, fifth section). Progresses in the cognitive and affective neuro-sciences vindicate Freud’s general intuition regarding the somatic grounding of psychic life, the fact that the body is the primordial locus of exploration and meaning making. A growing number of neuroscience research demonstrates that even higher order representational systems (categorization, language, semantic memory, or theories of mind), all depend on somatic markers and simulation of how we perceive and experience our own body in action (see Barsalou, 2008; Damasio, 1995; Gallese, 2007, Gazzaniga et al., 1998 for a review).

Obviously much has changed since Freud. Current infancy research calls for a revision of Freud’s pulsion theory that is at the original core of psychoanalysis. Details of Freud’s intuition need serious reconceptualization. One Freudian idea in particular, I would argue, is not tenable in the light of current infancy research. This idea is the assumed prevalence of infants’ ‘auto-eroticism’ that Freud viewed as the centrepiece of an infant’s subjective life, the primary narcissism expressed by the infant beyond survival instincts. This idea reduced the question of what it is like to be an infant to some sort of blind, circular, non-objectified, and autistic quest towards bodily excitation and suppression. We now know that there is much more than blind auto-eroticism in the life of babes. In what follows, I try to develop the idea that if early experience is indeed embodied, it is not just self-centred and driven by excitation and satisfaction turned towards the own body. Rather, informed by current research, I suggest that from the start early experience is also fundamentally relational: oriented towards objects, in particular the people infants rely on to survive. Here I propose that the process underlying such early relational experience is the innate propensity to detect what is alike and what is not. What underlies early experience would be the process of detecting similarities among things, including the inclination to experience sameness of feelings across sensory modalities (embodied ‘synaesthetic’ subjectivity) and the embodied vicariousness of experience with others (embodied intersubjectivity). This is how and why, I will argue, early experience needs to be considered as relational rather than primarily turned towards circumscribed bodily tensions, release, and satisfaction (‘auto-eroticism’).

The idea

The chapter revolves around the concept of intersubjectivity, defined in the general sense of shared experiences with others. The aim is to discuss what might be the phenomenal and psychological prerequisites of the sense of shared experiences with others that infancy research documented as emerging very early in development. We are interested in what constitutes its emergence and manifestation at the outset of development. Based on recent infancy research, the main idea proposed and explored here is that the ability to share experience with others rests first on an innate embodied subjectivity and intersubjectivity, an ability of being in ‘con-fusion’ with crucial aspects of the environment, particularly people. It is embodied because this ability is deeply rooted in the way we experience the world through the body and the given its biological organization at birth.

\[1\] The issue of whether from the outset infant psychology is relational and revolves around object relations continues to be controversial and a source of tensions in post-Freudian theorizing.
Embodied subjectivity and intersubjectivity is construed here as the basic ability to detect, from the outset of psychological development, ‘vicarious’ aspects of phenomenal experience, what I will call perceived vicariousness: the basic propensity to perceive the matching between what I see with what I feel: the perceived fact that my experience of what I feel tends to match what I see expressed by others in the way they move or stare at me. Or, even aside from people, that the way the leaves of the tree move, pushed by the wind, or that the choreographed body of the dancer, the melody I might suddenly hear in a coffee shop, all of these events are perceived not just as events occurring ‘outside of me’, but on the contrary are perceived as external events experienced in mutual resonance and in mutual correspondence with how I feel from within: whether excited, joyful, calm, or depressed. This correspondence would give perception a crucial affective tone that is too often overlooked by psychologists and even philosophers of the human mind.

The idea submitted here is that this innate ‘embodied’ subjectivity and intersubjectivity, rests on the particular attunement from birth toward ‘sameness’, the particular ability to link invariant features of the environment with invariant features of subjective experience.

The primordial detection of ‘sameness’

If there is one thing that we have learned in recent years by studying babies, and there has been a huge wave of interest in studying infants in the past 30 years (Rochat, 2001), it is the fact that from birth, infants are active in processing invariant information over changes. In their inclination to scrutinize novelty hides a deep look for ‘sameness’. They avidly look for regularities in the environment and this is the name of the game from the outset: we are born and built in a way that what we are primarily preoccupied with is the detection of what remains the same in the midst of many changes. Throughout our lives we try to establish what can be counted on and relied upon to survive and make sense of being alive in this world. This quest is already embodied in the neonate, and that is the built-in focus on what can be expected and trusted in a world that is by definition constantly changing, associated with a subjective experience that is fundamentally dynamic and changing.

But prior to developing these ideas, it is important to insist that the focus on sameness in the environment that seems to be the core aspect of infant behaviour and development, remains a core aspect of the human mind throughout the lifespan. I will try to show, tentatively, that it might even be thought to be at the root of morality and the conception of justice and equity across human cultures. . .

As William James (1890) wrote over a century ago:

The mind can always intend, and know when it intends, to think of the Same. . . . This sense of sameness is the very keel and backbone of our thinking.

The idea developed in this chapter is that it is also the backbone of our very human feelings and human experience of being alive and sentient in this world.

Initial sensory conflation and current neuroscience

The past 40 years of booming infancy research did certainly debunk a great deal of strongly held common assumptions: that babies were born cognitively helpless and passive, their behaviour disorganized. Prior to this research, it was not uncommon to construe infants as born blind and oblivious of the world surrounding them, a blank slate in need of fundamental growth and learning, often thought to be born in a vegetative state that kept them alive and tentatively able to receive indispensable care and protection from others. These views have certainly changed but the fact that human children are pretty helpless at birth should certainly not be overlooked, particularly
when comparing them with the infants of other species. These ancient views were not that counterintuitive after all.

Compared with other species, humans are indeed born too soon, greatly immature, and markedly dependent on others to survive. This is due to the combination of the proportionally larger brains we evolved as a species, together with the narrowing of the female’s birth canal associated with bi-pedal locomotion, a posture uniquely evolved by our species and linked to protracted ‘external gestation’, namely the fact that we are born much sooner compared with other primate species. We start standing and roaming the world on our own only by 12 months and it takes many, many long childhood years to separate from one’s own original niche and to become autonomous in order to reproduce this cycle of development with new progenies. The premature human birth leads to a state of protracted dependence during approximately one fifth of our life. This remarkable dependence shapes our psychology from the outset. It is a simple, straightforward fact, yet probably the major determinant of what makes us psychologically unique in the animal kingdom.

What the new wave of infancy research shows is not that infants are born much more mature than previously thought, but that infants are born much better equipped to tap into and exploit the prolonged state of dependence they are born in. As Bruner (1972) wrote years ago, there are ‘uses of immaturity’ by the young child. Numerous research tapping into preferential looking, sucking, visual familiarization, violation of expectations, and other clever habituation and dis-habituation paradigms show that infants from birth are remarkably quick to learn. The most solid and reliable finding is indeed that healthy young infants get easily bored and are particularly inclined to seek novel information. From birth on, infants expect particular outcomes to occur based on past experiences and show a natural inclination to build up on new expectations.

Two-month-old babies are attuned to complex probabilistic algorithms or conditional probability that one particular event will be followed by another, for example in their ability to discriminate among strings of speech sounds they hear successively, or the frequency of lights flashing at different locations in the environment (Haith et al., 1988; Saffran et al., 1996). Infants show all this remarkable learning ability while not having to worry about being fed, getting enough cuddling, or living in wet diapers. Their protests are typically heard while able to explore and encounter the world around in playful ways. Childhood is indeed, for the most part, a prolonged immaturity that translates into a prolonged, socially secured and assisted opportunity for a free licence to learn and to explore, to fantasize, and to realize these fantasies in the unbridled works of children’s imagination. But children’s free licence to explore and to play is not just free and self-organized. It is highly constrained as demonstrated by recent findings in cognitive and affective neuroscience. I will focus on two sets of recent findings that seem particularly relevant to the topic of this chapter. The first set pertains to synaesthesia, and the other to the so-called mirror neuron systems.

**Innate synaesthesia**

As you certainly know, synaesthesia corresponds to the spontaneous, implicit ‘metaphorical’ experience of a sensation or percept in one modality that is simultaneously experienced in another. For example, one might experience the particular timber or pitch of a sound with the vivid experience of a specific colour, the experience of time duration corresponding to the obligatory experience of a particular spatial layout or form (Simner et al., 2006). Neuroscientists have now established the embodied (neurobiological) reality of such ‘synaesthetic’ experiences that according to existing surveys, are part of the life of approximately 5% of all adults (Hubbard et al., 2005; Spector and Maurer, 2009).

Of interest to us here is the idea recently proposed and tentatively documented in infancy research by Spector and Maurer (2009), that adult cases of synaesthesia might in fact be remnant
and [magnified] cases of intersensory connections that are present at birth, pruned and somehow inhibited in the course of typical perceptual development. But these connections are expressed in ‘muted forms’ in all adults as Spector and Maurer put it. Accordingly, synaesthesia could be the natural starting state of our subjective sensory experience. We would indeed start off with a ‘conflation’ of all sensory modalities as suggested by William James in his statement of blooming, buzzing, confusion. Here is what he had to say:

The physiological condition of (the) first sensible experience is probably nerve-currents coming in from many peripheral organs at once. . . . In a new-born brain, this gives rise to an absolutely pure sensation. But the experience leaves its ‘unimaginable touch’ on the matter of the convolutions, and the next impression which a sense organ transmits, produces a cerebral reaction in which the awakened vestige of the last impression plays its part. Another sort of feeling and a higher grade of cognition are the consequences; and the complication goes on increasing till the end of life, no two successive impressions falling on an identical brain, and no two successive thoughts being exactly the same.

James (1890, pp. 7–8)

This experiential conflation or ‘pure sensory experience’ elegantly described by James, is, I would suggest, the symptom of a major competence, and not an incompetence as it has been taken by most infancy researchers (including myself), over the past 30 years. Infants are born with the readymade opportunity to link experiences from the various sense modalities, experiences that co-occur and tend to be qualitatively linked, corresponding to particular feeling tones and profiles.

From the start, intermodal systems might exist that allow these sensory experiences to coalesce into the ‘affective’ core of subjective experience that ultimately gives it values: values in rudimentary polarized terms such as pleasure or displeasure, stress or calm, soothing or enhancing, attunement or disharmony, bonding or estrangement. All these represent affective meanings (good or bad feelings) that are at the core of subjective experience, particularly in early development. In my view this affective core cannot be simply dissociated from subjective experience, as abstract and rational such experience might be later in development: as for example in the epistemic pleasures and satisfactions in discovering a theorem, in the building of a coherent argument, or in the reaching of an agreement with others. But what kind of empirical evidence is there that supports the assertion of a rich primitive sensory conflation, a conflation that would harmonize rather than confuse early experience?

In relation to synaesthesia, there is an abundance of empirical evidence showing that infants from birth are readily able to process information across sensory modalities. One-month-old infants are reported to discriminate an object they see projected on a screen based on the previous experience of an analogous object explored with their mouth only (i.e. a smooth spherical pacifier or a bumpy spherical pacifier with a knobby texture, Meltzoff and Borton, 1979). In another series of highly controlled, careful psychophysical studies on newborns in the early 1980s, Lewkowicz and Turkewitz (1980) demonstrated that neonates transfer learning from the auditory to the visual modality. Following visual habituation to either a bright or a dimmed light, they responded differently to corresponding soft or intense sounds in the auditory domain. In support of such unitary or common functioning of the senses at the outset, an even older neurobehavioural study by Wolff and collaborators (1974) shows that if the tactile stimulation of the newborn’s wrist evokes activation of the somatosensory cortex, this activity is significantly enhanced when the infant hears also a white noise. Such auditory–tactile interaction is not found in adults, a phenomenon that appears to be specific to the perceptual experience of newborns.

In another set of developmental evidence on an early unitary functioning of the senses, let me mention the work of Neville and collaborators showing that if infants respond to spoken language
with, as expected, enhanced activity in the auditory cortex, unlike adults and children, they also respond with enhanced activity in the visual cortex [Neville, 1995]. Finally, in support of the natural primacy of synaesthetic experience, Mondloch and Maurer (2004) show in a series of studies that two- to three-year-old children tend to be naturally inclined to perceive the same pitch-lightness, colour-letters, or sound-shape correspondences typically expressed by synaesthetic adults (but also to some extent, by non-synaesthetic adults). Young toddlers tend, for example, to perceive systematically that a higher pitch sound goes with a brighter colour; a nonsense word made of rounded vowels goes with a jagged shape (e.g. te-ta-ke goes with a sharp edged form), or that the letter A goes with the colour red).

In all, these few empirical examples taken from the developmental literature on synaesthesia—and there are many others—support the idea of a highly organized intermodal and resonating experience at birth. Early perceptual experience is made of rich sensory correspondences and implicit ‘a-modal’ representations that can be said to be metaphorical because they transcend the particularities of the sense modalities as singular perceptual systems. It is, and this is important, an experience that carries rich conflation and correspondences, not the cognitive confusion that has been assumed by many infancy researchers, including myself, since James’ misconstrued ‘blooming, buzzing confusion’. Let us turn now toward another set of findings in the neuroscience, the recent discovery of mirror neuron systems, which contributes in changing the view on the nature of early experience, in particular what might characterize phenomenal experience at birth.

**Mirror neuron systems**

Again, you will certainly know there is now abundant empirical evidence and even precise animal models that would substantiate the possibility of an experiential (phenomenological) equivalence between the observation and the execution of actions. As a quick reminder, in the original experiments, Rizzolatti and his team from Parma (1996) found that the responses of single nerve cells recorded in area F5 of the premotor frontal cortex of the macaque monkey discharge equally when the monkey itself performs a specific action (e.g. reaching for a peanut), or the same monkey observes another monkey—or another person—perform the same action. These cells are thus multimodal by nature, activated when a particular action is performed by the individual or seen performed by another. This discovery has had much resonance as it might provide (although many are still sceptical) some biological validation to the idea that there might be a deeply rooted system matching self and others’ representations, a mirroring system that could be the constitutive element of higher order phenomena such as empathy, language learning, and in general, basic embodied intersubjectivity, as defined at the beginning of this chapter.

Plausible, *yet indirect* behavioural evidence of mirror systems functional at birth is provided by the abundant research on facial imitation in neonates, the ‘matching’ reproduction of facial expression, tongue gestures, or emotional displays, actions that are seen repetitively being performed by an adult model at close visible range and that are systematically reproduced by the infant (e.g. Meltzoff and Moore, 1977, 1997). Such imitative responses in neonates suggest that we are born with the necessary mechanism that would allow for the experience of an equivalence between the perception and the execution of actions (Lepage and Théoret, 2007).

In William James’ terminology from the quote at the opening of the chapter, infants would be born with the opportunity to experience the ‘sameness’ of what is done by the self or what is seen done by somebody else, or vice versa. Rather than in a state of cognitive confusion, infants would thus be able from the start to experience and exploit in future learning, the *analogical link* between the products of two different agents: something self-generated and the same thing generated by
others, in the same way that they would be able to experience the analogical link between the varieties of sensory experiences in their incipient synaesthesia.

**Summary**

Much evidence shows that rather than in a state of cognitive confusion, psychic life begins in a state of unity made of correspondences among the diverse sensory experiences that originate from within or outside of the body. What babies express from birth, is not just the lack of all the competencies they will eventually develop, but more importantly, they express the basic ability that will enable them to develop such competencies, including language, humour, theories of mind, complex thoughts, and even morality. The demonstration of an early state of phenomenological correspondence as expressed in neonatal imitation or cases of infantile synaesthesia suggests that the basic ability we might be born with and that would contribute to the development of all future social and cognitive competencies is the ability to sense sameness in things that are ontologically different.

It seems increasingly evident that we are born with the propensity and neurological support to be attuned to the relative equivalence among things that are physically individuated and that we are prepared to experience in their ‘sameness’: a touch or a sound, his face or my face, her emotions or my emotions, his intention or my intentions, his beliefs or my beliefs. This might be the major and necessary ingredient of all future development, be it cognitive or social, an ingredient already revealed at birth. The ‘sameness of experience’ is what I would suggest embodies subjectivity and intersubjectivity, particularly when considering the latter in the perspective of development.

**From detecting to creating ‘sameness’ in development**

Between birth and two months remarkable changes occur, particularly in the social domain. By six weeks, infants universally begin to respond to faces with smiles that are not just automatic or linked to feeding or satiety, but that are socially elicited, taking place in face-to-face exchanges and active emotional co-regulation. This is what is generally recognized as unmistakable demonstration of primary intersubjectivity or first sign of an infant’s active sense of ‘shared experience’ with others. These face-to-face exchanges are, in the broad sense, aimed at co-regulating feelings and at creating mutual affective attunement, a sameness of feelings with others in a mutually affective proto-dialogue and emotional entrainment that has been extensively documented in the past 30 years.

This mutual affective entrainment is typically geared toward the maintenance and co-regulation of a shared ‘happy’, often exuberant, state that is first initiated by the adult but is also increasingly initiated by the infant, particularly from approximately seven months (Rochat, 2001; Striano and Rochat, 1999). It should be noted that such co-regulation around a shared state does not require the context of face-to-face exchanges particularly nurtured in Western industrial cultures. It also occurs via different sensory channels when a baby is carried on the back of an adult in a sling or backpack, day in and day out, or on the hip of an older siblings.

In general, once again, but transferred into the realm of social exchanges and intersubjectivity with a focus on shared feelings, the name of the social game is to mutually monitor sameness in affects and emotional expression, including the timing of such expression that specifies mutuality: whether, for example, the mother is more or less responsive to changes in the emotional expression of the infant, and vice versa, whether the infant is more or less responsive to the mother. We now know that by two months, infants become very much attuned to this relative mutuality of emotional responses, showing reliable negative responses when its expectation is violated as in the
case of the famous ‘still-face situation’ (Tronick et al., 1978). Early on, infants detect and overtly react to the violation of mutuality expectation, in other words react to the fact that others are not responding with equivalent emotional responses. What developmental research shows is that possibly from two months, and certainly by seven months, infants create and promote similarities, hence ‘sameness’ in feelings. They express the active propensity to create equivalent experiences with others.

What is intriguing is that this propensity becomes what is often identified as the central piece of cognitive and symbolic development, in particular language development. This central piece is the emergence by nine months of so-called secondary intersubjectivity with the active sharing of attention in reference to objects in the environment (i.e. joint attention; see Tomasello, 2008). Once again here, this important development rests on the new active sense and monitoring by the child of an equivalence (thus ‘sameness) in the focus of visual attention between self and others.

The name of the game remains essentially the same.

The sense of sameness is the broad concept used here to capture the natural inclination already expressed at birth to bridge experiences and draw analogies between things that are intrinsically distinct, between physical objects, but also between self and others. The sense of sameness does not only pertain to linking physical objects, self, and people because they phenomenally look alike or share the same qualities. It pertains also to spatial-temporal relations among things and probabilistic co-occurrences of events: that something entering one end of a tunnel typically tends to reappear some time later from the other end, or that if I smile and coo towards someone, I expect this person to somehow respond in comparable ways. As mentioned previously, research demonstrates that these latter aspects (contingency and conditional probability detection) are expressed very early on. They are the other expressions of infants’ propensity to sense a link between things as belonging to a same set, a same ‘chunk’, or category of experiences. It appears to be all part of the embodied propensity to sense ‘sameness’ or equivalence (i.e. same-value or same meaning). It is part of the analogous sense that is at the origins of concepts, symbols, and other representational signs that stand for something that exists in the world as separate entities: my own reflection in the mirror that I recognize and identify as the same as my embodied self.

To conclude, I will propose a major leap by suggesting that it is also the basic sense of ‘sameness’ that we find somehow conceptually redescribed in the ethical stance that children develop between three and five years of age. Detecting and creating ‘sameness’, in particular ‘equi-valence’ by the child is at the core of moral development.

**Conclusions: ‘sameness’ experience and morality**

When young children are asked to share resources, more often than not, they do so reluctantly. This seems to be a universal trend, yet exaggerated in some cultures as compared with others (Rochat et al., 2009). In general, three-year-old children tend to self-maximize and hoard ‘goodies’ significantly more than five-year-old children do when asked to split. So what develops?

Recent research suggests that what develops is a general aversion to ‘inequality’, hence a lack of ‘sameness’ in resource distribution. Fehr et al. (2008) show that increasingly, between three and eight years of age, children prefer equal over unequal distribution of desirable goods (e.g. candies) between themselves and somebody else, even if the unequal distribution would favour them. In the same vein, Olson and Spelke (2008) confirm such a trend even when children are not recipients of the distribution, preferring equal as opposed to unequal distribution of goodies among third-party protagonists. Interestingly, both the Fehr and Olson studies demonstrate that from three years of age, children show signs of ‘parochialism’ in their distribution of justice. All things being equal, children tend to favour protagonists they perceive as ‘in-group’ members, therefore those
they perceive as belonging to the same group as theirs, those being of the ‘same’ kind. Note in passing the shared etymology of the word ‘kind’, capturing something that makes another thing more or less comparable, and the word ‘kindness’ that captures a positive, prosocial disposition towards others. The value of parochialism is well rooted in semantics.

Research shows that the early development of distributive justice as the expression of an emerging ethical stance is linked to growing inequality aversion: the increasing tendency towards the detection and application of a ‘sameness’ principle in resource distribution. The application of the sameness principle (i.e. equality and equivalence) is also compounded with the other sense of sameness expressed in the child’s growing sense of affiliation with others that are of the same kind, the in-group members. The sense of ‘sameness’ is at the core of what amounts to a universal norm of equity in distributive justice that develops from five years of age, but also at the core of social affiliation and ultimately also, parochialism and social prejudices.

In a recent book (Rochat, 2009), I developed the idea that what universally drives behaviour from birth is the search for social affiliation. It is the quest for intimacy and social comfort found in the elusive sense of mutual recognition, a quest that I propose derives from a universal avoidance and deep fear of being socially rejected and ostracized by others . . .

What would drive such system is a basic need to affiliate with others, what I call the ‘BAN’, an acronym standing for ‘basic affiliation need’, a need expressed all through the lifespan. I would add that the sense of sameness represents the necessary constitutive element of our BAN. In this chapter, I tried to show that it guides behaviour and constrains the growth of the mind from the outset. It is what is behind the social phenomenon described in this last quote from William James (Principles of Psychology, 1890. p. 280):

Our father and mother, our wife and babes, are bone of our bone and flesh of our flesh. When they die, a part of our very selves is gone. If they do anything wrong, it is our shame. If they are insulted, our anger flashes forth as readily as if we stood in their place.

In our more mundane media world, it is also what is behind pop singer Janet Jackson’s comments in a recent interview regarding her latest boyfriend: ‘When I see him, I see myself . . . that’s how close we are’.

Similarity creation, and detection are pervasive and pervasively expressed in human lives, in our daily embraces, dances, or shaking of hands; all culturally choreographed embodiments of mutual agreement and shared experience, all originating from propensities that we appear to be born with.

**Box 24.2 Questions for future study/research**

1. Considering that sameness detection is foundational to how the mind works from the outset of development, what kind of sameness is detected as a function of age, in particular as a function of emerging new possibilities for action and interaction with others (e.g. language)?

2. What is the exact functional link between the early propensity to detect sameness across experiences, and emerging new psychological stances in development: intersubjective stance by two months via social smiling, referential stance by nine months via joint attention, intentional stance toward others by 14 months via true imitation, ethical and moral stance from approximately three years of age via empathy and principled social acts? The question is whether these emerging new psychological stances could also correspond to radical changes in what orient sameness detection?
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