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INTERCORPOREALITY AND INTERAFFECTIVITY[1]

abstract

According to phenomenological and enactive approaches, human sociality does not start from isolated individuals, but from intercorporeality and interaffectivity. To elaborate this concept, the paper introduces (1) a concept of embodied affectivity, regarding emotions as a circular interaction of the embodied subject and the situation with its affective affordances. (2) This leads to a concept of embodied interaffectivity as a process of coordinated interaction, bodily resonance, and 'mutual incorporation' which provides the basis for a primary empathy. (3) Finally, developmental accounts point out that these empathic capacities are also based on an intercorporeal memory that is acquired in early childhood.

keywords

empathy, intercorporeality, interaffectivity, bodily resonance, intercorporeal memory

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Introduction

Since the rise of cognitive psychology in the early 1970s, 'social cognition' has become the dominant concept in social psychology and cognitive neuroscience to denote the processes of social understanding and empathy. It is commonly based on a representationalist point of view: Internal cognitive mechanisms such as a 'theory of mind' enable an observer to 'mentalise' or 'mind-read', i.e. to infer others' hidden states of mind. Regardless of whether these mechanisms are described as akin to a scientific 'theory' or rather as a mental 'simulation' routine (Premack and Woodruff 1978, Baron-Cohen *et al.* 1985, Stich and Nichols 1991, Carruthers and Smith 1996), the general framework has mostly remained true to its origins in classical cognitivism and representationalism. This corresponds to the currently predominant concepts of *emotions:* they are not regarded as embodied responses to meaningful situations, being perceivable in the bodily expression and conduct of another person, but rather as internal cognitive appraisals of environmental stimuli (Solomon 1976, Lyons 1980, Nussbaum 2001). Since emotions are thus in principle hidden to others, empathy can only be based on mind-reading or on simulating others' mental states inside oneself.

However, in most everyday situations, we don't use any introspection, simulation routines or inferences when we interact with others. Instead, we immediately perceive their intentions and emotions in their expressive behaviour as being related to a meaningful context (Gallagher 2008). As I will show in the following, it is mainly *bodily resonance* which conveys an intuitive understanding of others' emotions in our embodied engagement with them. The ongoing interaction induces, on a pre-reflective level, a process of mutual modification of bodily and emotional states, thus enabling a primary form of empathy without requiring any representations. Accordingly, phenomenological and enactive approaches to sociality do not start from isolated individuals and their respective inner states, but from a priority of *intercorporeality* and *interaffectivity* (Gallagher 2001, Fuchs & De Jaegher 2009, Froese & Fuchs 2012, De Jaegher 2015).

To elaborate this concept, I will introduce (1) a general concept of *embodied affectivity*: it conceives emotions not as inner mental states residing within individuals (even less their brains), but as encompassing spatial phenomena that connect the embodied subject and the

1 This is a slightly revised version of my chapter „Intercorporeality and Interaffectivity", in: C. Meyer, J., Streeck, J. S., Jordan (Eds.) *Intercorporeality: Emerging Socialities in Interaction.* Oxford: Oxford University Press, 2017.

situation with its affective affordances in a circular interaction. (2) This leads to a concept of *embodied interaffectivity:* in every face-to-face encounter, the partners' subject-bodies are intertwined in a process of bodily resonance, coordinated interaction and 'mutual incorporation' which provides the basis for an intuitive empathic understanding. It can also give rise to self-sustaining interaction patterns that go beyond the behavioural dispositions of isolated individuals. According to this concept, emotions may not primarily be localized within a single individual, but should rather be conceived as phenomena of a shared intercorporeal space in which the interacting partners are involved.
(3) Finally, developmental accounts of intersubjectivity point out that sharing and understanding each other's feelings is also based on an *intercorporeal memory* or *implicit relational knowledge* that is acquired in early childhood. It conveys a basic sense of social attunement or a 'social musicality'. Primary empathy as mediated by embodied interaction may subsequently be extended by higher-level cognitive capacities such as perspective-taking and imaginary transposition. Nevertheless, intercorporeality and interaffectivity remain the basis of social cognition.

1. Embodied affectivity

To begin with, we should abandon the idea that emotions are only 'mental' phenomena, and the world is bare of any affective qualities. The introjection of feelings into an inner 'psyche' is a heritage of Platonic and, later on, Cartesian dualism. In fact, we do not live in a merely physical world; the experienced space around us is always charged with affective qualities. We feel, for example, the hilarity of a party, the sadness of a funeral march, the icy climate of a conference, the awe-inspiring aura of an old cathedral or the uncanniness of a sombre wood at night. Such atmospheric effects are evoked by physiognomic or expressive qualities of objects as well as by intermodal features of perception such as rhythm, intensity, dynamics, etc.[2] Emotions no less emerge from situations, persons and objects which have their expressive qualities, and which attract or repel us. The peculiar intentionality of emotions (see e.g. Solomon 1976, Frijda 1994, De Sousa 2010) relates to what is particularly *valuable and relevant* for the subject. In a sense, emotions are ways of perceiving, namely attending to salient features of a situation, giving them a significance and weight they would not have without the emotion. Referring to Gibson's (1979) concept of affordances (that means, offerings in the environment that are available to animals, such as a tree being 'climbable', water 'drinkable', etc.), one could also speak of *affective affordances*: things appear to us as 'interesting', 'expressive', 'attractive', 'repulsive', 'uncanny', and so on.
How do we experience the affective qualities or affordances of a given situation? Emotions are experienced through what I call *bodily resonance* (Fuchs 2000, 2013a). This includes all kinds of local or general bodily sensations: feelings of warmth or coldness, tickling or shivering, pain, tension or relaxation, constriction or expansion, sinking, tumbling or lifting, etc. There is no emotion without at least the slightest bodily sensations and movement tendencies. Of course, when I am moved by an emotion, I may not always be aware of my body; yet being afraid, for instance, is not possible without feeling a bodily tension or trembling, a beating of the heart or a shortness of breath, and a tendency to withdraw. It is *through* these sensations that we are anxiously directed towards a frightening situation, even if we do not notice them. Therefore, bodily feelings and action tendencies should not be conceived as a mere by-product or add-on, distinct from the emotion as such, but as the *very medium* of affective intentionality. The body

2 These structural qualities of perception have been particularly explored by Gestalt psychology (cf. Koehler 1992) and nowadays been rediscovered by infant research as so-called „vitality affects" (Stern 1985). See also the phenomenology of affectivity in Fuchs 2000: 193-217.

is a 'resonance body', a most sensitive 'sounding board' in which every emotion reverberates (James 1884).

This leads to an *embodied and extended conception of emotions* (Fuchs 2013a):

Emotions emerge as specific forms of a subject's bodily directedness toward the values and affective affordances of a given situation. They encompass subject and situation and therefore may not be localized in the interior of persons (be it their psyche or their brain). Rather, the affected subject is engaged with an environment that itself has affect-like qualities.

For example, in shame, an embarrassing situation and the dismissive gazes of others are experienced as a painful bodily affection which is the way the subject *feels* the sudden devaluation in others' eyes. The emotion of shame is extended over the feeling person and his body as well as the situation as a whole.

Emotions further imply two components of bodily resonance:

- *a centripetal or affective component,* i.e. being affected, 'moved' or 'touched' by an event through various forms of bodily sensations (e.g. the blushing and 'burning' of shame);
- *a centrifugal or 'emotive' component,* that means, a bodily action readiness, implying specific tendencies of movement (e.g. hiding, avoiding the other's gaze, 'sinking into the floor' from shame). Other tendencies are approach (desire, anger), avoidance (fear), being-with (enjoyment, confidence), rejection (disgust), dominance (pride) or submission (humility, resignation) (cf. Frijda 1986). Thus, in emotions "we are moved to move toward or against or away" (Sheets-Johnstone 1999: 267).

Taken together, emotions may be regarded as *circular interactions or feedback cycles* between the embodied subject and the situation it is confronted with (cf. fig. 1): Being affected by the affective affordances or value features of the situation *('affection', impression)* triggers a specific bodily resonance which in turn influences the emotional perception of the situation *and* implies a corresponding expression and action readiness *('e-motion').* Embodied affectivity consists in the whole interactive cycle which is crucially mediated by the resonance of the feeling body.

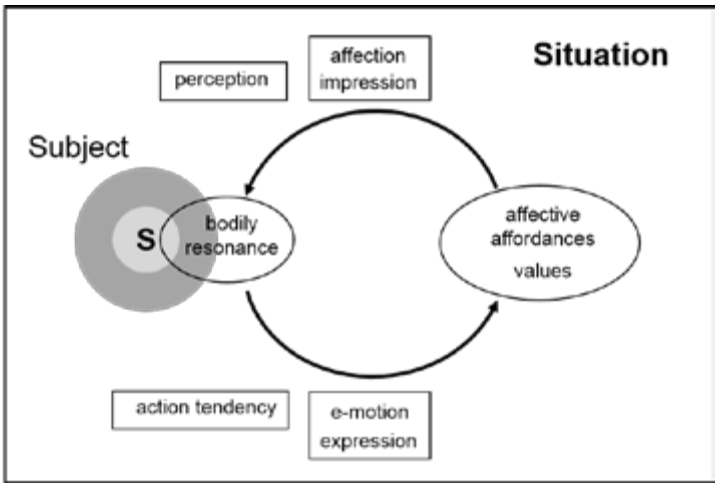

Fig. 1: Embodied affectivity [3]

3 Adapted from Fuchs 2013a: 623.

Bodily resonance thus acts as the medium of our affective engagement in a situation. It imbues, taints and permeates the perception of this situation without necessarily stepping into the foreground. In Polanyi's terms, bodily resonance is the *proximal*, and the perceived situation is the *distal,* component of affective intentionality, with the proximal or tacit component receding from awareness in favour of the distal (Polanyi 1967). This may be compared to the sense of touch which is at the same time a self-feeling of the body ('proximal') and a feeling of the touched surface ('distal'); or to the subliminal experience of thirst ('proximal') which first becomes conspicuous not as such, but as the perceptual salience of water flowing nearby ('distal'). Similarly, bodily resonance initially goes unnoticed; only at a certain level of intensity, it becomes conscious as such (for example when one's hear starts to pound in fear).

2. Embodied interaffectivity

If we now turn to the social sphere, we can see that the cycle of 'affection' and 'emotion', impression and expression involves another person as a specific 'affective affordance'. Emotions thus become *interactive phenomena* which are not only felt from the inside, but also displayed and visible in expression and behaviour, often as bodily tokens or rudiments of action.[4] The facial, gestural and postural expression of a feeling is part of the bodily resonance that feeds back into the feeling itself, but also induces processes of *interaffectivity:* Our body is affected by the other's expression, and we experience the kinetics and intensity of his emotions through our own bodily kinaesthesia and sensation. Our body schemas and feelings expand and 'incorporate' the perceived body of the other. This creates a dynamic interplay which forms the basis of social understanding and empathy, and which I will describe as *mutual incorporation* (Schmitz 1989, Leder 1990, Fuchs & De Jaegher 2009).

Incorporation is a pervasive characteristic of the 'lived' or subjective body *(Leib)* which always transcends itself and connects with the environment. This is the case for example in every skilful handling of instruments, as when playing piano and letting the fingers find their way by themselves; or when a blind man probes his environment with a stick and feels the surface at the top of it. In such cases, the instrument is integrated into the body motor schema like an extension of the body, subjectively felt as 'melting' or being at one with the instrument. However, such incorporation also occurs with other people, even at a distance. An example for this is fascination. Thus, we may listen to a spellbinder, hanging on his every word, and feel being drawn towards him. Or we may watch the performance of an acrobat on a high wire with a mixture of fascination and anxiety. Our lived body extends and connects with the acrobat's swinging movements; we may even be prompted to co-movements.

In a more subtle and subliminal way, such coupling occurs in every face-to-face encounter: Two cycles of embodied affectivity (fig. 1) become intertwined, thus continuously modifying each partner's affective affordances and bodily resonance, as illustrated in fig. 2:

Let us assume that A is a person whose emotion, e.g. anger, manifests itself in typical bodily (facial, gestural, interoceptive, adrenergic, circulatory, etc.) changes. His pre-reflectively experienced or lived body thus functions as a felt 'resonance board' for his emotion: A feels the anger as the tension in his face, as the sharpness of his voice, the arousal in his body etc. These proprio- and interoceptive bodily feelings may be termed *intra-bodily resonance.* Now this

4 According to Darwin (1872), emotional expressions once served particular action functions (e.g. baring one's teeth in anger to prepare for attack), but now accompany emotions in rudimentary ways in order to communicate these emotions to others. Evolutionary psychologists have advanced the hypothesis that hominids have evolved both with increasingly differentiated facial expressions and with sophisticated capabilities of understanding these affect displays. In any case, though strongly varying between and within cultures, emotional expression is a crucial facet of interpersonal communication in all societies.

resonance also implies an *expression* of the emotion, that means, the anger becomes visible and is perceived by A's partner B. Moreover, the expression will also produce an *impression*, namely by triggering corresponding or complementary bodily feelings in B. Thus, A's sinister gaze, the sharpness of his voice or expansive bodily movements might induce in B an unpleasant tension or even a jerk, a tendency to withdraw, etc. Thus, B not only sees the anger immediately in A's face and gestures, but also senses it with his own body, through his own intra-bodily resonance.

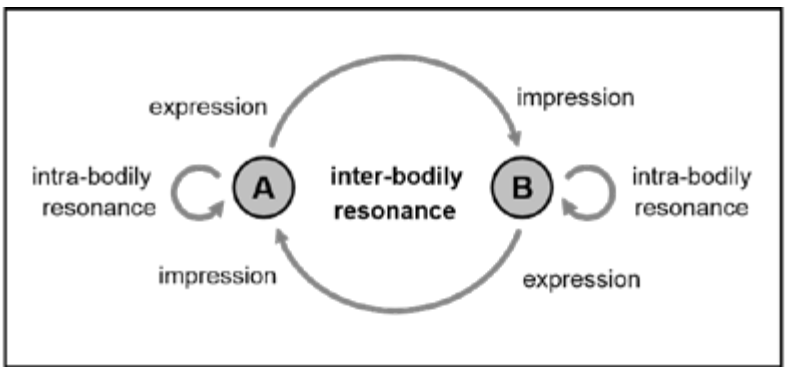

Fig. 2: Mutual incorporation and inter-bodily resonance[5]

However, it does not stay like this, for the impression and bodily reaction caused in B in turn becomes an expression for A; it will immediately affect his bodily reaction, change his expression, however slightly, and so forth. This creates a circular interplay of expressions and reactions running in split seconds and constantly modifying each partner's bodily state, in a process that becomes highly autonomous and is not controlled by the partners. They have become parts of a dynamic sensorimotor and inter-affective system that connects both bodies by reciprocal movements and reactions, that means, by *inter-bodily resonance*.[6] Of course, the signals and reactions involved proceed far too quickly to stand out discretely and become conscious as such. Instead, both partners will experience a specific feeling of being bodily connected with the other in a way that may be termed *mutual incorporation:* Each lived body with its sensorimotor body schema reaches out, as it were, to be extended by the other. This is accompanied by a holistic impression of the interaction partner and his current state (for example his anger), and by a feeling for the overall atmosphere of the shared situation (for example a tense atmosphere).[7]
No 'mental representation' or 'mind reading' is implied in this process. There is no strict or dualistic separation between an inside and an outside at all, as if a hidden mental state in A

5 Adapted from Fuchs 1996.
6 The term ‚resonance' is not infrequently used in social neuroscience as underlying social cognition or empathy (e.g., ‚motor resonance', Gallese 2001, ‚affective resonance', Decety & Chaminade 2003, Decety & Meyer 2008), but usually related to mirror neuron mechanisms or shared neural representations, without being spelled out phenomenologically. This is being done here. For a phenomenological account including references to neural resonance mechanisms, see also Gallagher 2012.
7 As the example shows, this interbodily resonance and resulting atmosphere is by no means restricted to 'harmonious' social situations – interpersonal conflicts may create most intense forms of mutual resonance and atmospheric tensions. Even situations of withdrawal, exclusion or ostracizing are felt as an inter-bodily field of negative field forces, so-to-speak (cf. Fuchs 2007).

produced certain external signs that B would have to decipher.[8] For A's anger may not be separated from its bodily resonance and expression; and conversely, B does not perceive A's body as a mere object, but as a living, animate and expressive body that he is in contact with. This expressiveness is concentrated and intensified in the *gaze*: the other is for me not somewhere 'behind his gaze', but he is visible in it. Even more, I experience the other's gaze *as being seen by him*, or in other words*, I see him seeing me (seeing him)*. The irrefutable evidence of the other's embodied presence emerges from being mutually affected by each other, or from inter-affection.

Nor may the process be described as a bodily *simulation* of the other's state that we project back onto him. We certainly do not simulate another's angry gaze or voice, even less his anger, in order to notice it, but we rather feel tense, threatened or invaded by his expressive bodily behaviour. That means, our resonance is *complementary* and does not mirror the other's expression. But even in case of *corresponding* resonance (e.g., the other's smile inducing a smile in me), there is no need for the complicated mechanism of an 'as-if'-simulation and back projection. Instead, my own intra-bodily resonance is simply *implied in my perception* of the other, namely as its 'proximal', tacit component. Bodily sensations, tensions, action tendencies, etc. that arise in our interaction do not serve as a separate simulation of the other, but are part and parcel of our embodied mutual perception.

Using the phenomenological distinction between the *subjective, lived body* (*Leib)* and the *physical, living body* (*Körper)*, we can also describe this mutual intertwinement as follows: The *lived body's impression* in the one person (A) becomes a *living body's visible expression* for the other person (B), and vice versa: the impression produced in B's lived body becomes a living body's expression for A. Thus, it is the peculiar 'chiasmatic'[9] structure of the body as the turning point of interior and exterior, as both *Leib* and *Körper*, which enables the interlacement of self and other in the process of mutual affection and perception. This analysis may be regarded as an articulation of Merleau-Ponty's concept of 'intercorporeality' (*intercorporéité,* Merleau-Ponty 1960), by which he intended to complement Husserl's account of intersubjectivity as the constitution or 'appresentation' of the other by a conscious ego (Husserl 1960).[10] Intercorporeality means a pre-reflective intertwining of lived and living bodies, in which my own is affected by the other's body as much as his by mine, leading to an embodied communication:

> The communication or comprehension of gestures comes about through the reciprocity of my intentions and the gestures of others, of my gestures and the intentions

8 Of course, humans are also able to control their emotional expressions, that means, to withhold, to enact or to feign emotions to a certain extent, for example when playacting, lying or cheating (such as in poker games), etc. However, this does not mean that emotions are actually inner or disembodied states:

(1) The success of those artificial or feigned expressions depends precisely on the primary interaffectivity: If we would not normally perceive others' expressions *as* their emotional states, we couldn't easily be deceived either. Spontaneous bodily resonance remains the default mode of non-verbal understanding.

(2) The control of one's emotional bodily resonance is restricted to the movement of the voluntary muscles, whereas the autonomous bodily resonance and general action readiness remains outside of control. This may be demonstrated by measuring muscle tonus, heart rate, skin conductance (think of a lie detector), etc. Hence, emotions are still embodied states, even though we may inhibit their motor expression to a certain extent.

9 This term was used by Merleau-Ponty in his later work to denote that our embodied subjectivity may not be located merely in either the body's touching or in its tangibility, in our interior or exterior, but in their intertwining, or where the two lines of a chiasm intersect without coinciding (Merleau-Ponty 1968).

10 Certainly Husserl's concept of intersubjectivity may not be restricted to the *Cartesian Meditations* in which he developed the idea of appresentation. Other accounts, which in part anticipate Merleau-Ponty's concept of intercorporeality, are given in *Ideen II* and *Experience and Judgement* (Husserl 1952, 1973).

> discernible in the conduct of other people. It is as if the other person's intentions inhabited my body and mine his (Merleau-Ponty 1962).

As we can see, intercorporeality leads to the opposite of a representationalist account: Primary social understanding is not an inner modelling in a detached observer, but the other's body extends onto my own, and my own extends onto the other. There is no component within the interactive cycle that represents ('stands for') another one, for this would require it to be separated from the cycle, thus reconstructing inside what is discernible outside. But in intercorporeality, inside and outside are not separate domains, but only directions of motion within an ongoing mutual transition between *expression* and *impression*, or 'e-motion' and 'affection'.

To illustrate this once more, let us imagine a football play in which one player sees his teammate raise his arms rejoicing at a goal. According to representationalism, there are objects 'out there', in this case a body, whose features are transmitted to the retina, then further processed by the brain in order to create an internal representation of the other's body, which is then combined with a theory of mind or simulation mechanism, resulting in the appraisal: "he is happy". Instead of this linear concept, an intercorporeal approach emphasizes the circular sensorimotor dynamics within the dyad of embodied agents. Both partners are linked to form an encompassing system through mutual perceptions and reactions. Grasping, pointing, handing-over, moving-towards, smiling, crying, etc. – all these are not just external behaviours that we have to furnish with a meaning by way of inference, but through our bodily resonance, they become inherently expressive and meaningful actions. Thus, the footballer will immediately perceive the other as an 'affective affordance', so to speak, and empathically sharing his pleasure, he might also perceive him as a person he could hug. His understanding is interactive from the start, and might easily result in spontaneously embracing his teammate. No simulation or introspection is necessary to share the pleasure – the embrace is merely the manifestation of both player's intercorporeality and interaffectivity.

3. The development of intercorporeality

The concepts of embodied affectivity and interaffectivity describe universal structures of (inter-)subjective experience. On the other hand, there is no doubt that the forms of emotional expression and interaction are to a large extent shaped by one's individual biography as well as by one's cultural background. From early childhood on, patterns of interaction with others are sedimented in the infant's implicit or bodily memory, resulting in what may be called *intercorporeal memory* (Fuchs 2008, 2012). A similar concept is the *habitus* as a culture- or class-specific set of dispositions, skills, styles, tastes and demeanour, which are adopted through everyday interactions according to one's social and cultural background (Bourdieu 1990). Apart from these acquired dispositions and habits, there is also a history of particular interactions between two partners, resulting in what may be called an encompassing or *dyadic body memory*. In this last section, I want to give a short account of these diachronic aspects of intercorporeality.

3.1. Intercorporeal memory

The notion of *body memory* may be used to denote all forms of implicit memory that are mediated by the body and actualised without explicit intention or recollection in our everyday conduct (Fuchs 2008, 2012). It thus comprises all those customs, habits, manners, and practices which are performed unreflectively or 'as a matter of course'. It is a procedural memory for motion patterns such as walking or dancing, for handling instruments such as a bicycle or a keyboard, for familiar *gestalts* of perception, for complex spatial situations (for example finding one's bearings in a dwelling or a town), and last not least for the habitual bodily interactions with others. Thus, body memory conveys the familiarity with recurrent typical

situations and enables skilled interactions with the social environment. Whereas explicit recollection is directed to the past, implicit or body memory re-enacts the past through the body's present performance; in other words, it may be regarded as our 'lived past'.
Implicit or body memory does not mean a subpersonal motion program realised by a body machine without a subject. When I am dancing, the rhythmic movements originate from my body without a need to steer them deliberately – and yet I am living in my movements, I sense them in advance, and I can modulate them according to the rhythm that I feel: I myself am dancing, and not a ghost in a body machine. The movements of my body are at my disposal, I am aware of my capacities, and thus I feel up to my present task as an embodied being. In the last analysis, all capacities acquired in life are integrated into a primordial capability of the embodied subject, a basic sense of agency or 'I can' (Husserl 1952: 253).
More specifically, *intercorporeal memory* means a pre-reflective, practical knowledge of how to interact with others in face-to-face encounters which is acquired already in early childhood. This is enabled by implicit or procedural learning which the infant is capable of from birth on, whereas explicit and autobiographical memory only develop in the course of further brain maturation, i.e. from the 2nd year of life on (Welzer & Markowitsch 2005, Bauer 2006). Let us look at these early learning processes in more detail:
Infants are attuned from birth to social interactions, in particular by showing a heightened attention to faces and their expressions (Valenza *et al.* 1996; Turati *et al.* 2002). Research studies conducted during the last two decades have mostly found that they are also able to imitate adults' gestures like sticking out their tongue, opening their mouth, frowning and others (Meltzoff and Moore 1977, 1989). Thus it seems that the newborn's body schema is characterized by an intermodal openness that immediately allows it to transpose the perceived expressions into its own proprioception and movement.[11] Since bodily imitation evokes corresponding feelings as well, we may assume that a mutual bodily resonance also emerges in the early dyadic interactions. This assumption is supported by the fact that 6-8 weeks olds already engage in proto-conversation with their mothers by smiling and vocalizing (Trevarthen 1979, 1993). They both exhibit a finely tuned coordination of movements, rhythmic synchrony and mirroring of expressions, that has often been compared to a couple dance (Gopnik & Meltzoff 1997: 131). Infant and caregiver also follow a turn-taking pattern, shifting the roles of agent and recipient in a non-random sequence (Jasnow and Feldstein 1986).[12]
As early as in the first months, infants become capable of discerning emotions such as happiness, sadness, and surprise in the postures, movements, facial expressions, gestures, and vocalizations of others (Hobson 2005: 39ff.). The basis for this is that different sense modalities can have the same 'kinematics' and thus express the same affect. Infants both perceive and express affects as the intermodal extract of rhythmic, melodic, vocal, facial and gestural characteristics: *'crescendo'* or *'decrescendo', 'accelerando'* or *'ritardando'*, rising or falling movements, flowing or explosive dynamics, etc. Thus, for example, the feeling of joy and the

11 Recent research with larger samples and a wider range of gestures presented to the infants challenges these results, finding no significant excess of matching over non-matching reactions (Oostenbroek *et al.* 2016). But even if it turns out that imitation is not an innate capacity, but learnt in the course of mutual exchanges during the first months, it still functions as a major component of what Trevarthen (1979) has termed "primary intersubjectivity".
12 It should be noted, however, that early communication does not ideally mean "complete synchronisation", but always includes sequences of matches, mismatches and subsequent "repair" which are also important for the infant to experience a difference between the mother as different from him- or herself, as shown my micro-analyses of the interaction (Tronick and Cohn 1989, Beebe *et al.* 1997). Synchronisation thus means a rhythmic or phasic harmonisation, not complete congruence.

various expressions of joy have similar intermodal dynamics, and this is the basis for the direct perception of others' emotional states even in earliest childhood.
According to Stern (1985), the temporal flow patterns and kinematics of the interaction that are felt by both partners result in *affective attunement,* which may be regarded as equivalent to inter-bodily resonance and mutual incorporation. This means that emotions are not primarily observed in others, but they emerge as *dyadic affective states*, often as an intense pleasure or joy (Tronick 1998). The shared affect during a joyful playing situation between mother and infant may not be divided and distributed among them. It arises from the 'between', or from the situation in which both are immersed. Thus, affects are not enclosed in an inner mental sphere to be deciphered from outside, but emerge, change and circulate between self and other in the intercorporeal dialogue.
The recursive patterns of these interactions are now sedimented in the infant's body memory, leading to what Lyons-Ruth and Stern (1998) have called *implicit relational knowing*. This means a pre-reflective knowledge or skill of how to deal with others – how to share pleasure, elicit attention, express happiness, avoid rejection, re-establish contact etc. The infant acquires specific interactive schemes („schemes of being-with", Stern 1985) and body micro-practices that are needed for a growing range of interactions. Implicit relational knowing is a temporally organised, 'musical' memory for the rhythm and dynamics that are subliminally present in the interaction with others (Stern 1985, Amini *et al.* 1996). It also implies an *interaffective memory* for the specific 'feel' of the shared vitality contours and the emotions that they carry.
Already in the first few months of life, infants demonstrate a memory for shared interaction sequences through the way they expect their mothers to react. Babies quickly learn to which emotional expressions parents respond, are spurned to action, or rather dismiss, etc. An impressive demonstration of the emergence of intercorporeal memory is enabled by the 'still face' experiment (Weinberg & Tronick 1996): during play with her infant, the mother is asked to assume a blank facial expression and stare straight ahead for two minutes. Babies from 2-3 months on usually react with clear irritation and unease – the expected resonance from the mother is absent – and they try in every possible way, with gestures and vocalizing, to elicit the mother's attention and to re-establish the familiar form of contact. More specifically, two groups of children can be differentiated (Field 1984):

1) Infants of sensitive and lively mothers remain active even in the still-face situation, and obviously expect to bring their mother back into contact in this way.
2) Infants of mothers who are more detached and lacking resonance (for instance, because of post-partum depression), react differently; in the beginning they are restless, but quickly become passive and helpless. In other words, they have not learned to effectively use their behaviour to induce contact. Later on these children show a marked weakness in attachment (Field *et al.* 1988).

These considerations and research results may suffice to show that intercorporeality is shaped by individual experiences which to a large extent date back to early childhood interactions, but have a lasting and even lifelong influence on our embodied relationships with others.

3.2. The concept of habitus

From a sociological point of view, body memory, and in particular intercorporeal memory, may also be seen as the carrier of the *habitus,* that means, a set of dispositions, skills, styles, tastes and behaviour that is shared by the members of a community, class or culture. The habitus is acquired by the individual through practical immersion in the life world, in the course of interactive experiences, mimetic learning, implicit routines, rituals etc. As Bourdieu notes (1977: 94), societies treat "... the body as memory; they entrust to it in abbreviated and practical, i.e. mnemonic, form the fundamental principles of the arbitrary concepts of culture. The principles embodied in this way are placed beyond the grasp of consciousness." This

embodied memory is realised by an "implicit pedagogy" (l.c.); it does not require purposeful instructions, deliberate imitation or other kinds of explicit learning. On the contrary, the habitus becomes a second nature which effectively guides one's behaviour, all the more as it is not conscious *as* a habitus.

This is also important for our concepts of social understanding: The homogeneity of the habitus as the shared body memory of a community or culture entails that the embodied practices are immediately evident or foreseeable on the background of a given situation. This provides a primary, non-inferential understanding of others without requiring conscious transposition, perspective-taking or simulation ("what would I do in his place?"). Growing up and being immersed in a common practical context results in tacit knowledge of the "rules of the game" and of typical interactive sequences (Condon 1979). Like the players of a football team on the field, the members of a culture normally understand each other intuitively, anticipate the next moves and know how to react, without a need to resort to deliberation, to a theory of mind or mentalising procedures.

The habitus thus becomes the basis of common sense or *sensus communis*, namely as a practical sense of embodied social customs and interactions which constitutes the pre-reflective background of social life. In this way, collective styles of intercorporeality and interaction are passed on from one generation to the next without becoming explicit – in an unconscious, collective history. Thus Merleau-Ponty's notion of intercorporeality gains an additional aspect: It means not only the primary familiarity of our bodies with each other, or their pre-reflective communication, but also the entanglement of human bodies in a shared history that is preserved in their implicit collective memory.

When relating the phenomenological concept of body memory to Bourdieu's habitus, however, one precaution seems necessary. Bourdieu himself has repeatedly criticised phenomenological approaches as relying merely on subjective descriptions, thus failing to account for the sociological determination of commonsensical practices (cf. Bourdieu 1977: 3f., 183; 2000: 132). While this may be disputed in particular in the light of Husserl's later work on the habitus (see e.g. Husserl 1973: 122) and of Schütz' social phenomenology of the life world (Schütz 1962), there is a reverse tendency in Bourdieu to adopt an objectivist and structuralist point of view which results in an overly deterministic picture of human sociality. One of the main reasons for this is that he mistakenly regards all non-representational forms of knowledge and habit ('knowing how') as necessarily 'non-conscious' and as such not accessible to conscious modification or control. However, as I have pointed out above, the realisation of bodily skills and practices is not a subpersonal process but open to modifications or even explicit changes by the subject. In principle, persons are always capable of acquiring new social skills; they may even reflect on their incorporated social background and then deliberately strive to transform their own habitus – though this may take a great deal of time and effort. Thus, the concept of body memory does not involve a deterministic stance but is open to individual creativity and social change.

3.3. Dyadic Body Memory

As we have seen, each body forms an extract of its past history of experiences with others that are laid out in its intercorporeal memory. As a result of learning processes, which are in principle comparable to the acquiring of motor skills, social agents shape and enact their relationships according to the patterns they have extracted from earlier and earliest experience. On the other hand, each particular interaction, when repeated, also acquires its own history, thus pre-figuring and constraining future interactions between the respective partners. One may, for example, develop a specific style of interacting with a close friend which is only possible with this person and re-emerges immediately even after years of separation. Then the intercorporeal memories of both partners unite to form a *joint procedural*

field that suggests and preordains typical interactions and shared experiences. It may also be regarded as a space of two body schemas which are attuned to each other through sensorimotor patterns generated by the shared history: rituals of welcoming, repertoires of gestures, postures, movements, voice pitch and even dialects which one 'falls into' in the presence of the other. Hence, we may say that there is, in a certain sense, a memory of the interactive process itself, or a *joint or dyadic body memory*.

Let us take another example, namely a well-trained couple of dancers who move easily with the rhythm of the music, make the suitable turns even on the slightest signals of the other, and whose hands and bodies find each other without guidance of the gaze. Both partners apply their procedural and intercorporeal skills, and yet they move and feel in a way that is only possible within the interaction. Together they create the spatio-temporal pattern of the dance which in turn draws them into its superordinate dynamics, implying the mutual incorporation already described above. Their kinaesthetic body schemes literally extend and connect with each other to form an overarching dynamic process. Rhythm and melody particularly support this incorporation by providing dynamic constraints for the movements of both partners. Each of them behaves and experiences differently from how they would do outside of the process (or with another partner); their interaction has gained an autonomy of its own (De Jaegher & Di Paolo 2007).

Where shall we localize this memory of joint dancing and other skilful bodily interactions? On the one hand, the superordinate or dyadic bodily system certainly has no natural substrate for forming a memory – it only consists of the present connection of two lived bodies in which the respective dispositions have formed. A 'memory of the system' must finally be based on the individual and biological memories of the agents involved in order to become effective for behaviour. On the other hand, it is only together that the individuals are in a position to re-enact the dyadic pattern, which justifies to attribute this memory or knowing-how in a sense to the dyad itself. It is a memory not in the sense of 'I can' but of *'we can'*. As we can see, intercorporeality means more than inter-bodily resonance and mutual incorporation: it may also be regarded as an overarching system which over time gains its own pattern, autonomous dynamics and peculiar history.

4. Conclusion

I have outlined a concept of primary or pre-reflective intersubjectivity which is based on embodied affectivity and interaffectivity. It conceives emotions not as inner mental states that have to be deciphered or inferred from external cues, but as expressive, dynamic forces which affect individuals through bodily resonance and connect them with one another in circular interactions. In face-to-face encounters, each partner's lived body reaches towards the other to form an overarching system through inter-bodily resonance and mutual incorporation. According to this concept, social understanding is primarily based on intercorporeality; it emerges from the interactive practice and coordination of embodied agents. We do not need to form internal models or representations of others in order to understand and communicate with them; as bodily subjects, we are always already involved in a shared affective and expressive space.

In social contacts, our lived bodies become extended such that they are intertwined with those of others in a way that prevents any conceptual or ontological reduction to isolated entities. This applies both to current interactions and to the history of interactive patterns. From early childhood on, social understanding and empathy develop as a practical sense, a musicality for the rhythms, dynamics and patterns of interactions with others. Intermodal kinematics and bodily resonance are key to attuning and sharing each other's affects within the primary dyad. Thus, in a non-mentalising way, infants are already able to perceive the emotions and intentions in the actions of others, in their postures, gestures and facial expressions, as related

to the context of the common situation. This provides a primary understanding without recourse to a concept of mental states.
Moreover, developmental research indicates that empathy is based on an intercorporeal memory or an implicit relational knowledge of how to interact with others that is acquired in early childhood and conveys a basic sense of social attunement. In each social encounter, both partners unconsciously re-enact a history of embodied socialization and relationships that have shaped their styles of interacting, their empathic skills and intuitions as well as their class- and culture-specific habitus. Finally, embodied intersubjectivity can also give rise to self-sustaining interaction patterns that go beyond the behavioral dispositions of isolated individuals. They may be attributed to a memory of the intercorporeal system and its partially autonomous dynamics, an 'attractor landscape', so-to-speak, that is actualised and modified in every new encounter of the participating agents.
To be sure, this embodied and enactive concept does not exhaust the possibilities of empathic understanding and intersubjectivity. On the basis of primary bodily empathy, we are also able to explicitly represent, to imagine or to question the other's situation. This happens in particular when their behaviour seems ambiguous, or when an irritation or misunderstanding occurs. Through additional information and inference, we can then try to enhance our understanding, infer possible hidden intentions and in this way often deepen our empathy. A further possibility is to transpose oneself into the other's situation and imagine how one would feel or react in his place. Here we use a kind of simulation which I prefer to call 'imaginary transposition' or 'perspective taking' (Fuchs 2013b).
Such higher-level forms of social understanding develop later in life, mainly from the 2nd to 4th year. Knowledge about others that is based on language and narrative reports plays a crucial role for these later stages of intersubjectivity (Gallagher & Hutto 2008, Hutto 2009). However, "... it is only gradually and with considerable input from adults that children eventually come to conceive of something like 'bodies' on the one hand and 'minds' on the other" (Hobson 1993: 117). Even then one may argue that the concept of 'Theory of Mind' was misleading from the start, since the very term presupposes a kind of inferential and scientific approach to others' allegedly hidden minds as the standard mode of intersubjectivity. Yet the need for such an approach arises mainly in situations in which intercorporeal and verbal communication becomes ambiguous or extremely restricted, such as poker games or the Cuba crisis. Sophisticated, detective-like cognitive capacities are neither necessary nor sufficient to enable empathic intersubjective relations. Despite those later developments, our everyday social understanding remains based on embodied intersubjectivity.

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