

The Notion of Intercorporeality and Its Psychology

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1. The background of intercorporeality

Maurice Merleau-Ponty (1960/1964) first proposed the notion of *intercorporeality* (intercorporéité) in his late work on Husserlian phenomenology, *The philosopher and his shadow*. As intercorporeality is also referred to as *carneal intersubjectivity* (intersubjectivité charnelle), it is clear that he was trying to open a discussion on intersubjectivity in close connection with the ideas of corporeity and embodiment.

It is necessary to note that in the background to this notion lies the so-called “problem of other minds”. This is an issue which has long been discussed in philosophy and can be thought of as displaying three key aspects.

First is the aspect of everyday life. In general, we tend to presuppose that the human mind is something invisible or untouchable, in other words, something non-perceivable. This presupposition often leads us to the idea that we need to “read” other people’s minds from their manifest behavior, such as their utterances, facial expressions or gestures. Phenomenologically speaking, this might be viewed as a sort of “natural attitude” toward the mind.

Second, the current discussion of social cognition, especially that of the theory of mind, nearly takes over the same presupposition. Although there has been some debate between theory-theory and simulation-theory (see Davies and Stone, 1995), a view common to both sides is that the mind is something hidden within the observable body (Gallagher, 2005; Gallagher and Zahavi, 2008). This lies behind the reasoning that we need to make use of theoretical inferences or inner simulations in order to understand another person’s mind.

Third, as a matter of course, one of the historical roots of this problem is found in Cartesian philosophy. As is well known, the philosophy of Descartes (1641/2010) separated the mind from the body which appears in three-dimensional space. According to his view, one’s mind is accessible only to oneself and is hidden from others, since the mind as *res cogitans* is private and

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never appears in the public space of extension. From a Cartesian perspective, social understanding is a problem of communication between two stand-alone minds.

But the notion of intercorporeality requires us, first of all, to change our view of the mind. Merleau-Ponty states, "We must abandon the fundamental prejudice according to which the psyche is that which is accessible only to myself and cannot be seen from outside" (1951/1964, p. 116). Intercorporeality then focuses on the relation between one's own body and that of the other in order to illuminate intersubjectivity in an alternative way. It shows that the problem of social cognition is not a problem of communication between two Cartesian minds.

2. Merleau-Ponty's texts on intercorporeality

Here, I would like to quote four related passages from Merleau-Ponty's texts in order to clarify the notion of intercorporeality.

(a) "Each one of us pregnant with the others and confirmed by them in his body." (1960/1964, p. 181)

This passage, from *The philosopher and his shadow*, stresses that we are connected through the body in a special way ("pregnant"). However, the reality of the connection remains ambiguous. The following passage from *The child's relations with others* explains it in more concrete way.

(b) "In perceiving the other, my body and his are coupled, resulting in a sort of action which pairs them. This conduct which I am able only to see, I live somehow from a distance. I make it mine; I recover it or comprehend it. Reciprocally I know that the gestures I make myself can be the objects of another's intention." (1951/1964, p. 118)

According to this passage, our connection through the body is based on perception, especially the perception of another's action. Merleau-Ponty states that the self "lives" another's action through perceiving it. We can better understand this point through the next example, from his *Phenomenology of Perception*.

(c) "A fifteen-month-old baby opens his mouth when I playfully take one of his fingers in my mouth and pretend to bite it. ... He perceives his intentions in his body, perceives my body with his own, and thereby perceives my intentions in his body." (1945/2012, p. 368)

A baby of fifteen months, as soon as he perceives the adult's action of biting, echoes the same action. In this example, as we saw in the passage (b), the baby's body and that of the adult are coupled in the same action, and the intention to bite is shared intersubjectively. The following passage refers to this point.

(d) "Communication or the understanding of gestures is achieved through the reciprocity between my intentions and the other person's gestures, and between my gestures and the intentions which can be read in the other person's behavior. Everything happens as if the other person's intention inhabited my body, or as if my intentions inhabited his body."

(1945/2012, p. 190-191)

The word “gestures” in this passage could also be read as “actions”. There is reciprocity between my intentions and another’s actions, and between another’s intentions and my actions. Consider again the baby’s case: perceiving the adult’s action of biting, the baby carries out its own intention to bite.

3. Being “pregnant” with the other

In examining the passages quoted above, we can almost comprehend the meaning of intercorporeality. However, I would like to add two simple but illuminating examples which can help us to understand the notion much more clearly.

The first example is yawning. It is well known that yawning is highly contagious. In fact, it is a common experience that we cannot help yawning when we see someone else yawn. Interestingly enough, it has been pointed out that children with autism show difficulty with contagious yawning (Senju et. al., 2007). The other example is of smiling. Generally speaking, smiling is not as contagious as yawning. However, when we come upon someone’s smiling face, we feel that the muscles around our mouth are about to make the same facial expression, even if we do not actually smile.

As is seen in these examples, intercorporeality contains a perception–action loop between self and other. Perceiving the other’s action prompts the same action in the self (like yawning) or its possibility (like smiling). Conversely, the self’s action prompts the same action, or its possibility, in the other’s body. In this way, each one of us is “pregnant” with others, as Merleau-Ponty expressed it.

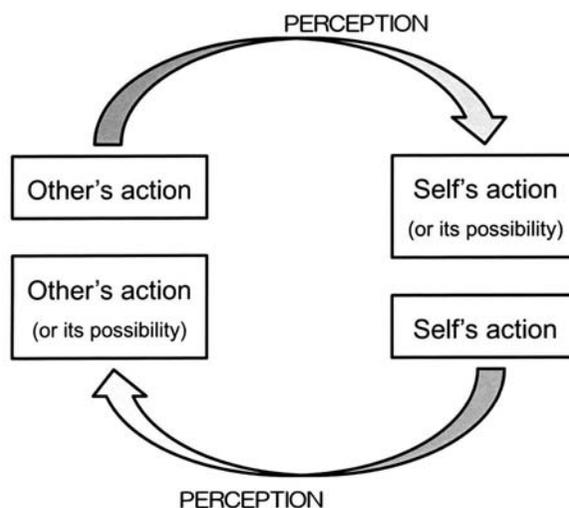


Figure: The structure of intercorporeality

In terms of social understanding, through this reciprocity between bodies, we directly grasp the intention of another's action. For the self, to perceive another's action is potentially to take up the same action. Thus, it is through our motor capacity that we understand the meanings of the other's action. Our basic ability to understand others is perceptual, sensorimotor, and non-conceptual (Gallagher, 2001). It precedes the theoretical inferences or inner simulations put forward in the theories of mind.

4. The function of mirror neurons

In this context, it seems appropriate to refer to the mirror neuron system (Rizzolatti and Craighero, 2004; Murata, 2005, for a review). As is well known, mirror neurons are a special type of neuron that become active when one performs a specific movement as well as when one observes someone else performing the same movement. Neurons in the brain of an observer reflect the action of the other, as if the observer were acting in the same way.

The functions of mirror neurons have been considered in relation to various human capacities, such as language acquisition (Rizzolatti and Arbib, 1998), tool use (Ferrari et al., 2005), and empathy with others (Gallese, 2001). Naturally, however, the primary importance of their function is in understanding the meaning of another's action. After quoting passage (d) above from Merleau-Ponty's *Phenomenology of Perception*, Rizzolatti and Sinigaglia (2008, p. 131) write that, "the 'act on the spectator's part' is a potential motor act, determined by the activation of the mirror neurons that code sensory information in motor terms thus enabling the 'reciprocity' of acts and intentions that is at the root of our ability to immediately understand what we see others doing."

As we have already seen above, to perceive another's action does not necessarily provoke the same action, but it draws out its possibility in the self. This process seems to correspond to the activation of mirror neurons. The mirror neuron system seems to be the neural basis for the perception-action loop between self and other.

In past debate on the theory of mind, mirror neurons have been interpreted as a form of empirical evidence supporting simulation theory (Gallese, 2001; Gallese and Goldman, 1998). According to this theory, the activities of mirror neurons can be considered as an implicit and subpersonal process which simulates the other person's behavior. However, what the mirror neuron system really suggests is a direct understanding of the other's action and intention through perception. It does not correspond to the mental simulation but rather to the perception of action, which is a part of intercorporeality (cf., Gallagher and Zahavi, 2008).

5. Intercorporeality as behavior matching

Besides the discovery of mirror neurons in the area of neuroscience, after Merleau-Ponty's death in 1961 many empirical cases have been reported in social and developmental

psychology that support the notion of intercorporeality. The following cases are considered classical and are well known in the field.

- Reflexive crying (Simner, 1971): Newborn infants have a strong tendency to cry in response to another newborn's crying. It is said to be the earliest stage of empathy.
- Neonate Imitation (Meltzoff and Moore, 1977): Newborn infants imitate an adult's facial expressions, such as opening and closing the mouth or sticking out the tongue.
- Postural congruence (Schefflen, 1964; LaFrance and Broadbent, 1976): During communication in pairs or in a group, a similarity in participants' postures is often observed (e.g., crossing the legs, head propping, leaning back). This is correlated to ratings of rapport between individuals and involvement in communication.

Similarly to contagious yawning, these cases involve our natural tendency to mimic the behaviors of others. Needless to say, this tendency is observed not only in newborns but also in adults, and includes a broad range of nonverbal behavior such as facial expressions, para-language, postures, gestures, movements and mannerisms (Nagaoka, 2006, for a review). Most of them are unintended, unconscious and automatic mimicry (Chartrand and Bargh, 1999), and in consequence people are often able to converge emotionally (Hatfield et al., 1993). In all instances, more than two people show a similarity in nonverbal behavior, especially in bodily actions, which Bernieri and Rosenthal (1991) comprehensively conceptualize as "behavior matching".

In terms of social understanding, the aspect of intercorporeality known as behavior matching is the basis of empathy. In the standard view of psychology, empathy is considered to be shared-cognition between two independent minds. For example, according to the American Psychological Association's *Concise Dictionary of Psychology* (2009), empathy is defined as "understanding a person from his or her frame of reference rather than one's own, so that one vicariously experiences the person's feelings, perceptions, and thoughts".

However, we need to indicate that there is a more primordial, embodied type of empathy. When the perception-action loop between self and other appears as behavior matching (i.e., unintended and unconscious mimicry), feelings and emotions occur which do not belong to any independent mind or subject in the strict sense. Consider the case of reflexive crying. It is plain that crying newborns may share a certain emotion, but it is difficult to know whose emotion it derives from originally. There is a type of empathy which does not belong to the individual but to the "in-between" of self and other.

6. Intercorporeality as interactional synchrony

In the nonverbal behavior of interpersonal communication, intercorporeality appears not only as matching but also as meshing, which is formally termed "interactional synchrony" (Bernieri and Rosenthal, 1991).

The perception–action loop between self and other does not always provoke the same response as we saw above. Rather, it appears in much larger part as embodied interactions of action and reaction. Perceiving the other’s action, we bodily grasp the intention included in it, and then we react in response to that. For example, if an interaction partner points a finger in a certain direction, the other will look for the object in that same direction. If a speaker leans too close toward a listener, the listener is likely to lean back. These reactions will then cause a subsequent action, and so on. In other words, we mesh the flow of behavior with one another in communication, as if we were playing music or dancing together. Interactional synchrony is this kind of interpersonal coordination. According to the classical findings of Condon and Sander (1974), even infants just a few days old are able to synchronize movements of their hands, head and legs to an adult’s speech patterns.

Synchrony is based on the rhythmical circulation of action and reaction between self and other. It is important to add that this circulation is based on the embodied perception of each other’s action. From an enactive point of view, perception is not a process of passively receiving information from the environment. On the contrary, it is a process of exploring possible action toward the environment, based on embodied skills (Varela et al., 1991; Noë, 2004). Perception itself is a potential action. In the context of interpersonal communication, therefore, the other’s action is perceived as one that affords the self to react in a certain manner. Conversely and in turn, the self’s action is perceived as one that affords the other to react in response to it. This is how interactional synchrony is generated: the process is not mediated by intellectual mental operation. (Behavior matching is a special case where a similar reaction is afforded.)

Consider a rally in a table–tennis match as an example of interactional synchrony. Each of the player’s strokes rapidly and often fundamentally changes the situation of the game. As soon as the player perceives the opponent’s striking action (or even before that), he or she prepares to move to strike back. There is a shared goal of playing the match, but no–one can foresee how it will end.

It should be pointed out that the intercorporeality which appears as interactional synchrony is itself a type of social understanding, because interpersonal coordination through embodied interactions often gains its own life and autonomy. The open-ended structure of the embodied interaction enables a new autonomy to emerge and creates a new phase of sense–making. Fuchs and De Jaegher (2009) describe this as follows:

When two individuals interact in this way, the coordination of their body movements, utterances, gestures, gazes, etc. can gain such momentum that it overrides the individual intentions, and common sense–making emerges. ... Each of them behaves and experiences differently from how they would do outside of the process, and meaning is co–created in a way not necessarily attributable to either of them. (p. 476)

7. Summary and conclusion

According to the Merleau-Ponty's own works, the notion of intercorporeality refers, first of all, to the reciprocity of one's own body and that of another. The other's body appears to the self not as a mere object (Körper) but as a living body in action (Leib). This is where the perception-action loop between self and other occurs: to perceive the other's action prompts the same potential action in the self, and vice versa. This reciprocity supports the most basic type of social cognition, that is, understanding the intention and meaning of other people's actions. Mirror neurons seem to be the neural correlate of this basic social understanding.

In the interpersonal communication process, intercorporeality appears in two similar but different manners: behavior matching and interactional synchrony. In behavior matching, more than two participants during communication show a similarity in nonverbal behavior, such as facial expressions, gestures, postures or vocalizations. Since it has been shown that people engaged in matching often converge emotionally, intercorporeality is considered the basis of empathy. However, this empathy derives from feelings and emotions which occur "in-between" the interactants.

Interactional synchrony appears as the rhythmical circulation of action and reaction between self and other. Understanding the intentions of each other's actions, we mesh the flow of nonverbal behavior with one another in communication. As a result of meshing, we come to a new phase in the sense-making process, outside of which we would act differently.

In the end, the notion of intercorporeality opens up the possibility of social understanding without it being mediated by mental representation. According to the current theories of social cognition, we are able to understand others only by indirect means: applying the theory of mind to the other's behavior in order to understand their motivation, imagining the other's thoughts and feelings by simulating the other's situation, and so forth. However, intercorporeality suggests an immediate and direct understanding of the other person, through embodied interactions, and by entering into the "in-between" of self and other. It is not a problem of communication between two Cartesian minds, but a problem of the matching and meshing of two living bodies.

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