

CORPorealized AND
DISEMBODIED MINDS
*A Phenomenological
View of the Body in
Melancholia and
Schizophrenia*

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ABSTRACT: The article starts with a phenomenological account of the implicit functioning of the body in everyday perception and performance, turning the physical body into a living medium of the subject's relation to the world. This transparency of the body is conceptualized as a mediated immediacy, based on the coupling and synthesis of single elements of perception and movement to form the integrated intentional arcs by which we are directed toward the world. However, this mediacy of embodied consciousness is vulnerable to disturbances of the mediating processes involved, leading to different forms of opacity of the body and, subsequently, an alienation of the self from the world. Thus, the body may regain its pure materiality and turn into an obstacle; this is the case in severe depression, which may be described as a reification or corporealization of the lived body. On the other hand, the subject may also be detached from the mediating processes that it normally embodies, resulting in what may be called a *disembodied mind*; this condition is often found in schizophrenic patients. The loss of the implicit or transparent structure of the body is described in both contrasting cases, with special emphasis on disturbances of embodied intersubjectivity.

KEYWORDS: lived body, transparency, opacity, melancholia, schizophrenia, intersubjectivity

HUMAN SUBJECTIVITY is embedded in the world, with the body acting as its mediator. Consciousness as the luminosity which reveals the world to a subject is the result of this mediation. Miraculously, our body, a solid and material object, is capable of a transformation that turns matter into mind and lets the world appear. By multifarious assimilations, sensorimotor interactions and their further processing, the body becomes transparent to the world we are living in and allows us to act in it.

The meaning of this *transparency of the body* should be noted carefully: It implies that consciousness is not the final link of a chain of deanimated physical processes as Descartes thought it to be. The mind is not a transmundane asylum of pure subjectivity, but it is the integration of all these living bodily processes, which render themselves transparent to the world. Of course, I cannot see my seeing; the biochemical alterations of the retina and the processing of its sensory input in the brain cannot be observed by the subject either. But in perceiving the subject embodies or enacts these processes. Their invis-

bility precisely means their transparency. It is through them that we perceive, and they are implicitly present in our act of perceiving, in a way similar to the single letters through which we read a word without being aware of them.

Embodied consciousness may thus be characterized, using a term of Plessner (1981), as mediated immediacy. The body is the medium through which we perceive and interact with the world. The constituting processes inherent in conscious experience are normally unconscious, that is, only implicitly present in our relation to the world. It is by their means that we perceive the world as such, and are capable of acting in it according to our goals, as autonomous agents. On the other hand, this mediacy of embodied consciousness is not a matter of course, but vulnerable to disturbances of the mediating processes involved. Sensory dysfunctions, motor paralyses, or other lesions may affect single ways of access to the world that are normally opened by the body. Moreover, there are major mental disorders in which the mediacy of the body is affected as a whole, leading to different forms of opacity. Instead of being transparent, the body may, as it were, regain its materiality and turn into an obstacle; this is the case in severe depression or melancholia, which may be described as a corporealization of the lived body (Fuchs 2002a). On the other hand, the subject may also be separated from the mediating processes that it normally embodies, resulting in what may be called a disembodied mind; this is a condition often found in schizophrenic patients (Stanghellini 2004). In both cases, the relation of the subject to the world is deprived of its immediacy, leading to a fundamental alienation of the self.

In the first part of my paper, I take a closer look at some of the mediating processes involved in embodiment, drawing mainly on the phenomenological literature, with a side glance to neurobiological findings. On this basis, I analyze in the second part the opacity of the body in melancholia and in schizophrenia, respectively.

THE TRANSPARENCY OF EMBODIED CONSCIOUSNESS

As a medium revealing the world to a subject, the body has to fulfill different tasks: On the one

hand, it has to establish a mutual connection or relationship between subject and world. On the other hand, the difference between the two poles of the relationship should not be lost, so that they are not simply melting into one. Finally, as the carrier of this relationship, the body nevertheless has to conceal itself in order to establish transparency. How are these tasks effected? Consider a simple perceptual example, namely the experience of feeling the bark of a tree. First, there has to be an affection of the body, brought about by its sense of touch. This affection is at the same time a basic self-feeling of the body, an *auto-affection* in Michel Henry's (1963) terms, or the *pathic* moment of perception, as Erwin Straus (1966) put it. This self-feeling or auto-affection is present in every perception; awareness of the world always includes a tacit awareness of oneself in relation to the world. In a sense, the embodied subject is itself this relationship that relates to itself, to use Kierkegaard's terms (1989). The self-referentiality that is rooted in the auto-affectivity of the body is indeed imparted to all our perceptions, actions, and thoughts.

Furthermore, touching an object requires not only an affection of the body, but also a distinction of the perceiver and the perceived. At first sight, this is brought about by the resistance of the tree to the touching hand. But this felt resistance presupposes an implicit awareness of the body's own movement, a *sense of agency*. Because the world is disclosed by the interactions of the body with its environment, there has to be an awareness of the source of action. Agency is based on a bodily sense of potentiality—of being able to move—as well as on the actual proprioceptive and kinesthetic sensations of movement. On the neurophysiologic level, it is realized, among others, by mechanisms of forward modeling, efferent copy, and action monitoring (Georgieff & Jeannerod 1998; Jeannerod 1994). Agency as self-movement of the body is the necessary complement to its self-affection; together they form the basic self-awareness or self-referentiality of embodied consciousness.

Now it is through the affection of my moving body that I can feel the roughness and structure of the bark. Slightly shifting my attention, I come to experience the modification of my touching hand as the surface I am palpating. Auto-affec-

tion turns into hetero-affection, or in Straus' terms, the "pathic" turns into the "gnostic" moment of perception (Straus 1966). Through my feeling I perceive the surface of the tree; and as we can see in a blind person reading Braille letters, the single touchings may even become carriers of significance. Thus both self-affection and self-movement of the body are operative in the intentional arc by which the embodied self relates to the world. But while reading, the blind person is not aware of her fingertips any more. Instead she intends the words through her moving fingers; they have acquired *semantic transparency*, so to speak.

Michael Polanyi (1967, 1969) has analyzed this transparent structure of embodied perception as an interplay between the "distal" pole, that is, the thematic, explicit, or focal object of awareness, and the "proximal" or bodily pole, which recedes from awareness and is known only in a tacit, implicit, and prereflective manner. The following quotation from Polanyi conveys the essence of this transparency:

Our body is the only assembly of things known almost exclusively by relying on our awareness of them for attending to something else . . . Every time we make sense of the world, we rely on our tacit knowledge of impacts made by the world on our body and the complex responses of our body on these impacts. (1969, 147f)

Transparency is based on an "as-structure": We come to experience our bodily affections as the objects that we perceive or act upon. Drew Leder (1990) has elaborated this structure in detail in his phenomenology of the "absent body": Inasmuch as we perceive or act through an organ, he writes, "it necessarily recedes from the perceptual field it discloses." Thus as a medium, the body withdraws in the tacit dimension; "it conceals itself precisely in the act of revealing what is Other" (Leder 1990, 14, 22). The transparency of the body arises precisely from the embodied nature of mind.

Now this implicit or transparent structure is not just an innate property of the body, but develops and constantly changes over time. This has come to be explored mainly in the last decade under the heading of "implicit" or "procedural memory" (Schacter 1987, 1996). It means an unconscious knowing-how, based on process-

es of gestalt formation that finally enable us to grasp meaningful schemas, or perform integrated actions, without still being aware of their single elements. What was once analyzed, perceived, or performed piece by piece is integrated and incorporated as a novel skill. Thus, we have learned to read single letters as words and sentences. Or we know how to dance without still noticing the single movements or being able to explain it.

The tacit knowledge or knowing-how of the body implies all the taken for granted that has become part of our body repertoires, habits, and dispositions. By repetition and practice, an *implication* has taken place, connecting single elements of movement and perception to unified wholes (Fuchs 2001). The couplings are learned and forgotten at the same time, thus simplifying our everyday performance. We do not have to think of how we do something, and are free to direct ourselves to the aims we choose. Implicit knowledge thus corresponds to Husserl's "passive syntheses" (Husserl 2001) or Merleau-Ponty's "operative intentionality," as a chain of connected elements which carry the intentional arc of perception or action (Merleau-Ponty 1945/1962, xvii, 137, 243).

On the neurobiological level, these implications are mainly based on intramodal and intermodal connections between different modules, especially on sensorimotor feedback loops. For Braille readers, for example, the cortical representation of the reading finger is extended and coupled with language centers (Pascual-Leone and Torres 1993). For musicians, the connectivity between acoustic and motor areas is increased; hence, hearing a melody may automatically evoke the corresponding motor programs of the fingers (Bangert and Altenmueller 2003). Finally, patterns of movements are stored in the basal ganglia as a "sequence memory," allowing for the fluid interplay of agent and object in complex series of maneuvers (Ennen 2003). As a result, the body schema, for example, of the pianist has incorporated the instrument, so that he lives in it like a limb and inhabits the expressive musical space it opens, without paying attention to his or her single movements. One of the principal functions of the brain is the intra- and intermodal transformation of single elements into integrated

wholes, thus providing the basis for the transparent or “as” structure of the body (Fuchs 2002b).

To complete this short outline of the body’s transparency, I will point out its role in affectivity and intersubjectivity. When I am moved by an emotion, I do not think of my body; yet being afraid 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 I am anxiously directed toward a frightening situation. In emotions, we experience atmospheres, situations, and social relationships in a holistic way; but we do so through our bodily sensations, by *bodily resonance* or *affectability*. Thus, there is an implicit or “as” structure effective here as well, carrying the intentional arc of emotions. In Heidegger’s terms, mood and emotions are “world-disclosive,” but they can be so only for an embodied subject. Similarly, as Leder points out, corporeal states such as hunger, thirst or sexual craving are not simply internal sensations but modes to experience a state of lacking something needed from the environment. “Such biological urges colour the perceived world,” pointing to possible sources of gratification and satisfaction (Leder 1990, 21).

The “as” structure of the body is also effective in expression and communication. Thus, we understand the gestures and facial expression of others immediately but cannot tell from which details; through the sounds of their voices, turning into carriers of meaning, we understand what they want to say. Moreover, there is an implicit resonance between their expressions and our own bodily and emotional reactions. By an emotional contagion (Hatfield, Cacioppo, and Rapson 1994), another’s tears may make me feel sad, or I may be infected by his laughter. The body works as a tacitly “felt mirror” of the other. It elicits a noninferential process of empathic perception that Merleau-Ponty called “transfer of the corporeal schema” and which he attributed to a primordial sphere of “intercorporeality”:

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 discernible in the conduct of other people. It

is as if the other person’s intentions inhabited my body and mine his. (Merleau-Ponty 1945/1962; my italics)

We may speak of a “mutual incorporation” (Leder 1990, 82) in which our own body schema extends and embodies the other. Infant research has shown that even newborn babies are able to imitate the facial expressions of others. By the mimetic capacity of their body, they transpose the seen gestures and mimics of others into their own proprioception and movement (Meltzoff and Moore 1977, 1989). Because bodily mimesis evokes corresponding feelings, a mutual emotional resonance or attunement ensues. By tacitly imitating the mother’s expression, voice, and movements, the baby gradually learns to feel what she feels. By this implicit learning, the infant’s body gradually becomes a medium for empathy and the nonverbal understanding of others (Fuchs 2001, 2003).

It is important to note that in this context the “as” structure of the body has turned into an “*as-if*” structure. Already in agency, the preparation of action implies a virtual modeling of the relevant motor schema. When I am preparing for a jump over a ditch, my body produces a phantom of the movement and projects it into space, as if it were already there. A similar modeling of action occurs in the face of objects to be dealt with, for example, a cup or a football. Looking at such objects means to tacitly simulate potential action (Gallese and Umiltà 2002). On the neurobiological level, this may also be demonstrated by positron emission tomography (PET) brain imaging: While subjects are looking at tools, the cortical premotor areas normally active in their handling are activated as well (Grafton et al. 1997). Now in intersubjective perception, the body acquires the capacity to put itself virtually in the place of another body and to transpose the perceived actions into its own motor schema. Again a correlate may be found on the neuronal level: The “mirror matching system” discovered in the premotor cortex seems to provide the core mechanism for this sensorimotor integration (Rizzolatti et al. 1996). “Although we do not overtly reproduce the observed action, nevertheless our motor system becomes active *as if* we were executing that very same action that we are observ-

ing . . . action observation implies *action simulation*" (Gallese 2001).

Moreover, it is not just the movements, but precisely the intentional, goal-directed actions of others by which the mirror matching system is activated, for example, reaching for a cup or biting an apple (Gallese 2001). Thus, observing the other's movements and gestures implies a transmission of intentions as well. We use the operative intentionality of our body as an instrument for understanding the other's intentions. The similarity of the representational mechanism involved in the preparation of our own action and the observation of actions performed by others may explain how we can understand them as "agents like us", and engage in social interactions such as mutual imitation, learning by observation or cooperative action. Thus in intercorporeity, the "as-if" structure of the body becomes the very medium of understanding.

LOSS OF TRANSPARENCY IN MENTAL ILLNESS

So far I have described some of the main structures rendering the body transparent for the world and the others, while at the same time serving as a medium for our intentional activity. Now I explain how this transparency and mediacy may be clouded or lost in mental illness, leading to some kind and degree of opacity of the body instead. My first example concerns melancholic depression.¹

MELANCHOLIA AS A CORPorealIZATION OF THE SELF

In melancholia, the body loses the lightness, fluidity, and mobility of a medium and turns into a heavy, solid body that puts up resistance to the subject's intentions and impulses. Its materiality, density, and weight, otherwise suspended and unnoticed in everyday performance, now come to the fore and are felt painfully. Thus, melancholia may be described as a reification or *corporealization* of the lived body (Fuchs 2002a). The melancholic patient experiences a local or general oppression, anxiety, and rigidity (e.g., a feeling of an armor vest or tire around the chest, lump in

the throat, or pressure in the head). Sense perception and movement are weakened and finally walled in by this rigidity, which is visible in the patient's gaze, face, or gestures. To act, patients have to overcome their psychomotor inhibition and push themselves to even minor tasks, compensating by an effort of will what the body does not have by itself any more. With growing inhibition, their sensorimotor space is restricted to the nearest environment, culminating in depressive stupor.²

Corporealization thus means that the body does not give access to the world, but stands in the way as an obstacle, separated from its surroundings: The phenomenal space is not embodied any more. However, this is not only due to psychomotor inhibition (which would not distinguish depression in principle from tiredness, paralysis, or Parkinson disease³). Rather, the *conative dimension* of the body, that is, its seeking and striving for satisfaction, is missing. Normally, it is this dimension that opens up the peripersonal space as a realm of possibilities, "affordances", and goals for action. In depressive patients, however, drive, impulse, appetite, and libido are reduced or lost, no more capable of disclosing potential sources of pleasure and satisfaction. As a result, the patient's imagination, the sense of the possible, fails to generate future goals and plans, leaving the self confined to the present state of pure bodily restriction. Thus the depressive person cannot transcend her body any more, neither in space nor in time, which is what we normally do when the body serves as the medium for our intentions and actions.

In addition, a loss of vitality in many systems of the organism occurs, which further restricts the space of the lived body. The exchange with the environment is inhibited, excretions cease; processes of slowing down, shrinking, and drying up prevail. All this literally means a *corporealization*, in the sense of resembling a corpse, a dead body. Hence, depressed people are preoccupied with bodily malfunctions or possible diseases; hypochondriacal delusions mostly relate to a restriction, constipation, or shrinking of the body, which is experienced as decaying from within or even dying. However, this decay also affects the self in its core: The depressive person cannot

retain a position outside of her body, but is dragged into its ruin and destruction. She herself feels shrinking, decaying, and rotting.

So far, the opacity of the body in melancholia seems obvious. But there is also a more subtle loss of transparency: It concerns the bodily resonance or affectability that mediates our experience of emotions and atmospheres, and is also required for our affective attunement with others. In melancholia, the corporealized and frozen body loses this capacity of emotional resonance.⁴ Loss of feeling means at least a partial loss of self. Hence, affective depersonalization is the clinical core feature of the most serious melancholic episodes (Kraus 2002; Stanghellini and Fuchs 2004). These patients feel inanimate, detached from their emotions and their environment. They are no longer capable of being moved and affected by things or persons; the attractive and sympathetic qualities of their surroundings have vanished. Thus they speak of a “feeling of not feeling” and complain of not even being able to experience feelings for their family any longer.

The depersonalization in severe melancholia culminates in the so-called nihilistic delusions or Cotard’s syndrome, formerly called *melancholia anaesthetica* (Enoch and Trethowan 1991). It may be understood as a separation of the “pure”, unaffected consciousness from the corporealized body, whose depressive heaviness now changes into the opposite, namely, a feeling of lightness or even a complete loss of bodily sensations: Proprioception, taste, smell, and even the sense of warmth or pain are missing. At the same time, the environment looks dead; persons and objects seem hollow and unreal, the whole world is emptied. The patients may conclude that they have already died and ought to be buried. Sometimes they even deny their own existence or the existence of the world. In such states of utter depersonalization, the mediacy of the lived body is lost completely, leaving a dead world behind:

A 61-year old patient of mine, suffering from recurrent depression, felt that her inner body, her stomach and bowels had been contracted so that there was no hollow space left. The whole body, she said, was dried out and decayed, her limbs and muscles were completely stiff; nothing did move any more. She sensed

neither heat nor cold and could no longer smell or taste the meal. The surroundings seemed all pale and meaningless to her. She even could no more imagine anything, neither the furnishings of her flat nor the face of her daughter whom she had seen only recently. Finally she was convinced that all her relatives had died, that she was alone in the world and had to live in a dead body for ever.

To summarize, the person affected by melancholia collapses into the spatial boundaries of her own solid, material body (Stanghellini and Fuchs 2004). Instead of transcending the body, she becomes completely identified with it.⁵ Therefore, the heaviness and rigidity of the body is not simply experienced as a lack of bodily function, as with a paralytic patient or with a patient affected by Parkinson’s disease. For them, bodily impairment remains more or less peripheral to their core self. The melancholic patient, however, is not able to detach herself from the experience of bodily failure and therefore feels worthless, guilty, or decaying; she is corporealized in her very self. Only in the nihilistic culmination of melancholia, the self disconnects from the corporealized body, but at the price of losing its sense of being alive.

The German philosopher Helmut Plessner (1981) coined the term *excentric position* to characterize the ambiguous relationship of the embodied human subject with its environment. *Excentricity* is continuous oscillation between being inside of one’s body, in the center of one’s world, and being outside of it, in reflective distance from pure centricity. This flexibility is based on the human faculty of transcending the here and now and adopting the other’s perspective on oneself. In severe melancholia, however, the excentric position collapses and gives way to an egocentric state of corporealization that the patient is unable to transcend. Melancholic delusion is the hallmark of this loss of intersubjectivity: The other is separated by an abyss and cannot be reached any more.

SCHIZOPHRENIA AS A DISEMBODIMENT OF THE SELF

Now I turn to my second example of opacity, the disturbance of the self in schizophrenia. In contrast to the melancholic corporealization, phe-

nomenological analyses suggest that the schizophrenic person suffers from what may be called a *disembodiment* of the self. She does not “inhabit” her body any more, in the sense of using as taken for granted its implicit structure, its habits or automatic performances, as a medium for relating to the world. Parnas and Sass have analyzed, in a number of seminal papers, how the schizophrenic psychopathology may be derived from a diminished self-affection on the one hand, and a compensatory “hyperreflexivity” on the other (Parnas 2000; Parnas and Sass 2001; Sass 2000). The tacit self-awareness or self-referentiality present in every experience is weakened or lost, and an alienation of perception and action results. The result may be described as a fragmentation of the intentional arcs of perceiving, feeling, thinking, and acting. This in turn leads to a pathologic explication of the implicit or transparent structure of the body. In what follows, I analyze some of the resulting phenomena, before finally turning to schizophrenic disorders of embodied intersubjectivity.

Fragmentation of the Intentional Arc

“Explication of the implicit” is an experience well-known to us: By reducing a schema or gestalt to its single elements, the transparent “as” structure is lost, and we do not see, as it were, the forest for the trees any more. Thus, when looking for a typing error, we cannot attend to the meaning of the text at the same time. Or if we repeat a familiar word several times slowly and aloud it may sound strange to us: The implicit coupling of syllables and meaning is dissolved. In the same way, when thematizing a part of the body, it no longer functions as part of tacit knowledge. If the musician concentrates on his single fingers, he stumbles in his run, as we do also if we concentrate on individual steps while running down the stairs. Explication thus disturbs former familiarity and leads to an alienation or disintegration.

Now in schizophrenia a “pathologic explication” occurs.⁶ Following Blankenburg (1971), the basic disturbance may be regarded as a loss of implicit knowledge and “common sense”, that is, of familiarity with the world and with others.

Patients often experience a disintegration of habits or automatic performances, a “disautomation”. The dissolution of implicit schemas may be increased by secondary attention and hyperreflexivity, similar to the examples mentioned before (Sass 2000); in schizophrenia, however, this dissolution is primarily rooted in the loss of tacit self-awareness, which is necessary for the integration of passive syntheses to form the intentional arc.⁷ Pathologic explication is the result of the fragmentation of bodily intentionality itself rather than the result of a compensatory hyperreflexivity.

A case vignette from our department may illustrate this alteration (Buergy 2003):

A 32-year old patient reports that at the age of 16, he had become more and more uncertain about whether his personal things really belonged to him or had somehow been exchanged by others. When buying books, he was not sure if the salesman had not secretly replaced the ones he had chosen; so he had to give them away and always buy new ones. When leaving things on his school-desk inattentively, he later began to doubt whether they were still the same, and had to throw them away. More and more he lost the trust in his environment. At the age of 21, he also began to doubt whether it were really his own arms that did a work or somebody else’s. He had to carefully observe his arms from the hands up to the body in order to make sure that they were his own, and he repeatedly looked behind himself in order to see if there was not somebody else who moved them. Now he could not trust his own hands any more, and doubted the simplest actions. He took endless time to dress, since he had to touch the cloths several times and had to repeat his movements again and again to make sure they were his own. He did not know whether he held his trousers the right way and in which order to dress. Every movement was like an arithmetical problem that had to be pondered over with extreme concentration. So he became stuck in his everyday performances and felt more and more desperate.

For this patient, the loss of the basic self-awareness first manifests in his distrust in the ownership of his belongings. In vain he struggles to fight the growing alienation of his personal surroundings. Then the tacit “mineness” or agency of his own movements is weakened, and the units of meaningful actions are deconstructed. To compensate for this disautomation, the pa-

tient has to prepare and produce each single action deliberately, in a way that could be called a “Cartesian” action of the mind on the body. But even then he cannot be sure that they are not actually performed by somebody else. The intentional arc mediated by the tacit bodily feeling of “I can” is broken. Schizophrenic patients often speak of a split between their mind and their body, of feeling hollowed out, like a machine or a robot; for the sense of animation depends on being an incarnated subject, with integrated bodily performances at one’s disposal. The disautomation of action may culminate in a loss of agency, rendering the patients incapable of willfully releasing any action they intend to perform. The resulting stupor sometimes resembles a severe melancholic inhibition, but is quite different, because the latter is not a disorder of will or agency but results from a loss of drive and impulse.

In *perception*, the loss of the “as”-structure or transparency in schizophrenia manifests itself in an impaired capacity to recognize familiar patterns or *gestalten*, which in turn leads to an overload of details. Thus, for example, the features of familiar faces may come to look odd or distorted like masks. A schizophrenic patient of Minkowski illustrates another example of pathologic explication, the loss of semantic transparency: “He can no longer read at all. He becomes attached to a word, a letter, and does not attend to the meaning of the sentence. He examines whether all the ‘i’s have dots over them, whether there are accents where needed, whether all the letters have the same form” (Minkowski and Targowla 2001). Here the single elements lose their function as carriers of intentional meaning. With growing alienation of the intentional arc, even the act of perceiving itself may come to awareness; then the patient is like the spectator of his perceptive processes. “I become aware of my eye watching an object,” a patient reports (Stanghellini 2004, 113), or “I saw everything I did like a film-camera” (Sass 1992, 132). This disembodiment and alienation of perception turns the objects into mere appearances or phantoms; hence the artificial, enigmatic, and uncanny alteration of the environment experienced espe-

cially in the early stages of the illness (Fuchs 2005). Thus, instead of constituting an objective world, schizophrenic perception gets trapped in a subjective or opaque view.

In a similar way, the mediating and world-disclosive function of emotions is disturbed or lost. As has been shown, it is through bodily sensations and resonance that we experience emotions and are emotionally related to our present situation; the same applies to drives and desires. This intentional arc of emotions and drives is typically fragmented in schizophrenia. Somatic sensations normally experienced as the tacit medium of an attitude or affect are detached from their motivational context and obtain an object-like quality (Sass 2000). This leads to a sense of artificiality and distance, both in the patient’s experience of an emotion and in the expression visible to others. Even if the emotion is felt, its meaning remains obscure to the patient. Thus, one of my patients reported that she often felt a pressure on her tear glands; she then had to cry without being aware of a motive, and it felt as if she were made sad. Here the intentional content of the emotion is only grafted on the sensation subsequently, so to speak. Similarly, normal sensations of sexual desire, hunger, or other visceral and muscular sensations may lose their contextual meaning and come to be explicitly experienced as *cenesthesias*, strange, unpleasant, and object-like states of tension, movement, pulling, pressure, or electric flow, which more and more appear to be caused by an outside source manipulating the patient’s body.

Disorders of Embodied Intersubjectivity: A Short Circuit of Bodily Simulation?

The dissolution of the intentional arc finally leads to the experience of alien influence, as was also the case in the patient mentioned earlier who felt his arms moved by another person. The loss of basic self-awareness and agency may generate a sense of alien control characteristic of schizophrenia, which I now attempt to explain as a disturbance of embodied intersubjectivity.

As I have pointed out, in the preparation of action as well as in intercorporeal perception, the “as”-structure of the body implies an “as-if”

structure. The body schema serves as a virtual model for simulating one's own future actions as well as for understanding the actions of others. In the latter case, as we have seen, this modeling implies an implicit ascription of intentions to others as well. Thus, simulation is the means of understanding others by using one's own body as a mirror of their intentions and attitudes; in other words, by simulation the body obtains intersubjective transparency. As Merleau-Ponty states, it is "as if the other person's intentions inhabited my body, and mine his" (see above). Now we may hypothesize that in schizophrenia, with the weakening of the sense of agency, a short circuit of action modeling occurs, and the crucial discrimination between one's own and another's agency is lost. Thus, the virtual "as if" stated by Merleau-Ponty becomes an actual "as-if" for the patient: "It is as if another person were standing behind me and moving my arms." This finally leads to the delusional misattribution of movements to an alien agent. Delusions of control are thus not based on mistaken cognitive inferences, but on an immediate sense of alterity in the experienced movement itself.

Of course this proposed short circuit would have to be identified on the neurobiological level as well.⁸ In fact, there is growing evidence for a substantial overlap between the representational networks underlying preparation and monitoring of one's own action ("intention-in-action") and the networks responsible for the observation of another person's action (Blakemore and Decety 2001; Chaminade et al. 2001; Chaminade, Meltzoff, and Decety 2002; Gallagher 2004; Jeannerod 2001). This overlap in simulated action requires a secure self-other discrimination; a number of neuroimaging studies have demonstrated a crucial role of the right inferior parietal cortex in this task. Thus PET studies by Farrer and Frith (2001) have shown contrasting activation in the right inferior parietal cortex for perception of action caused by others, and in the anterior insulae bilaterally when action is caused by oneself. Another PET study by Ruby and Decety (2001) found a specific activation of the left inferior parietal lobe when the subject imitated another person, whereas the right inferior parietal lobe

was activated when that person reciprocally imitated the subject. In contrast to this, Spence et al. (1997) found that schizophrenic patients with feelings of alien control show increased activity in the right inferior parietal lobe during a movement task, as if their brain were activating the observational mirroring system at the same time, resulting in a breakdown of the self-other discrimination. Moreover, Frith and Done (1989) as well as Mlakar, Jensterle, and Frith (1994), found in such patients an impaired proprioceptive awareness of their own actions, pointing to a loss of agency that could make them vulnerable for the proposed short circuit of action simulation.

What may we conclude from these preliminary results? Obviously, bodily self-awareness and the perception of the other share to a large part the same neurobiological foundations. This is in precise accordance, on the phenomenological level, to Merleau-Ponty's "transfer of the body schema" in intersubjective perception. The operative intentionality of the body serves as an instrument for understanding the other's intentions; meaning is assigned to the other's actions by implicitly matching them to one's own. However, the virtual use of the body in the "as-if" mode of action modeling is obviously vulnerable to misattributions. With the weakening or loss of the sense of agency, the crucial distinction of self and other which has to be kept up in the "as-if" mode breaks down. Consequently, the agency of one's movements seems to come from the outside, and an inversion of intentionality results (Fuchs 2003): Now another person's intentions literally inhabit the patient's body. Thus, according to the proposed hypothesis, the very capacity of the body to model the intentional behavior of others would be perverted into the experience of alien control.

The disturbance of embodied intersubjectivity is not restricted to the domain of movement. It may also affect the sphere of expression and appearance, as is shown by the following case of a 28-year-old female patient:

For some time I had a feeling as if my clothes did not seem appropriate any more. My gait had changed, I walked stiffly and did not know how to hold my

hands. Then I often looked into the mirror and found that my facial expression had changed, and I began to think that I might be regarded as a prostitute. Men looked so strange at me . . . I took passport pictures of myself in order to examine whether I only imagined that. Then I began to feel a kind of charging or tension in my body when others came near to me, as if it were passing over from them. Finally I thought I should be made a prostitute by brain manipulation . . . (Fuchs 2000, 165)

In this case, there is an “as-if” structure or internal modeling involved as well. For our body also incorporates attitudes and role models by acquiring postures, expressions, and habits that we have unconsciously taken over from others. We may even deliberately adopt such attitudes in a suitable situation, like an actor is used to doing. For example, the attitude of a judge implies a certain bodily posture, tone of voice, a feeling and comportment of seriousness, and so on. According to G. H. Mead (1962), *role taking* essentially means to adopt attitudes from others, which is accomplished by imitating their bodily expression, comportment, clothing, and so on: our body is inhabited by their attitudes. Thus, our body image usually includes a variety of stances and models that we are capable of adopting in the “as-if” mode. The experience of the mirror image is the paradigm of this virtuality, which already by itself bears the seeds of alienation.

Now, for the patient, her own bodily stance and expression somehow does not “fit” any more. Instead of being transparent for, or representing herself, her bodily exterior becomes opaque and alienated. The intercorporeal sphere has turned unfamiliar and artificial, thus reminding her of prostitution. Now the “as-if” mode of bodily stances again becomes the gateway for an inversion of intentionality: It is as if her attitude and appearance were made by others turning her into a prostitute. As we can see, it is not only the simulation of action, but also the body’s social modeling of expression and behavior that is vulnerable to a short circuit of self and other, leading finally to psychotic alienation.

A last case example may once more illustrate the break down of the “as-if” mode on which the transfer of the body schema is based:

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 . . . Are there perhaps two ‘Ts’? (Kimura 1994, 194)

Here it is precisely the virtuality of the mirror image that undermines the “as-if” mode and begins to shake the sense of self. While looking at the mirror, the patient cannot maintain his own embodied centre any more. This is generalized to the perception of virtual images in the TV, and to the perception of others. The “as-if” mode of the transfer of the body schema breaks down, resulting in a disembodiment and split of the self. As we can see, the conditions of the possibility of such a break-down are rooted in the dialectical structure of intersubjectivity and intercorporeity. Of course, when we look at another person, we do not become her; the distinction of perceiver and perceived implies a continuous oscillation between one’s own embodied center and the simulation of the other’s stance and perspective. One could also say that every perception of the other implies a disembodiment inhibited *in statu nascendi*. It is this dialectical tension of man’s “excentric position” (Plessner 1981) that the schizophrenic person cannot keep up any more. Whereas melancholics are imprisoned in their corporealized centricity, the schizophrenic patient is lost “in the orbit”, in a disembodied, imaginary, and delusional view from the outside. Thus, it is precisely the highly developed social perception of man, his capacity to take the view of others and to put himself in their position by bodily simulation, that renders him vulnerable for the loss of his self in schizophrenia.⁹

CONCLUSION

I have described two different ways in which the transparency of the body turns into opacity. In melancholia, the self is corporealized, impris-

oned, as it were, in its rigid and solid body as in a platonian dungeon, and it becomes unable to transcend the body any more. In contrast to this, a disembodiment of the self occurs in schizophrenia, caused by a loss of the basic self-awareness in which all intentional acts are normally embedded. This results in a fragmentation and dissolution of the intentional arc, and in a pathologic explication of the implicit structure of the body. The “mediated immediacy” of the subject’s relation to the world is lost. By an inversion of intentionality, the remaining fragments of the intentional arc may even acquire the quality of alien influence and control. Thus, in melancholia the opacity and solidity of the body excludes the world, whereas in schizophrenia the body as a medium distorts reality in a way that renders the person all the more vulnerable to its impact and finally entangles her in an imaginary view from the outside.

Both in melancholia and in schizophrenia, the self is fundamentally affected by the opacity of the body, and a state of depersonalization results (Stanghellini and Fuchs 2004). But in the melancholic patient, this state is caused by an inability to transcend the body and get in touch with her environment. She is identified with her state of loss of feeling, and feels painfully guilty about it. Except for extreme cases, there is no second self detached from its body that remains uninvolved and observes this state from the outside. On the contrary, schizophrenic depersonalization results from a divorce of the self from its body that it comes to experience as a Cartesian machine that may be steered by anonymous and alien forces. The melancholic patient is imprisoned in his own body, whereas the schizophrenic patient does not inhabit his body any more. Thus, in their distinctive ways both melancholia and schizophrenia illustrate the essentially embodied nature of the self.

NOTES

1. In present psychiatric nosology, *melancholia* is depressive episode with a typical syndrome including psychomotor inhibition and loss of emotional resonance, drive, appetite, and weight. This corresponds to a large extent to the former “endogenous depression”. Although its strict separation from other forms of depression is no longer tenable, the following descrip-

tion of depressive experience applies mainly to this type, not for example, to dysthymia or depressive adjustment disorder.

2. On the other hand, the restriction of the body may be counteracted by physical exercise, which helps to unfold bodily vigor and expansion, with a demonstrable relieving effect on depression (Byrne and Byrne 1993).

3. In this way, Leder has described what he calls the “dys-appearance” of the body in illness in general (Leder 1990, 83ff): The sick body stands between the subject and the world, as “an obstinate force interfering with our projects” (p. 84). However, as we will see, depression adds more to this general phenomenon: Here the patient herself is identified with the failure and opacity of the body; she cannot retain an independent position, which acquits her of failure and guilt.

4. The only remaining emotions, such as guilt, anxiety, or hopelessness, show common characteristic features: (1) they do not connect, but separate the subject from the world and from the others, (2) they are rigid and immovable in character, and (3) they are part of the prevailing mood rather than specific feelings; therefore their intentional objects are just as ubiquitous as arbitrary. In advanced stages of depression, such emotions turn into continuous states of agony, and it may be doubted whether they could still be called emotions at all.

5. Kraus (2002) and Stanghellini (2004, 140ff.) have therefore analyzed the melancholic depersonalization in terms of a disorder of identity: The premorbid overidentification of the melancholic type with his social role (as an “exoskeleton”, as it were) collapses in the illness, leading to a perception of himself as empty or dead.

6. See also Fuchs (2001). A similar approach has been taken by Stanghellini (2004, 175f.).

7. In a recent paper, I described the fragmentation of the intentional arc as a disintegration of the temporal microstructure of consciousness (connecting retentions and protentions) as described by Husserl in his “Phenomenology of the inner time consciousness” (Fuchs in press).

8. See Gallagher (2004) for a detailed discussion.

9. The etiology of this disembodiment in schizophrenia is an issue that cannot be dealt with here. Growing evidence points to the assumption that it may be based on an early neurodevelopmental disorder, with disruptions of neural connectivity and faulty maturation of the brain, manifesting itself in early motor abnormalities and impaired learning of cognitive and social skills (see de Haan and Bakker 2004 for a recent overview). Thus, there seems to be an early weakening of the embodiment or “incarnation” of the self.

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