

Thomas Fuchs

# *Pathologies of Intersubjectivity in Autism and Schizophrenia*

**Abstract:** *Most mental disorders include more or less profound disturbances of intersubjectivity, that means, a restricted capacity to respond to the social environment in a flexible way and to reach a shared understanding through adequate interaction with others. Current concepts of intersubjectivity are mainly based on a mentalistic approach, assuming that the hidden mental states of others may only be inferred from their external bodily behaviour through 'mentalizing' or 'mindreading'. On this basis, disorders of intersubjectivity for example in autism or schizophrenia are attributed to a dysfunction of Theory of Mind modules. From a phenomenological point of view, however, intersubjectivity is primarily based on a pre-reflective embodied relationship of self and other in an emergent bipersonal field. Instead of a theory deficit, autistic and schizophrenic patients rather suffer from a basic disturbance of being-with-others which they try to compensate by explicit inferences and hypothetical assumptions about others. The paper consequently distinguishes three levels of intersubjectivity: (a) primary intersubjectivity or intercorporeality, (b) secondary intersubjectivity or perspective-taking, and (c) tertiary intersubjectivity, implying a self-other meta-perspective. On this basis, disturbances on these different levels in autism and schizophrenia are described.*

Correspondence:

Prof. Thomas Fuchs, MD, PhD, Karl Jaspers Professor of Philosophy and Psychiatry, Psychiatric Department, University of Heidelberg, Voss-Str.4, D-69115 Heidelberg, Germany. Email: [thomas.fuchs@med.uni-heidelberg.de](mailto:thomas.fuchs@med.uni-heidelberg.de)

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## 1. Introduction

The currently predominant psychiatric paradigm is based on a conception of the patient as an enclosed individual with a clearly defined brain dysfunction. In contrast, from a phenomenological point of view, mental illness may not be located in the individual patient, let alone in his brain, but always includes his relations and interactions with others. Indeed most mental disorders imply more or less profound disturbances of intersubjectivity, that means, a restricted capacity to respond to the social environment in a flexible way and to reach a shared understanding through adequate interaction with others. However, the concepts of intersubjectivity currently prevailing in psychology and psychiatry are mainly based on a *mentalistic approach*: they assume a fundamental strangeness and inaccessibility of the other whose hidden mental states, thoughts, or feelings may only be indirectly inferred from his external bodily behaviour. This happens in the mind of the observer by using a ‘Theory of Mind’ (ToM), ‘mentalizing’, or ‘mindreading’ procedure which allows them to explain and predict the other’s behaviour (Carruthers, 1996; Goldman, 2012). Neither direct perception of bodily expressions nor the embodied interaction between social agents are assumed to play a founding role for social cognition. On this basis, disorders of intersubjectivity for example in autism or schizophrenia are consequently attributed to a faulty development or dysfunction of ToM modules in the brain (Baron-Cohen, 1995; Bora *et al.*, 2009).

In contrast, phenomenological approaches regard intersubjectivity as being based on a pre-reflective embodied relationship of self and other in an emergent bipersonal field. Face-to-face interactions in shared contexts play a major and often even constitutive role for social understanding (De Jaegher and Di Paolo, 2007; Fuchs and De Jaegher, 2009; Gallagher, 2012). This primary intersubjectivity, based on ‘intercorporeality’ (Merleau-Ponty, 1960) and interaction, should be distinguished from higher levels of intersubjectivity, which include aspects of perspective-taking, inference (‘mindreading’), or imaginary transposition (‘putting oneself in another’s shoes’). Thus, the phenomenological approach would not deny that mindreading occurs in rare cases, for example when we are confronted with a puzzling behaviour. However, whether such mindreading skills are based on a ToM mechanism or rather on a communicative and narrative practice

of understanding typical human behaviours is an open debate (Gallagher, 2012; Gallagher and Hutto, 2008).<sup>1</sup> In any case, embodied and enactive approaches suggest a different conception of intersubjective disturbances in psychopathology: What autistic and schizophrenic patients *primarily* suffer from is not a theory of mind deficit but rather a disturbance of bodily being-with-others and social attunement which they try to compensate by hypothetical constructs and assumptions about others. As we will see, disturbances arise on the higher level of intersubjectivity too, but they are based on the primary disturbances of embodied interaction and attunement.

In what follows, I will first present a three-level concept of intersubjectivity; on this basis, I will describe some major pathologies of intersubjectivity, taking autism and schizophrenia as paradigm conditions.

## 2. Three Levels of Intersubjectivity

### (a) Primary intersubjectivity

Primary intersubjectivity (Trevarthen, 1979) develops in the first year of life. Imitation of facial expressions starts from birth on, that means, newborns are already able to transpose the seen facial expressions of others into their own proprioception and movement (Meltzoff and Moore, 1977), thus gaining a basic sense of familiarity with others. Being affected by each other's expressive behaviour results in shared states of bodily feelings and affects. Moreover, already during the first months familiar patterns of interaction and affect attunement are stored in the infant's implicit or procedural memory as interactive schemas ('*schemes of being-with*', Stern, 1985). For example, through interacting with their caregivers, babies soon learn how to share pleasure, elicit attention, avoid overstimulation, re-establish contact, etc. Thus, long before the age of four, the supposed age for acquiring a ToM (or for a presumed ToM module to become functional), the infant already acquires a primary understanding of others through shared practices.

This is the basis of empathy in face-to-face encounters: in embodied and empathic interaction, the other is not assumed to be 'behind'

[1] Many ToM theorists have argued that the alleged inferences are not necessarily introspectively accessible, but remain tacit or sub-personal (Gopnik and Wellman, 1995, p. 250; Carruthers, 2009, p. 121; Spaulding, 2010). This issue cannot be dealt with here; for a critical discussion of this claim see Gallagher (2012). It does not seem very plausible, to say the least, that the main empirical evidence for a sub-personal ToM mechanism to exist is based on various *false-belief tasks* — tasks which are certainly *explicit*, conscious, and even narrative ways of inferring another's mental state.

his action, but he enacts and expresses his intentions in his conduct. In seeing his expressive movements and actions as embedded in their specific context, ‘...one already sees their meaning. No inference to a hidden set of mental states is necessary’ (Gallagher and Zahavi, 2008, p. 185). Moreover, in social interaction, one’s own body is affected by the other in various forms of bodily resonance, leading to what may be called ‘mutual incorporation’ (Fuchs and De Jaegher, 2009). Thus, phenomenology denies the principal divide between the other’s mind and body assumed by current theories of social cognition. Bodily behaviour is expressive, intentional, and meaningful within its context, and as such it is beyond the artificial distinction of internal and external. It constitutes a sphere of primary intercorporeality as the basis for all forms of intersubjectivity.

*(b) Secondary intersubjectivity*

Around the age of one year, infants increasingly go beyond the mutual resonance of intercorporeality and begin to refer to the shared context explicitly, namely by joint attention, gaze-following, and pointing. By noticing how others interact with the world, they learn the usage and meaning that objects have for them, and they recognize others’ goals and intentions in uncompleted actions (Baldwin and Baird, 2001; Meltzoff and Brooks, 2001). Thus, the dyadic interaction opens up towards objects in the surrounding field, leading to a *triadic structure*. Through this ‘*secondary intersubjectivity*’ (Trevarthen and Hubley, 1978), infants begin to perceive others as intentional agents whose actions and mutual interactions are purposeful in pragmatic contexts. In the course of cooperative actions, they also experience themselves as being perceived as intentional agents by others, in a common social space that gradually assumes a symbolic structure.

Symbolic interaction is already present in pointing and cooperative action, but reaches its crucial stage in *language*. Verbal narratives then become the presupposition for more sophisticated modes of understanding which develop in the third and fourth year of life. By engaging in storytelling practices, children learn to understand others in a meaningful way, to imagine their goals and intentions as underlying a certain course of actions (Gallagher and Hutto, 2008). Narrative competency supports the development of the capacities of taking the other’s perspective, of pretend playing and role-taking, and, finally, for certain predictive capacities that underlie the typical ToM tasks (Fuchs, 2013). These capacities are only fully developed on the next level.

(c) *Tertiary intersubjectivity*

Whereas infants begin to perceive others as *intentional agents* in joint attention situations from around 9–12 months of age, it is not before 4–5 years of age that they become aware of others as *mental agents* with thoughts and beliefs that may differ from their own and also differ from reality (Tomasello, 1999). This ‘mentalizing’ capacity is tested in the typical false-belief tests like the Sally-Ann task. Understanding conflicting perspectives of self and other implies the capacity to flexibly shift between them, and to be aware of both perspectives at the same time. This integration of both perspectives is only possible from a *self–other metaperspective* (Laing *et al.*, 1966) which is the hallmark of what may be termed *tertiary intersubjectivity* (Fuchs, 2013). Interpersonal perception in its full sense is thus based on the ability to freely oscillate between an ego-centric, embodied perspective on the one hand, and an allo-centric or decentered perspective on the other, without thereby losing one’s bodily centre of self-awareness. This decisive step of human cognitive development may also be summarized as reaching the ‘excentric position’ (Plessner, 1981) — a third or higher-level stance from which the integration of an ego- and allocentric point of view is possible. It means to *become aware of others as being aware of oneself as being aware of them*.

These briefly presented distinctions will now aid us in understanding pathologies of intersubjectivity in autism and in schizophrenia.

### 3. Disturbances of Primary Intersubjectivity in Autism

As a paradigmatic disorder of intersubjectivity, autism has become a major topic of research in phenomenology as well as in cognitive neuroscience. The present conceptualizations of the disorder are still dominated by a cognitive and modular approach, assuming a faulty development of ToM modules that leads to a disturbed capacity to attribute mental states to others (Baron-Cohen, 1995; Frith, 1989). In recent years, however, criticism has been raised by phenomenological psychiatrists and philosophers (Hobson, 1993; 2002; Gallagher, 2004; De Jaegher, 2013), arguing that the deficit is rather caused by failures of early interaction and interaffectivity. This is supported by the fact that many autistic symptoms such as lack of interest in living beings or social stimuli, reduced emotional resonance, lacking imitation, anxiety, or agitation are already present in the first and second year of life, that means, long before the supposed age to acquire a ToM (Klin *et al.*, 1992; Dawson *et al.*, 1998; Hobson and Lee, 1999; Zahavi

and Parnas, 2003). Even when an innate ToM module is assumed, its disturbance or failure is not suitable to explain those symptoms of lacking bodily resonance, for the latter does not require any mentalizing capacity whatsoever. Moreover, between 15 and 60% of autistic individuals at a later age are able to pass false-belief tests successfully, pointing out that the disorder can hardly be only due to a lack of a ToM (Reed and Paterson, 1990).

From a phenomenological approach, autism should rather be conceived as a *disorder of primary or embodied intersubjectivity*. This includes basic disturbances of embodiment found in children with autism, namely of (a) sensory-motor integration, (b) imitation and affect attunement, and (c) holistic perception, impairing in particular the children's perception and understanding of others' expressions. As a result, the later development of higher-order capacities such as perspective-taking and language acquisition is compromised as well.

- (a) There is evidence that autistic children show a variety of basic sensory-motor abnormalities at the neurological level (Mari *et al.*, 2003; Fournier *et al.*, 2010). In studies of videotapes, such abnormalities could be found as early as the first year of life in children who were later diagnosed as autistic (Teitelbaum *et al.*, 1998), for example problems in righting, sitting, crawling, and walking, or other abnormal motor patterns. This points to a *deficient integration* of visual, kinaesthetic, vestibular, and tactile sensations into a common experiential space (Gepner and Mestre, 2002). Infant research has shown that early dyadic interactions are particularly based on the integration of sensory, motor, and affective experience, allowing for affect attunement via corresponding rhythmic and dynamic shapes in different sensorimotor modalities (Stern, 1985). In other words, there is a close connection between the bodily '*sensus communis*' (i.e. intermodal integration) and social attunement or primary '*common sense*' (Fuchs, 2001). Hence, faulty intermodal integration may significantly interfere with the development of embodied social perception in autistic children.
- (b) Intermodal integration of perceived movements and one's own kinaesthetic sensations plays a particular role for the capacity of *imitation* (Meltzoff, 2002), which serves as a major instrument for early social cognition. Not surprisingly, the literature shows a consistent finding that children with autism do not readily imitate the actions of others (Smith and Bryson, 1994; Hobson and Lee, 1999). There is also increasing evidence for mirror neuron

dysfunctions in autism spectrum disorders (Oberman *et al.*, 2005; Dapretto *et al.*, 2006). Problems with imitation might then lead to a cascade of impairments in early intercorporeality, affect attunement, joint attention, pretend play, and, finally, acquisition of ‘mindreading’ capacities .

- (c) Moreover, autistic children show problems in establishing *perceptual and situational coherence*: they focus on single parts or elements rather than perceiving the Gestalt of objects, and they tend to treat things as decontextualized, thus missing their particular meaning provided by the situation as a whole (Frith, 1989; Happé, 1995). While this failure of holistic cognition may have some positive effects such as remembering unrelated or nonsensical items, it significantly interferes with the development of social understanding. Thus, affect attunement is crucially based on perceiving emotional cues (gestures, facial expression, voicings) as embedded in recurrent situations. Even more, secondary intersubjectivity depends on learning how to relate gestures and actions of others to the context in order to grasp their intentions. Correspondingly, eye tracking studies have shown that autistic children focus on inanimate and irrelevant details of interactive situations while missing the relevant social cues (Klin *et al.*, 2003). In other words, the salience of social stimuli is reduced, because these are particularly bound to the holistic perception of expressive gestures and behaviour.

Although the question of reciprocal interaction between these different mechanisms is as yet far from being solved, it seems most likely that they converge to a fundamental disturbance of embodied social perception and interaction very early in life. This disturbance is then also bound to compromise the later stages of intersubjectivity. For these are not based on ToM modules that develop separately, but rather on the primary *sensus communis* or a sense of ‘being-like-others’ that is subsequently extended by relating to a shared context such as in social referencing or joint attention and, finally, by understanding others as mental agents like oneself. However, if the ‘like-me’ experience is already missing in primary bodily encounters, such that the other’s body remains but an object among others, then the child will not be able *to identify herself* with other persons which would be the presupposition for acquiring the capacity to take their perspective (Hobson and Lee, 1999). Consequently, the development

of more abstract mentalizing capacities will be seriously retarded or even remain impossible.

In sum, what autistic children primarily lack is not a theoretical concept of other minds but a primary *sensus communis* or a sense of bodily being-with-others. Strategies of explicit mentalizing and inferring from social cues are rather employed by high-functioning autistic individuals as a compensation for the lacking capacities of primary intersubjectivity (Zahavi and Parnas, 2003). Thus, Temple Grandin, a woman with autism spectrum disorder, described her problems with interpersonal relations to Oliver Sacks as follows:

It has to do, she has inferred, with an implicit knowledge of social conventions and codes, of cultural presuppositions of every sort. This implicit knowledge, which every normal person accumulates and generates throughout life on the basis of experience and encounters with others, Temple seems to be largely devoid of. Lacking it, she has instead to 'compute' others' intentions and states of mind, to try to make algorithmic, explicit, what for the rest of us is second nature. (Sacks, 1995, p. 270)

These compensatory strategies enable functional interactions with others to a certain degree, but fail to establish the primary sense of being-with-others which is normally provided implicitly by intercorporeality, as a kind of 'magical communication':

She is now aware of the existence of these social signals. She can infer them, she says, but she herself cannot perceive them, cannot participate in this magical communication directly, or conceive the many-leveled kaleidoscopic states of mind behind it. Knowing this intellectually, she does her best to compensate, bringing immense intellectual effort and computational power to bear on matters that others understand with unthinking ease. This is why she often feels excluded, an alien. (*Ibid.*, p. 272)

As we can see from Grandin's report, the bodily *sensus communis* cannot be substituted by explicit inference or rule-based knowledge about others' behaviour. This will be confirmed when we now look at disturbances of intersubjectivity in schizophrenia.

#### **4. Disturbances of Primary Intersubjectivity in Schizophrenia**

According to currently dominant theories, schizophrenia, just like autism, involves some incapacity for meta-awareness, self-monitoring, and theory of mind. Frith (1992) has proposed that schizophrenia can be explained by impaired meta-representation: a failure of

monitoring one's own intentions to think or to act results in symptoms such as thought-insertion or delusions of alien control. Moreover, the inability to correctly infer the mental states of others by using a ToM gives rise to paranoid delusions. A number of experimental studies have shown that patients with schizophrenia perform badly in typical ToM tasks (false-belief test; Frith and Corcoran, 1996; Lee *et al.*, 2004; see Sprong *et al.*, 2007, for a review). However, most of these studies were conducted with patients when they were acutely ill and showed positive symptoms such as delusions. Moreover, studies on real-life interactions could not confirm those results — in normal conversations even delusional patients showed intact ToM skills (Walston *et al.*, 2000; McCabe *et al.*, 2004; McCabe, 2004). Obviously, the interpretation of the results depends on how one conceives the role of narrative and context versus abstract mentalizing abilities in understanding others (Gallagher and Hutto, 2008).

In contrast to meta-representational concepts, recent phenomenological approaches locate the main disorder in schizophrenia on a lower level, regarding it as a fundamental disturbance of the embodied self, or a *disembodiment*. This includes (1) a weakening of the basic sense of self, (2) a disruption of implicit bodily functioning, and (3) a disconnection from the intercorporeality with others (Fuchs and Schlimme, 2009). As a result of this disembodiment, the pre-reflective, practical immersion of the self in the world is lost.

A disturbance of the pre-reflective, embodied self must necessarily impair the patient's social relationships. For as we saw, it is the lived body that conveys the practical knowledge of how to interact with others, how to understand their expressions and actions on the background of the shared situation. This tacit or enacted knowledge is also the basis of 'common sense' (Blankenburg, 2001; Fuchs, 2001): it provides a fluid, automatic, and context-sensitive pre-understanding of everyday situations, thus connecting self and world through a basic habituality and familiarity. If this embodied involvement in the world is disturbed as in schizophrenia, it will result in a fundamental alienation of intersubjectivity: the basic sense of being-with-others is replaced by a sense of detachment that may pass over into a threatening alienation.

First, schizophrenic patients have been shown to lack primary or bodily empathy, that means, they have problems with understanding facial and gestural expressions of others (Kington *et al.*, 2000; Edwards *et al.*, 2002; Amminger *et al.*, 2012). One could say that they experience others' bodies more like objects. Second, patients often show a lack of implicit social understanding, manifesting itself in a

subtle ‘loss of natural self-evidence’, as Blankenburg (1971) has described it. Precisely those things become a problem ‘...which cannot rationally be unequivocally defined, which are a matter of tact’: which dress one wears, how one addresses someone, how one apologizes, and so on (*ibid.*, p. 82). What is lacking in schizophrenic autism, then, is not explicit social knowledge, inferential or ToM abilities, but rather an implicit understanding of the ‘rules of the game’, a sense of proportion for what is appropriate, likely, and relevant in the social context.<sup>2</sup> As a result, patients report that they feel isolated and detached, unable to grasp the natural, everyday meanings of the shared life-world. This alienation may sometimes even date back to the patient’s childhood:

When a child, I used to watch my little cousin in order to understand when it was the right moment to laugh or how they managed to act without thinking of it before... It is since I was a child that I try to understand how the others function, and I am therefore forced to play the *little anthropologist*. (Stanghellini, 2004, p. 115)

I don’t really grasp what others are up to... I constantly observe myself while I am together with people, trying to find out what I should say or do. It’s easier when I am alone or watching TV.<sup>3</sup>

Thus, the behaviour of others comes to be observed from a distant or third-person point of view instead of entering second-person embodied interactions. Interpersonal relationships have then to be managed by deliberate efforts, leading to constant stress in complex social situations and finally to autistic withdrawal.

This alienation can also be felt when interacting with the patient, leading to what has been termed *praecox-feeling* by the Dutch psychiatrist Ruenke (1941), derived from the former term *dementia praecox* for schizophrenia (*ibid.*). It means the sense of an interpersonal atmosphere of unnaturalness, characterized by a lack of mutuality, responsiveness, or attunement:

I felt trapped by a peculiar kind of distress, as if, in contact with my patient, something broke within me. (Minkowski, 1933)

Even after a very brief mental state examination it becomes clear to the psychiatrist that his [the patient’s] empathy is lacking... it is impossible to establish contact with his personality as a whole. (Ruenke, 1941)

- [2] One might argue that a failure of *implicit or sub-personal* ToM mechanisms could also explain those deficits. However, what is at stake here is not reading other people’s minds but rather the embodied ‘social sense’ (Bourdieu, 1990) which conveys an intuitive grasp of social situations, interactions, and intentions-in-action. On the problem of a sub-personal ToM see also footnote 1.
- [3] Quotation from a schizophrenia patient, Psychiatric Clinic, Heidelberg.

In the intercorporeal encounter, the patient's emotional expressions and verbal utterances do not seem to correspond to each other or to the context (parathymia); bodily movements and expressions are not integrated to form a harmonious whole through which the person could manifest himself. As a result, one could say that others will experience the schizophrenic patient more as an object-body than as a lived body. This impression corresponds to the experiential disembodiment of the schizophrenic person.

### 5. Disturbances of Tertiary Intersubjectivity in Schizophrenia

#### (a) *Transitivity*

The disturbance of basic self-awareness in schizophrenia does not only affect primary intersubjectivity, but also the higher level of self–other distinction or self-demarkation, resulting in a loss of experienced ego-boundaries which Bleuler (1911) termed ‘transitivity’:

When I look at somebody my own personality is in danger. I am undergoing a transformation and my self is beginning to disappear. (Chapman, 1966)

The others' gazes get penetrating, and it is as if there was a consciousness of my person emerging around me... they can read in me like in a book. Then I don't know who I am any more. (Fuchs, 2000, p. 172)

Such reports show that in transitivity ‘being conscious of another consciousness’ may threaten the schizophrenic patient with a loss of his self. How can this be explained? In current neurocognitive accounts, the sense of self is regarded as being generated by inferential self-monitoring processes. Corresponding explanations of symptoms such as transitivity, thought insertion, acoustic hallucinations, or passivity experiences rely on the concept of *shared representations*, i.e. overlapping neuronal representations for the execution of an action and for the observation of the same action in others (Decety and Sommerville, 2003). A hypothetical failure of the action attribution system (neuronal ‘who’ system, Georgieff and Jeannerod, 1998) then leads to self–other confusion and delusional misattribution.

However, such modular explanations miss the basic disturbance of self-awareness that precedes the acute psychotic symptoms often by years. From a phenomenological perspective, the self–other distinction is automatically constituted in every experience as an aspect of non-reflective self-awareness (Parnas, 2003). If this primary embodied sense of self or *ipseity* is disturbed, then becoming aware of others

as being aware of oneself will become precarious. In grasping the other's perspective, the patients are no more able to maintain their own embodied centre. This is illustrated by the following case description:

A young man was frequently confused in a conversation, being unable to distinguish between himself and his interlocutor. He tended to lose the sense of whose thoughts originated in whom, and felt 'as if' the interlocutor somehow 'invaded' him, an experience that shattered his identity and was intensely anxiety-provoking. When walking on the street, he scrupulously avoided glancing at his mirror image in the windowpanes of the shops, because he felt uncertain on which side he actually was. (Parnas, 2003, p. 232)

As pointed out in the first section, the verbal interaction with others implies a continuous oscillation between the central, embodied perspective and the decentred perspective from which I am aware of the other as being aware of me being aware of him. It is this dialectical tension of the 'excentric position' that the schizophrenic patient cannot maintain any more. The perspectives of self and other are confused instead of being integrated from a self-other meta-perspective, resulting in a sense of being invaded and overpowered by the other. The same confusion arises for the patient when perceiving himself in the mirror. A similar case example is given by Kimura:

When I am looking into a mirror, I do not know any more whether I am here looking at me there in the mirror, or whether I am there in the mirror looking at me here... If I look at someone else in the mirror, I am not able to distinguish him from myself any more. When I am feeling worse, the distinction between me and a real other person gets lost, too. While watching TV, I don't know any more whether I am speaking in the TV-set or whether I am hearing the words here. I don't know whether the inside turns outwards or the outside inwards. It is as if the foundation of my self collapses. Are there perhaps two 'I's? (Kimura, 1994, p. 194, own translation)

Here it is precisely the virtuality of the mirror image that undermines the embodied sense of self. While looking into the mirror, the patient cannot maintain his own centre, thus confusing the embodied and the virtual self. This is generalized to the perception of virtual others in the mirror, and finally to the encounter with real others. As we can see, the conditions of the possibility for the phenomenon of transitivity are rooted in the dialectical structure of intersubjectivity. To recognize others as mental agents, that means as persons, and to recognize oneself as a separate person among others is one and the same achievement, namely reaching and maintaining the excentric position.

However, this achievement is threatened when the basic bodily sense of self is weakened, finally resulting in a short-circuit of perspectives, as it were, or a melting of self and other.

This short-circuit may also lead to the experience of thought-broadcasting: all the patient's thoughts are known to others; there is no difference between his mental life and that of others any more. Thus, he is entangled in a disembodied, self-referential, and delusional view from the outside. It is also for this reason that the first episode of schizophrenia frequently occurs in situations of social exposure and emotional disclosure, that means, when the affirmation of one's own self against the perspective of the others is at stake: e.g. when leaving the parents' home, starting an intimate relationship, or entering working life. In such situations, the patient may lose his embodied perspective and start to feel observed, persecuted, and permeated from all sides. Thus we find again what I have called a disembodiment, caused by a loss of self in the dialectical process of intersubjective perception.

Importantly, a *lack of recognition* by significant others or one's larger social environment may aggravate these risks. According to recent epidemiological studies, social marginalization, minority status, migration, and other facets that define individuals as being different from their social surroundings, are potential risk factors for schizophrenia, leading to significantly increased incidences in the affected population (Fearon *et al.*, 2006; Cantor-Graae and Selten, 2005; Zammit *et al.*, 2010; Bourque *et al.*, 2011). Although a disturbance or loss of the excentric position has to be distinguished from psychological problems of self-assertiveness or self-worth, the challenge to one's ipseity in social encounters may nevertheless be increased by experiences of social exclusion, discrimination, or deprivation.

### (b) *Delusion*

Finally, I will turn to delusions as disorders of tertiary intersubjectivity or self–other meta-perspective. At first sight, one might think of delusions as the mere product of faulty neuronal information processing, or of 'broken brains'. After all, delusions misrepresent reality, so they must be somehow 'in the head'. However, even in present-day psychiatry, this is not the whole story, for the current definitions of delusion contain a cultural clause: even convictions that seem bizarre from a western viewpoint may well be shared with others in a corresponding cultural background and then give no justification

for a diagnosis of delusion (APA, 2013, p. 103). This shows that the essence of delusion cannot be just a wrong content or representation of reality — delusion should rather be considered an interactive phenomenon. Instead of reifying delusion as a localizable state in the head of the patient, an enactive approach regards it as a disturbance of intersubjectivity, arising in a social situation that is always constituted by two or more interaction partners.

According to the enactive approach to cognition, organisms do not passively receive information from their environment which they then translate into internal representations; rather, they constitute or *enact* the world through their sensorimotor interactions with the environment (Varela *et al.*, 1991; Thompson, 2005; 2007). However, for human beings this constitution is not a solitary activity but always means an intersubjective co-creation of meaning. We live in a shared life-world because we continuously create and enact it through our coordinated activities and ‘participatory sense-making’ (De Jaegher and Di Paolo, 2007). This applies in particular to the domain of the social world, that means, to the processes of mutual understanding, negotiation of intentions, alignment of perspectives, and reciprocal correction of perceptions.

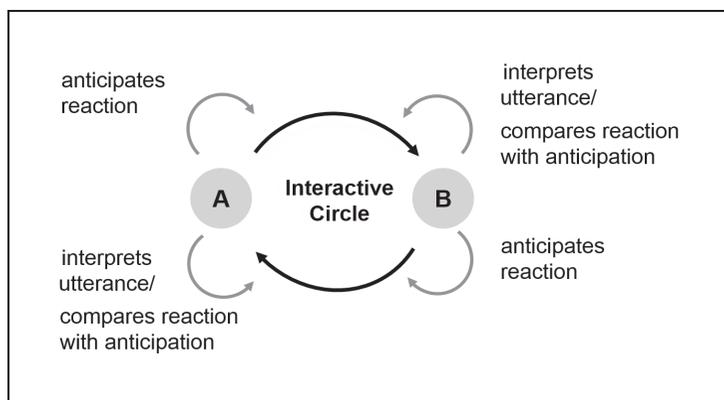


Figure 1. Interactive circle.

Let us look at this more closely. In social interactions, shared meanings are produced by circular processes of action and mutual perception according to the following pattern (*cf.* Figure 1): a person, A, makes an utterance (upper black arrow), anticipating a certain reaction of his partner B. Now B interprets A’s utterance, thus at least implicitly taking A’s perspective, and then gives a corresponding

reply (lower black arrow), anticipating a certain reaction of A. Now it is A's turn to interpret B's reaction, to compare it with his own anticipation, and then to make a second, affirming, modifying, or correcting utterance. B compares this with his expectation, now in turn modifies or affirms his own reply, etc. This yields an ongoing *interactive circle* which may even be better illustrated by a *spiral of interactions*, leading to shared or participatory sense-making (Figure 2). One could also say that the shared meaning is generated and constantly transformed through the interaction which implies an alignment of perspectives or mutual perspective-taking. In successful interactions, this spiral leads to an increasingly consensual understanding or definition of the shared situation (as symbolized by the increasing approximation of A and B) — even if there were differing viewpoints, attitudes, and pre-judgments at the beginning.

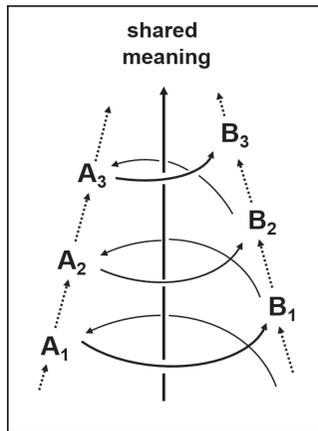


Figure 2. Spiral of participatory sense-making.

It is important to note that there is an *implicit background* or framework to this process which consists of all the commonsensical assumptions about how an interaction works, what kind of reactions are adequate or inadequate, what presuppositions may be taken for granted, including the meaning of words or phrases in certain contexts, the shared cultural values, and the overall view of the world. One most important element of this background, however, is a basic sense of *trust* — the underlying assumption to live in a world with mutual expectations and obligations, and with reliable rules of the social game. This ‘bedrock’ of unquestioned certainties (Wittgenstein, 1969; Rhodes and Gipps, 2008) is a fundamental

presupposition of the consensual understanding of a situation. Following Erikson (1959) and others (Stern, 1985; Trevarthen and Logotheti, 1989), we may assume that a sense of basic trust and affective attunement normally develops in the first year of life, as a presupposition for being related to others, learning from them, and thus being socialized into the human community.

However, if there are constraining boundary conditions to these circular processes, then the joint negotiation of meaning will be disturbed and mutual understanding will fail. Such is the case, for example, when one of the partners is deaf, or does not understand the other's language or cultural background. It is well known that these are typical conditions which in vulnerable persons may lead to suspicion, paranoid ideation, and finally to delusions of persecution — termed 'paranoia of the hard-of-hearing' (Cooper, 1976) or 'paranoia of immigrants' (Fuchs, 1999; Fossiona *et al.*, 2004; Cantor-Graae and Selten, 2005). In these cases, adequate understanding of verbal utterances is compromised, leading to a disturbance of the circle of social action and perception. The non-verbal and behavioural signals of others become ambiguous, and their reactions are no longer congruent with the patient's anticipation. More and more, the deaf person or the immigrant gets entangled in situations in which the utterances or expressions of others seem to be aimed at him in a sinister way, and he is unable to neutralize these perceived self-references by subsequent correcting interactions.

At a certain point in this process, the basic trust in others breaks down and is replaced by a paranoid delusional framework which now converts even the most harmless events and doings into all the more insidious machinations and intrigues. The breakdown of the medium of trust and attunement to others leads to a loss of the natural evidence of commonsensical reality (Blankenburg, 2001). Moreover, there is a looping effect between the arising paranoid ideation and the reaction of the others to the patient's altered, suspicious behaviour. Their irritated reactions contribute to his sense that there is something to be suspicious about, which in turn feeds back into their failure to make themselves understood.

With some modifications, this description applies to schizophrenic delusions as well. For, in the prodromal stages of the psychosis, the alienation of perception and the resulting loss of familiar significances particularly extend to the social sphere. The faces, the gazes, and the behaviour of others become highly ambiguous, and the interactive circles with others are fundamentally disturbed. In the *delusional mood* arising from this ambiguity (Jaspers, 1968; Fuchs, 2005),

the basic trust in others breaks down. The co-constitution of a shared world fails and is replaced by the new, idiosyncratic coherence of the delusion. Now the patient feels observed by gazes from the background, being spied at from out of anonymous cars, or secretly tested in well-prepared situations. In other words, she takes others' presumed perspectives even excessively, but in a way that all these perspectives seem to be directed centripetally towards herself, implying the attribution of threatening intentions to others (this has sometimes been termed 'overmentalization'; see for example Montag *et al.*, 2011).

Similar to transitivity, delusions may thus be described as a *loss of the excentric position*. Deluded patients are able to take on the (supposed) perspective of others, i.e. they are aware of others being (seemingly) conscious of them. However, what they lack is the independent position from which they could compare their own and another's point of view, and from which they could also relativize or question their feeling of centrality and reference (being observed, spied at, persecuted, etc.). This independent or 'third' position is the excentric position — the achievement of tertiary intersubjectivity that is lost in delusion.

The failure of excentricity becomes manifest in particular when the patient is confronted with doubts or objections by others. In most cases, he will not be able to adequately respond to these; on the contrary, he will simply assume a *consensually perceived situation* even though this is not at all the case from the other's point of view. The patient behaves as if others could only be of the same opinion and does not justify his claims in a way that is understandable to the interlocutor (McCabe *et al.*, 2004). He no longer succeeds in actually taking their perspective, in transcending his own point of view. Thus, delusions are not mere products of a deranged brain. For their essence is not a faulty representation of the world, but the failure of co-constituting the world through mutually taking and aligning one's perspectives.

An important result of this is the *exclusion of chance* (Berner, 1978). Chance or coincidence normally allows us to neutralize irrelevant elements of a situation by attributing it to a mere contingency, not to another's intention: 'This was not meant for me' or 'not aimed at me'. For the schizophrenic patient, however, the situation is reversed: it is precisely the normally irrelevant background elements that adopt a meaningful, sinister, and threatening character. The deluded person no longer acknowledges the possibility of chance, and thus refuses to treat the shared situation as an open one. This inability to take a different perspective on the situation in turn leads to a severe irritation and worry in his interaction partners. They no longer know how to

comprehend his behaviour, nor where they stand with him. This experience corresponds, on the level of verbal interaction, to the *praecox-feeling* on the intercorporeal level.

In sum, delusions may not be sufficiently described as individual false beliefs. Rather, they correspond to an intersubjective situation bereft of the basic trust and attunement to others that could help to restore a consensual understanding of the situation and to co-constitute a shared, commonsensical reality. No matter what their neurobiological presuppositions and components are — no doubt that these are of crucial importance — delusions are not just products of individual brains but disorders of the *in-between*, or of enacting a world through interaction with others. Delusions are *relational phenomena*, precisely because they escape our attempts towards understanding; they manifest themselves through the negation of the established order of sense by which we aim to grasp them. By virtue of this negation, however, delusions also remain related to the others.

## 6. Conclusion

From a phenomenological point of view, severe disorders of intersubjectivity as they are found in autism and schizophrenia are primarily based on a disturbance of the embodied interaction with others and on a lack of the practical skills implied. Instead of a theory deficit, autistic and schizophrenic patients rather suffer from a lack of *sensus communis* or embodied common sense — a lack which they can only insufficiently compensate by explicit inferences and hypothetical assumptions about others. Lacking the tacit knowledge and familiarity which normally guides our relationships and interactions, autistic and schizophrenic patients are also impaired in their capacity to take the other's perspective and to participate in processes of joint sense-making. As a consequence, higher levels of intersubjectivity are affected on which the shared negotiation of meaning, the mutual alignment of perspectives, and the demarcation of oneself from others are at stake. What is most characteristic of disorders at these levels is the lacking capacity to *flexibly switch* between one's own and another's point of view, a capacity that is normally enabled by a *third* or *excentric* position on a meta-level. Its loss may result in a failure to adequately recognize others' beliefs as differing from one's own, further in phenomena such as transitivity or loss of self–other boundaries, and finally in delusional beliefs. In all these cases, the interactive constitution of a shared world is seriously compromised,

leading to a fundamental alienation, detachment, and autistic withdrawal.

The alignment of perspectives and sharing of intentions directed towards a common object or action goal has been termed ‘shared intentionality’ or ‘we-intentionality’ in social philosophy and psychology (Searle, 1995; Tuomela, 2002; Elsenbroich and Gilbert, 2014). We may recognize from the psychopathological conditions described above that this we-intentionality is ultimately based on a primary, embodied, and practical understanding of others. Even though higher levels of intersubjectivity may be reached by high-functioning autistic individuals through explicit inference and similar strategies, their primary lack of intercorporeal skills is bound to at least impair the development of high-level mentalizing capacities. Similarly, in patients with schizophrenia the weakening of the bodily sense of self leads not only to disturbances of intercorporeality and commonsensical understanding of social situations, but also to a loss of self–other distinction and participatory sense-making on higher levels of intersubjectivity.

In the last analysis, this shows that intersubjectivity is not a relation or meeting of ‘pure minds’, but of embodied subjects interacting with each other in shared situations. Correspondingly, so-called ‘mental’ illnesses should not be regarded as a malfunctioning process occurring in an individual brain but as a disturbed way of enacting a world, and, in particular, to ‘inter-enact’ a shared world through adequate interaction with others. Mental illness is an extended phenomenon, a process always taking place *in between* the patient and others.

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