

## OVERCOMING DUALISM

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IN “CORPorealized and Disembodied Minds,” I outlined a phenomenological analysis of depression and schizophrenia as disorders of lived embodiment (Fuchs 2005a). Drew Leder’s apposite remarks point to the open questions left by my paper and give me the welcome opportunity to add some considerations on the mind–body problem, on etiology and therapy. Of course a phenomenological approach centered on the lived body may not be misunderstood as pertaining to merely subjective experiences stored in the transmudane repository of the “mind.” Instead of such dualistic assumptions rightly rejected by Leder, phenomenologists favor a *systemic* or *ecological* view, which regards mind and world, as well as body and environment, as mutually overlapping, or as poles of a unity (Fuchs 2002, 2005b). Thus, the environment is not a realm of “pure objects,” but is constituted as the specific surroundings of the living being; nor is the living being as such an object in physical space, but rather, by mediation of the lived body, always already embedded in meaningful situations.

An ecological notion of life is indispensable for a nondualistic approach to the mind–body problem. For consciousness does not develop in an isolated brain, but only in a living organism enmeshed in its environment. The brain may well be the central organ of the mind, but it is not its “seat”. First, consciousness is based on the continuous interaction of the brain and the organism with its neurovegetative, hormonal, immunologic, and proprioceptive processes (Damasio 1999). Second, the higher or cognitive brain

functions depend on the dynamic sensorimotor interplay with the environment. The mind is not located in any one place, but distributed among the brain, body, and world, and thus continuously crosses the borders of the skull (Clark 1997). Moreover, research on neuronal plasticity has shown that the brain is not inserted into the world as a prefabricated apparatus, but is structured epigenetically by the interaction of organism and environment in which we move, behave and live with others. From birth on, our mind as well as the correlated brain structures are essentially shaped by social and cultural influences (Eisenberg 1995). Obviously there are nonmaterial powers that have a decisive impact on the configuration of the human brain: language, ideas, models, norms, and world views. The concept of a *historical biology* (Fuchs 2002) implies the continuous formation and reconstruction of the brain via subjective experience.

In this complementary relationship, there is nothing like “a mind acting on a physical body” or “a brain producing the mind.” Instead, the brain acts as a *transformer*, which may be addressed by input on different hierarchical levels and translates it in both directions: Psychosocial influences on the level of meaning and intentionality are transformed into altered patterns of neuronal activity on the biological level, and vice versa. This means that any process concerning the etiology and symptoms of mental illness is of a biological as well as psychological nature. The translation only runs “top-down” in the one case, that is, from subjective experience (e.g., a

perceived social situation, a psychotherapeutic intervention) to the level of neuronal and biochemical processes, and it runs “bottom-up” in the other case, for example, from pharmacologic effects on transmitter metabolism to modification of subjective experience (Fuchs 2002, 2005b). Neurobiochemical changes become mood changes on the subjective level, but subjectivity in turn influences the plasticity, structuring, and functioning of the brain.

This concept suggests that the simple bottom-up explanation of mental disorders as products of genetic or neurophysiologic determinants is inadequate to the causal complexity involved. Instead we ought to develop etiologic models that are based on a *circular causality* between organism and environment, with the brain acting as a mediating entity. As a paradigm case, I have elsewhere described depressive illness as a social as well as psychophysiological *desynchronization* (Fuchs 2001). A backlog in the fulfillment of one’s duties, a gap between one’s expectations and achievements, or a loss that the individual is unable to cope with, are perceived as a loss of synchronicity and connection with important others and may result in depression. This means that the perceived situation is translated by the brain into a neurobiochemical pattern associated with depressed mood. On the biological level, depression implies an uncoupling of rhythmic physiologic (e.g., endocrine) processes normally synchronized to each other and to the environment. In the course of this biological desynchronization, a prolonged stress response of the hypothalamic–pituitary–adrenal axis and other endocrine systems ensues, which in turn increases anxiety and depressed mood. The causal pathway thus goes from the “mind” or the subjective experience of the situation, to brain and body, and then back to the mind. Psychosocial and physiologic desynchronization trigger and influence each other. The lived body is situated at the junction of these influences: Its heaviness, restriction, and inhibition are an appropriate expression of the psychosocial backlog (and may even be adaptive in the ways pointed out by Leder), but at the same time they manifest the physiologic desynchronization.

In a similar way, schizophrenia may be regarded, from an ecological point of view, as a circular process, implying neuropsychological and biochemical dysfunctions on the one hand and psychosocial alienation on the other. Basic cognitive and self disturbances in the prodromal phase (Klosterkötter 1988; Parnas 2000) lead the patient to withdraw from situations that overburden his intentional and emotional capacities. The loss of social attunement to the common life world results in an increasing dissolution of commonsensical meanings and Gestalt perceptions (Stanghellini 2004; Fuchs 2005c). Finally, the process of alienation culminates in a psychotic crisis in which the lost intersubjective meanings are replaced by the private and isolated world of delusions. These rigid, concretistic schemas of perceiving and thinking (which nevertheless serve adaptive purposes as well) correlate with neurobiochemical alterations in the brain that can be treated by neuroleptic medication. Thus, there is a circular and reciprocal influence of subjective, intersubjective, and physiologic factors on each other. Again, the brain both reflects *and* causes alterations in the relationships of body, self, and world. For example, the right inferior parietal cortex may only become a locus of dysfunction and self–other confusion (as pointed out in Fuchs, 2005a), because the certainty of the self–other distinction has been lost on a higher, personal level. Otherwise the local brain dysfunction would only cause a neurologic disorder, such as the alien-hand syndrome (Spence 1996).

Finally, an ecological concept of “mental illness”—in a sense, as Leder points out, this terminology is self-contradictory, insofar as an ecological approach precisely transcends the term of “mental” illness—also suggests a pluralistic understanding of treatment. The circular interactions of self, body, brain, and environment may be approached at various levels or turning points, because any mode of treatment is transformed by the brain and thus contributes to a holistic effect. On the one hand, beyond a certain point, the neurobiological and endocrine dysfunctions involved, for example, in depression, may be too advanced to be accessible to interventions on the psychological level. Pharmacologic (“bottom-

up”) treatment may then enable the patient to re-engage in his relationships and thus will further his social well-being. On the other hand, recent neuroimaging studies have proven that psychotherapy significantly changes functions and structures of the brain, in a manner different from the effects of pharmacotherapy (Fuchs 2005d). In view of the limited effectiveness of medication especially in chronic illness, it would be wrong to neglect these “top-down” options of treatment. The intentional and qualitative aspects of beliefs and emotions cannot be explained in terms of physical processes in the brain; nor can we do without new subjective and intersubjective experiences if we want to change the patient’s maladaptive beliefs and dispositions that have led to his illness and may lead to relapse in the future. Moreover, a merely biological view tends to isolate the individual patient and to consider his illness separated from its interconnections with his environment. Any social approach to psychiatry is based on a holistic, ecological view of life.

What is decisive, however, is that a reductionist approach to treatment would undermine the patient’s capacity for self-understanding, self-efficacy, and autonomy. To deny his freedom of will, self-determination, and responsibility on the basis of a deterministic view of the brain as the “real” cause of illness results in another kind of “learned helplessness”, namely a dependency on expert knowledge of brain mechanisms and brain modification. Psychotherapy, in contrast, addresses the patient’s responsibility for himself, his will to change, his search for meaning, and identity even in his illness. These goals are not too demanding. Psychiatrists should keep them in mind, whatever kind of treatment they legitimately apply.

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