

THREE LEVELS OF INTERSUBJECTIVITY IN EARLY DEVELOPMENT

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ABSTRACT

The sense of shared values is a specific aspect to human sociality. It originates from reciprocal social exchanges that include imitation, empathy, but also negotiation from which meanings, values and norms are eventually constructed with others. Research suggests that this process starts from birth via imitation and mirroring processes that are important foundations of sociality providing a basic sense of social connectedness and mutual acknowledgement with others. From the second month, mirroring, imitative and other contagious responses are by-passed. Neonatal imitation gives way to first signs of reciprocation (primary intersubjectivity), and joint attention in reference to objects (secondary intersubjectivity). We review this development and propose a third level of intersubjectivity, that is the emergence of values that are jointly represented and negotiated with others, as well as the development of an ethical stance accompanying emerging theories of mind from about 4 years of age. We propose that tertiary intersubjectivity is an ontogenetically new process of value negotiation and mutual recognition that are the cardinal trademarks of human sociality.

Keywords: intersubjectivity, development, reciprocation, value negotiation.

1. INTRODUCTION

In the general sense, the concept of *Intersubjectivity* captures the way a person understands and *relates* to another. It is the phenomenon by which we share experiences with one another. Intersubjectivity implies that there must exist a bridge between *my self-acquaintance and my acquaintance of others*. In this paper, we discuss these issues from a developmental perspective. We identify 3 levels in the early development of intersubjectivity, the third one corresponding to what we posit as the foundation and main constitutive element of human sociality. Specifically, we explore the development leading the young child from a capacity to imitate, a capacity that we share with many other animal species, to the emergence of negotiation and mutual recognition that we

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propose are cardinal features of human sociality. The concept of *intersubjectivity* is a common notion used to capture the product of interpersonal interactions that emerge from infancy and by which children begin to understand others' thoughts and emotions.

Traditionally, intersubjectivity has been associated with language communication. It was assumed that only conventional language could make intersubjectivity possible. In the last few decades, however, new empirical research forced to broaden the meaning of intersubjectivity and to clarify its underlying mechanisms in ontogeny. Even if language radically transforms human ways of communicating, much evidence now exists in the field of infancy showing that intersubjectivity is an important aspect of psychology from the outset development, long before children learn to speak (Trevarthen, 1979).

2. FOUNDATIONS OF INTERSUBJECTIVITY

The philosophical problem of intersubjectivity was first raised in the context of the internal private mind postulated by Descartes in the 17th Century. The Cartesian proposal is that “the only single mind that I can have direct access to is my own mind”. This claim allowed the conclusion that our first self-experience is a purely mental and solipsist experience. This notion left wide open the question of how we eventually got to know the mind of others. The post-Cartesian standard question became “How do I know the mind of others?” In contemporary philosophy and cognitive sciences, various models are proposed to answer this question. A cognitivist solution suggests that to have access to others’ mind requires necessarily the sharing common representations and meanings that are essentially given by language and metarepresentational abilities, in particular the ability to generate “theories of mind”. Such theories of mind would be based on either pure hypothetico-deductive representations or “theorytheory” (Baron-Cohen, 1995; Leslie, 1991; Gopnik & Meltzoff, 1997) or on an embodied simulation and other mirror or built-in empathic systems (Gallese & Goldman, 1998; Goldman & Stripada, 2005; Gallese, 2007).

Some philosophers point to the limits and inconsistencies of such accounts to resolve the “others’ mind” understanding issue that was left out by Descartes. In particular, there are good empirical reasons to think that above and beyond either theory-theory or simulation processes, *non-conceptual* (pre-theoretical and non simulation) processes might also underlie the apprehension, if not **INTERNATIONAL WORKSHOP - ENACTING INTERSUBJECTIVITY 175** understanding of other’s mind (Gallagher & Zahavi, 2008) These processes would include the direct detection of perceptual features pertaining for example to the bodily movements, motor signature and embodied emotional expressions of others, particularly facial features detected from birth (Rochat, 2001). Gallagher (2005), for example, proposes that the understanding of others rests essentially on the detection of embodied interactive or interpersonal practices. Embodied interactive practices would constitute the primary access by which we understand others. Following Gallagher, from a very early age infants would be attuned to the way others choreographed with facial expressions and postures what they feel and what might be on their mind as they interact with them. This proposal would entail that infants are born perceptually prepared to capture and eventually develop a sense of shared experience, certainly not born simply caught up in solipsist experiences and passively shut off from their social world. From the start, there would be some awareness of others structured within some basic intersubjectivity framework. Contrary to the pioneer ideas proposed by early psychologists,

infants are not born in a state of confusion or a-dualism in relation to either objects or people (Rochat, 2001). Next, we describe how intersubjectivity seems to develop from birth and in the course of the first 4-5 years of life. We propose that from basic biological mechanisms that are innate, namely mirroring and imitation mechanisms that are the necessary foundation of intersubjectivity, infants quickly develop intersubjective propensities that entail reciprocation and mutual recognition, both trademarks of human sociality.

We proposed elsewhere that the sense of shared experience and of shared values develops primarily in a process of *reciprocation* that goes beyond the process of imitation and mirroring as copying (Rochat & Passos-Ferreira, 2008b). If an innate inclination to copy and simulate the behaviors of others could provide a basic sense of social connectedness and mutual acknowledgment of being with others that are “like me”, these innate processes are essentially not creative, leading nowhere in themselves. In a strict sense, imitation and mirroring are closed loop “tit for tat” systems. More processing is therefore needed to allow for the social construction of meanings that drive human transactions (Rochat & Passos-Ferreira, 2008b). If mirroring processes might enable individuals to bridge their subjective experiences via embodied simulation (Gallese, 2007), human inter-subjectivity properly develops from reciprocal social exchanges and the constant negotiation of values with others. Infants

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and young children develop to become *Homo Negotiatus*, and not just to become *Homo Mimesis* (Rochat & Passos-Ferreira, 2008a).

3. LEVEL OF INTERSUBJECTIVITY

We distinguish levels of “inter-subjectivity” beyond the primary vs. secondary distinction introduced years ago by Trevarthen & Hubley (1978), Trevarthen (1979) and Bruner (1983). We review this development up to 5 years of age when children show explicit understanding of the mental states that drive others in their behaviors, beliefs, and decisions (i.e., “theories of mind” in Wellman, 2002).

This development leads the child from neonatal imitation to the development of reciprocation starting at 2 months of age. By two months infants already appear to transcend basic mirroring processes by manifesting first signs of reciprocation in face-to-face exchanges (primary intersubjectivity). They soon engage in triadic intentional communication with others about objects (secondary intersubjectivity, starting approximately 9 months) and eventually begin to negotiate with others about the values of things, including the self as shared representations (tertiary intersubjectivity, starting approximately 20 months). This development culminates with the ethical stance that children begin to take around their fourth birthday when they begin to manifest explicit rationale about what is right and what is wrong, as well as “theories” regarding the mind of others.

The notion of tertiary intersubjectivity was proposed some years ago by Trevarthen (2006). In Trevarthen’s conception, the tertiary level is the first- and second-person reflective and recursive intersubjectivity, in the sense of communicative understanding mediated by meta-representations, and symbolic references to actual and fictional worlds of imagination or joint pretense. We

shed light on another feature of this third level of intersubjectivity. We are not particularly interested in the evident linguistic aspect that structured this third level. We investigate what is the interactive structure involving child and second person. Not interested in the grammatical second person, an abstract object, expressed by the words such as “you”, “thy”, “tu”, “voce”, we focus here on the “real” person the child is concretely interacting with and with whom he or she will negotiate values, meanings, status, and reputation.

There are various levels of social connectedness associated with this development in relation to context, behavioral index, putati

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ve underlying process and chronological age. We propose a *road map* that would take the healthy child, starting the second month, beyond the basic mirroring and imitative processes, toward reciprocation, social negotiation, and ultimately the sense of mutual recognition and the explicit moral sense.

Table 1.

I	Mirroring Face-to-face Imitation Automatic birth engagement simulation
II	Primary Reciprocal Proto- Emotional 2m. Inter- dyadic conversation, co-regulation subjectivity exchanges social expectations
II	Secondary Triadic Joint attention; Intentional 9m. Inter- exchanges social communication subjectivity about things referencing and intentional co-experience
IV	Tertiary Triadic Self-recognition Projection and 20m. Inter- exchanges and embarrassment, identification subjectivity about the use of possessives, of self onto value of things claim of others ownership, pro-social behaviors
V	Ethical Decision Claim of Value negotiation From 4 y. stance regarding the ownership, with others, value of things, sharing, narration, what is right distributive justice, meta-representation vs. wrong theories of mind of reputation <i>(This table is reproduced from Rochat & Passos-Ferreira, 2008b)</i>

3.1. Mirroring and Imitation

Imitation and mirror processes are important foundations for sociality, that entails the capacity to relate, interact and possibly re-present or simulate, hence “bridge” self with others’ experience. These capacities, called *innate intersubjectivity* by Trevarthen, (2006) show that humans are born with an innate communicative competence given by biological mechanisms that have an important impact on learning, recognizing and thinking. In reproducing the behavior of others we create inter-subjectivity, bridging self

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and others’ experience as suggested by current simulationist theories that find validation in the discovery of mirror neurons. The basic mirror processes expressed at birth probably correspond to innate social binding mechanisms. They are basic resonance

processes (Gallese, 2003) that allow the child, from the outset, to match self and others' experience. These mechanisms allow for a necessary starting state of implicit inter-subjective equivalence. Endowed with, and capable of such processes, infants from birth would automatically perceive others as "like them". This basic, obligatory perception would be mediated by sub-personal innate mirror mechanisms (i.e., neural mirror systems).

Developmental and comparative theorists see imitation as the basic mechanism, by which children develop empathy and the capacity to represent, think and speak. Imitation has also been considered for a long time as a mechanism by which children develop theories of mind, in addition to being the source of social connection and affiliation.

The idea that imitation or mimesis, and the ability to simulate are at the core of what distinguish humans from other animals is a recurrent theoretical proposal in philosophical, psychological, and comparative theories (Tarde, 1890/1993; Donald, 1991; Finnbogason, 1912). For Tarde (1890/1993), behaviors and ideas transmitted by imitation are not just copied as mirrors copy the world in their reflections. Imitation is active in the sense of being selective. It is intentional, not just a source of contamination by reproduction. Finnbogason (1912) laid down a theory on "sympathetic intelligence", that posits that performing a motor act or seeing it performed by a model can *de facto* be the same. This is a remarkable intuition of the current simulation and imitation theories in social cognition that now find neurobiological validation in the discovery of mirror neuron systems (Goldman & Sripada, 2005; Gallese et al., 2002; Meltzoff, 1995, 2007; Harris, 1992). For a long time theorists have seen in imitation a central mechanism driving the evolution of human societies and those abilities that set us apart as a species (e.g., complex abstract languages, explicit ethics, empathic feelings, technological inventions, cultural transmission). What these theories emphasize is that *imitation is not only a copying capacity; it is also a source of innovation*. It allows individuals to connect, build intersubjectivity and feel what other individuals feel.

Since the discovery of mirror neurons, imitation has been understood based on the mirror metaphor, as an automatic simulation

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of others' behaviors. We suggest that mirror metaphor should be replaced by the dynamic, open ended, and relational concept of *reciprocation* (Rochat & Passos-Ferreira, 2008b). Human sociality is inseparable from sense of shared values. This sense arises from the interaction with others via complex "open" systems of reciprocation and negotiation. It cannot be reduced to early imitation and mirroring processes that are, in a strict etymological sense, "closed" systems, in themselves copying mechanisms like mirrors reflecting whatever is facing them. Taken literally, imitation thus stands for a system of direct reflection of what is out there, impoverishing of the process by which we actually relate and understand each other, a process that is in essence, selective and creative of new meanings (ideas, feelings, values) that arise from on-going social exchanges.

For human sociality to develop, imitation and mirroring processes need to be supplemented by an open system of reciprocation. The reflection arising from mirroring processes needs to be broken

down and somehow by-passed. In early ontogeny, particularly starting the second month, mirroring, imitation, and other contagious emotional responses tend to become more subtly attuned to interactive others. This first social register of the neonate is by-passed in “proto” conversation with others, in the context of first reciprocal exchanges that form open, as opposed to closed, loop systems.

Imitation and mirroring processes are necessary but not sufficient mechanisms for children to develop inter-subjectivity and sociality. Human sociality (i.e., the inclination to associate with or be in the company of others) entails more than the equivalence and connectedness of perceptual experiences. It entails a sense of reciprocity that is more than the “like-me stance” or embodied simulation that researchers derive from early imitation (Meltzoff, 2007) or from the recent discovery of mirror neuron systems in the brain (Gallese et al., 1996; Rizzolatti et al., 1996; Gallese et al., 2002; Rizzolatti & Craighero, 2004; Fogassi et al., 2005; Goldman & Sripada, 2005).

3.2 Primary Intersubjectivity: From basic mirroring to reciprocation and social expectations

If imitation in the strict sense is a source of vicarious experiences that give individuals the opportunity to get “into the shoes of others” and possibly empathize with them, it is also a source of

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discovery and learning. Children learn primarily via observational and imitative learning, rarely if not at all, via the explicit instruction that prevails in Western cultures (Odden & Rochat, 2004; Rogoff, 1995; Boggs, 1985; Lancy, 1996). What is important to note is that observational and imitative learning is *selective* and *intentional*. New skills are not just learned by accident, or rarely so, typically scaffold by more advanced individuals who transmit their skills and knowledge to the apprentice or novice learner (Lave, 1988; Rogoff, 1990), a process that contributes to cultural learning in general (Tomasello, Kruger, et al., 1993).

For novelty to emerge and knowledge to be transmitted via observation and imitation entails more than passive “random” and incidental learning. It entails *reciprocation* in the following basic sense. For learning to take place there is a mutual willingness on the part of the novice to observe the expert and on the part of the expert to be observed by the novice. Both protagonists meet in the reciprocal willingness to share attention toward each other, the novice observing the expert and the expert modeling for the novice. The reciprocal willingness to learn and to teach that is constitutive of imitative learning, when not purely incidental, makes the process break away from imitation in the strict sense of copying, mirroring or the direct “shadowing” of the other. Mutual attention and intention are involved. This is expressed in the reciprocal sharing of attention, each protagonist aware of and monitoring the other.

In this context, imitation becomes a source of selective transmission and learning, not just a mechanism by which individuals can create an inter-subjective bridge by simulating the subjective experience of others. It is a source of learning and novelty that is co-created, based on exchanges that are reciprocal.

The sense of reciprocity is expressed very early in the life of the

healthy child. By two months, infants start to engage in face-to-face proto-conversations, first manifesting signs of socially elicited smiles toward others (Wolff, 1987; Sroufe, 1996; Rochat, 2001). Such emotional co-regulation and affective attunement are more than the mirroring process underlying neonatal imitation and emotional contagion evident immediately after birth (Meltzoff & Moore, 1977; Simner, 1971; Sagi & Hoffman, 1976). From this point on, infants express a new sense of shared experience with others in the context of interactive face-to-face plays, what Colwyn Trevarthen (1979) coined as “primary inter-subjectivity”.

When infants start to engage in proto-conversation, they are quick to pick up cues regarding what to be expected next from the social partner. In general they expect that following an emotional bid on their part, be it via a smile, a gaze, or a frown, the other will respond in return. Interestingly, adult caretakers in their response are typically inclined to reproduce, even exaggerate the bid of the child. If the child smiles or frowns, we are inclined to smile or frown back at her with amplification and additional sound effects. There is some kind of irrepressible affective mirroring on the part of the adult (Gergely & Watson, 1999).

The complex mirror game underlying social cognition does manifest itself from approximately 2 months of age and from then on, infants develop expectations and representations as to what should happen next in this context. The still-face experimental paradigm that has been extensively used by infancy researchers for over 30 years provides good support for this assertion (see the original study by Tronick, Als, Adamson, Wise, & Brazelton, 1978). Infants are disturbed when the interactive partner suddenly freezes while staring at them (Rochat & Striano, 1999). They manifest unmistakable negative affects, frowning, suppressing bouts of smiling, looking away and sometimes even starting to cry. In general, they become avoidant of the other person, presumably expecting them to behave in a different, more attuned way toward them.

This reliable phenomenon is not just due to the sudden stillness of the adult, as the infant’s degree of negative responses varies depending on the kind of facial expression (i.e., happy, neutral, or fearful) adopted by the adult while suddenly still (Rochat, Striano, & Blatt, 2001). Also, it appears that beyond 7 months old, infants become increasingly active, rather than avoidant and unhappy, showing initiative in trying to re-engage the still-faced adult. Typically, they touch her, tap her, or clap hands to bring the still-faced adult back into the play, with an intense gaze toward her (Striano & Rochat, 1999).

Numerous studies based on this still-face paradigm and studies using the double video paradigm, in which the infants interact with his mother seen on a TV (Murray & Trevarthen, 1985; Nadel et al., 1999; Rochat, Neisser, & Marian, 1998), all show that early on, infants develop social expectations as to what should happen next or what should happen while interacting with others. The difficult question is what do these expectations actually mean psychologically for the child. What does it mean for a 2-month-olds to understand that if he smiles toward an individual, this individual should “normally” smile back at him? What does it mean that he

picks up the fact that amplified and synchronized mirroring from the adult is an invitation for more bouts of interaction? One could interpret these expectations as basic, possibly subpersonal and automatic. Accordingly, face-to-face interactions are information-rich events for which infants are innately wired to pick up information, attuned and prepared from birth to attend to and eventually recognize familiar voices and faces (e.g., De Casper & Fifer, 1980; Morton & Johnson, 1991). From birth, infants would be attuned to perceptual regularities and perceptual consequences of their own actions, wired to prefer faces, human voices, and contingent events as opposed to any other objects, any other noises, or any other random events. Accordingly, this would be enough for young infants to build social expectations and manifest apparent eagerness to be socially connected as shown by studies using the still-face experimental paradigm or the double video system. But there is more than what meets the eyes of an “engineering look” at the phenomenon (Rochat, 2009). It is more than just mechanical and requires another, richer look to capture its full psychological meaning.

This proposal is based on evidence of developmental changes in the ways that children appear to connect with others and reciprocate. Infants rapidly go beyond mirroring and imitation to reciprocate with others in increasingly complex ways, adding the explicit social negotiation of *values* to the process. This development corresponds to the unfolding of primary and secondary (i.e., triadic exchanges of the infant with people in reference to objects in the environment by 7-9 months), and also a *tertiary* level of inter-subjectivity from at least 3 years of age.

3.3. Secondary Intersubjectivity: From reciprocation to joint attention

The sign of the emergence of the secondary intersubjectivity is the beginning of triadic interactions. At the secondary level, with the intentional communication about objects that emerges by 9 months via social initiatives and explicit bouts of joint attention, infants break away from the primary context of face-to-face exchanges. They become referential beyond the dyadic exchanges to include objects that surround the relationship. Social exchanges also include conversations about things outside of the relationship, becoming triadic in addition to being dyadic. Exchanges become object oriented or objectified, in addition to being the expression

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of a process of emotional co-regulation. Infants now willfully try to capture and control the attention of others in relation to themselves via objects in the environment. At this point, however, the name of the game is limited to the sharing of attention just for the sake of it. Children measure the extent to which others are paying attention to them and what they are doing. They begin to check back and forth between the person and the object they are playing with (Tomasello, 1995); or they begin to bring an event to the attention of others by pointing or calling for attention to share the experience with them. However, such initiative ends there, and is typically not followed through in further conversation or co-regulation. For infants, secondary inter-subjectivity in triadic exchanges is a new means to control their social environment, in particular the proximity of others as they gain new degrees of freedom in roaming about the environment (Rochat, 2001).

By becoming referential, infants also open the gate of symbolic development. They develop a capacity for dual representation whereby communicative gestures stand for and become the sign of something else (e.g., a pointing gesture as standing for a thing out there to be shared with others). Communication becomes intentional, transcending the process of emotional co-regulation and affective attunement that characterizes early face-to-face, proto-conversational exchanges (i.e. primary inter-subjectivity). Yet, it remains restricted to the monitoring of whether others are, or are not, co-experiencing with the child.

Nevertheless, with the emergence of intentional communication and the drive to co-experience events and things in the environment, infants learn and begin to develop shared meanings about things. To some extent, they also begin to develop shared values about what they experience of the world, but this development remains limited. For example, when facing dangers or encountering new situations in the environment, they are now inclined to refer to the facial expressions of others that are paying attention to the same events (Campos & Sternberg, 1981; Striano & Rochat, 2000). The meaning of a perceived event (e.g., whether something is dangerous or threatening) is now referred to others' emotional responses, to some extent evaluated in relation to others, but it ends there. The process does not yet entail any kind of negotiation regarding the value of what is experienced. The world is essentially divided into either good (approach) or bad (avoidance) things and events. Such basic social referencing emerges at around 9 months, in parallel to the propensity of infants to share attention with others and to communicate with them intentionally (Tomasello, 1999; Rochat & Striano, 1999).

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3.4 Tertiary Intersubjectivity: From joint attention to negotiation
Next, we focus on this latter level that we introduce as a major extension of the first two, both well accounted for in the literature (Bruner, 1983; Trevarthen & Hubley, 1978; Trevarthen, 1979; Tomasello, 1995; see table 1 above). At the tertiary level of intersubjectivity, objects and situations in the environment are not just jointly attended to (secondary inter-subjectivity), they become also *jointly evaluated* via negotiation, until eventually some kind of a mutual agreement is reached.

By the middle of the second year, triadic exchanges develop beyond basic social referencing and the sense of co-experience with others that is the trademark of secondary inter-subjectivity. The child now begins to engage in active negotiation regarding the values of things co-experienced with others. They manifest *tertiary intersubjectivity*, a sense of shared experience that rests on complex on-going exchanges unfolding over time: things that happened in the past, are manifest in the present and are projected by the child into the future. The prototypical expression of this new level of inter-subjectivity is the expression of secondary emotions such as embarrassment or guilt.

In relation to the self, by 20 months, children begin to represent what others perceive of themselves and gauge this representation in relation to values that are negotiated. If they see themselves in a mirror and notice a mark surreptitiously put on their face, they will be quick to remove it and often display coy behaviors or acting out (Amsterdam, 1972; Rochat, 2003). They begin to pretend

and mask their emotions (Lewis, 1992). In general, they become self-conscious, negotiating and actively manipulating what others might perceive and evaluate of themselves (Lewis, 1992; Rochat, 2009). From this point on (18-20 months), children project and manipulate a public self-image, the image they now identify and recognize in the mirror. It is an image that is objectified and shared with others, a represented “public” self-image that from now on will be constantly updated and negotiated in relation to others. Interestingly, by 20 months, children’s linguistic expressions begin also to include the systematic use of possessives, children starting to claim ownership over things with imperative expressions such as “mine!” (Bates, 1990; Tomasello, 1998). Such expressions

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demarcate the value of things that are jointly attended in terms of what belongs to the self and what belongs to others. This value begins to be negotiated in the context of potential exchanges, bartering, or donations. With the explicit claim and demarcation of property, the child develops a new sense of reciprocity in the context of negotiated exchanges of property, whether objects, feelings or ideas. At around the same age, children also begin to demonstrate pro-social behaviors, engaging in acts of giving and apparent benevolence by providing help or spontaneously consoling distressed others (Zahn-Waxler, 1992). Self-concept, ownership claim, and a new concern for others bring the child to the threshold of moral development and the progressive construction of an explicit sense of justice (Damon, 1994). What follows in development is a new level of social reciprocity that is increasingly organized around an ethical stance taken by the child. But this ethical level of reciprocity develops between 3 and 5 years of age, and beyond.

4. CONCLUSIONS: NEGOTIATION AND MUTUAL RECOGNITION TRADEMARK OF HUMAN SOCIALITY

Our intention was to revise the development of intersubjectivity, stressing that it originates from reciprocal social exchanges that include imitation, empathy, but also negotiation from which meanings, values and norms are eventually constructed with others.

This process starts from birth via imitation and mirror processes that are important foundations for sociality providing a basic sense of social connectedness and mutual acknowledgement with others. Nevertheless, these basic mirroring processes are necessary, but not sufficient, to account for the early development of reciprocal exchanges that takes place from the second month on. Imitation and emotional contagion, taken literally as close-loop automatic mirror systems, are soon transformed into dynamic, ultimately creative exchanges that take the form of open-ended proto-conversations ruled by principles of *reciprocation*, and develops as *negotiation* and *mutual recognition*. As we intended to show, from the second month, mirroring, imitative and other contagious responses are by-passed. Neonatal imitation gives way to first signs of reciprocation (primary intersubjectivity), and joint attention in reference to objects (secondary intersubjectivity). From 20 months, we proposed a third level of intersubjectivity, that is the emergence of values that are jointly represented and negotiated with others, as well as the development of an ethical stance accompanying emerging theories of mind from about 4 ye

ars of age. The tertiary intersubjectivity is an ontogenetically new process of value negotiation and mutual recognition that are the cardinal trademarks of human sociality. In conclusion, we tried to show that the way infants and young children connect to the social world develops dramatically with the emergence of active, creative, and increasingly complex reciprocal exchanges. The emergence of reciprocal exchanges allow for the social construction of meanings that drive human transactions, e.g., shared ideas or values such as trust, guilt, the sense of what's right and what's wrong, who is to be admired and emulated, who is commendable and has prestige, who is to be avoided and despised.

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