Body Image Disorders
Bernhard Schlage, MA

Received 12 November 2012; received in revised form July 2013; accepted August 2013

Abstract
Coming out of a childhood experience of an ‘expanded body image’, this paper postulates the existence of a so-called ‘second body’, a body different from but linked to the physical body and how this body relates to parts of the brain. Drawing on historical and cross-cultural research, the author shows how this ‘second body’ can help us toward a better understanding and therapy of various body image disorders and phenomena, such as anorexia/bulimia, neuropathies, dream states, body dissociations, and body neglect phenomena. This article seeks to avoid descriptions of phenomena in practice, and instead focuses on different definitions and models of understanding in the hope of coming to new modes of working with these phenomena.

Keywords: body image disorders, neuroplasticity, peripersonal space

Body Image Disorders: A Unique Field of Body Psychotherapy

There is but one temple in the universe
and this is the body of man.
Nothing is holier than this high form.
- Novalis

As a point of departure for the ideas in this article, I would like to relay an experience from my childhood.

I was not yet five years old when I was lying alone in my bed one night and started experiencing strange and new body sensations. My inner images of loneliness and emptiness evolved into scenarios increasingly out of my control. I was walking along a path, the contours of which were increasingly dissolving, eventually consisting of nothing but flowing colours. My growing fear made the scene play faster, which increased my fear all the more, thus further increasing the tempo of the experience. There was also a feeling of space, which became wider and larger. Somehow in its limitlessness it was also soothing. Almost by accident I noticed my hands, which seemed huge, and streaming sensations flickered through my body. There was so much tranquility in this relaxed expansion. It was still accompanied by the fear that I might in some way lose control and so I did not dare confide these unusual sensations to anybody else at the time.

I would have forgotten about all of it if I had not accidentally read Michael Ende’s book Momo (1973) more than ten years later. There is a “street” in this story where the same sensations appear as in my childhood dreams: the more restless the spirit moves in this street,
the faster Momo is carried by the turtle and as soon as there is a calming down in Momo the street seems to emerge out of time, so to speak.

I later found the experience of the augmented hands referenced by Wilhelm Reich as an expression of early sexual sensations (Reich, 1987; Reich, 1942). Coming from a home with a mentally ill mother, I had the tendency to see unusual physical sensations as something that might be pathological and hence went to great lengths not to let anything like that show. Although understandable in my family context, this habit of hiding prevented me from getting any clarifying feedback from anyone for years and thus also the understanding that these sensations were considered normal in society. Both aforementioned texts made it obvious to me that these sensations are rather common in the human context of experience and so I was able to deal with them in a more conscious way.

I would first like to stay with these rather diffuse terms and write about the importance of these phenomena for body psychotherapeutic practice, so as to give an introduction to the wide range of items that will be touched upon while looking at this theme. Terms such as body image, body schema, subtle body, astral body, dream body, and much else will be used in the discourse. Our clients, too, use these terms to describe their experience — intuitively in the beginning — before approaching a more detailed understanding of their experiences.

I will begin with short descriptions of phenomena pertinent to the practice of body psychotherapists which probably involve body image disorders:

- First of all there are of course disorders involving body image and eating — namely, cases of anorexia and bulimia in which clients typically perceive themselves to be extremely fat (Keleman, 1992), as well as some adipose patients (overweight) who reverse their body as thin and petite (Küpper, Müller & Unland, 2002).
- Secondly, there are all those disorders of the body image that result from a nervous system disorder: for instance sensorimotor neuropathy or diseases of the myelinated layer of the nerves, in which a failure of traditional physiotherapeutic treatment is common because the nerve connections with the client’s consciousness are damaged (Schlage, 2007).
- I am reminded of those clients who usually describe their body as standing in front of them or hovering above them while being asked about their physical state or during body exercises. This means that they are not able to perceive their body within the confines of their own skin.
- In trauma therapy, there is a series of diagnostic references related to ‘dissociation’ from one’s own body image. The people concerned find themselves, due to stress, feeling out of their body, either standing next to their body or behind it. Similar to these conditions, some people suffering from schizophrenic psychoses may also report dissociative symptoms (coanesthesia or delusional modifications of their organ experience).
- We will then have to name the so-called ‘neglect’ disorders apparent in stroke cases in which cognisance of one side of the body is missing (as if that part of the body did not exist) (Sacks, 1984/Sacks, 1993). In extreme cases people behave as if these body parts do not even belong to their bodies anymore (Sacks, 1985/Sacks, 1990).
- In some of our clients we may find evidence of a fragmented body image. We used to call these disorders ‘schizoid character types’ (Lowen, 1982). They are now classified as those clients with early developmental disorders, who might also be traumatised, in whom ego development was impaired at an early age and so too the concept of a complete body image.
- People with near-death experiences also fall into this category, such as Peter Nádas who wrote a diary about his last year of life and the changes that happened to his body image (Nádas, 2002).
- In his book, Quantenmensch (1996), Michael Murphy documented examples of extraordinary modifications to the body images of competitive athletes (whereby the outer appearance of the physical form was changed, among other things) by visualization exercises or the martial arts, where the perception of one’s own body in space was extended into cosmic dimensions, similar to what I have experienced during fever dreams and described at the beginning of this article.
- We know from shamanic dream work that there are people who experience their own body in dreams, and thus have physical experiences that do not seem possible in reality as it is generally understood: flying or being eaten by wild animals without dying (examples in: Garfield, 1974/Garfield, 1983, p. 166; Castaneda, 2001, p. 35 and p. 150).
- When standing at the helm on my first sailing trip, I experienced once more the “feeling” for the outer limits/movements of their cars, skippers learn how to develop
a sense for the movements of the hull so that the helm can be handled more easily. Thus, they do not have to use a compass to balance each course deviation when they cross the crest of a wave, although they still notice the basic deviations. This means that they must expand their sense of the outline of the body downwards until it is the size of the ship’s hull.

- Facilitators of cranio-sacral movement therapy achieve better treatment success when they can imagine the connections of the cranial bones in a more detailed way. This takes place in areas of the treatment where the motility of the bones is below one millimeter!

- As to the plasticity of our sense body image, I will report Vilaynur Ramachandran’s ‘Pinciochio’s nose’ experiment:

Your own body is a phantom which your brain has construed temporarily simply for practical reasons. I know this sounds unbelievable, hence I will prove to you how malleable your body image is and in what a short time you are able to significantly change it. You need two helpers for the first illusion.

I will call them Julia and Mina. Sit in a chair, let your eyes be blindfolded and ask Julia to turn towards you and to sit down in the chair in front of you. Ask Mina to stand at your right side and give her the following instruction: ‘Take my right hand and bring my index finger to Julia’s nose. Move my hand rhythmically back and forth, so that my index finger repeatedly touches her nose in random intervals, just like a Morse code. Touch my nose with your left hand in the same rhythm and at the same time intervals. You have to touch my nose and Julia’s in complete synchronicity. With a little luck, you will have the eerie illusion after thirty or forty seconds that you are touching your nose somewhere outside of your body and that your nose has transformed and is now half a meter long. The more random and unpredictable the sequence of touches, the more astounding the illusion.’

(Ramachandran, 1998/Ramachandran, 2002)

The above examples indicate that alongside the physical body, which we realize by observing it in a mirror or by the touch of other people, we possess a second “inner” body, so to speak, which is only available to our own perception.

Since Hippocrates’ ancient case descriptions (Lebensordnung, 1993), there are indicators that the first expressions of illness or convalescence may coincide with a change to body image. I have the impression that in contemporary literature the Swiss physicist and Jungian training analyst, Arnold Mindell, follows this question most clearly, for example in his book, Working with the Dream Body (1985) or more recently in, The Quantum Mind and Healing (2004). We shall note later in this article Frank Röhricht’s definitions, which were developed in the nineties at the Dresden Body Image Workshops (2009).

In other cultures, too, there are indications of the existence of body image variations: Tibetan Qi Gong, for example, speaks about the development of a ‘rainbow body’, which is said to be able to vitalize the physical body. There are also stories, which may seem strange to Westerners, about a person who has experienced the rainbow body and, after his death, leaves no other remnants of the physical body except some hair and fingernails (Geshe Tenpa Choepheph, 2007).

In Anthroposophy, Rudolf Steiner lists practices for experiencing the astral body. This means that a person who in a dream is outside of the physical body and can perceive it from the outside, may still able to describe it and even move it: “...that the ‘I’ that is out of the physical body appropriates images of life in the dream which it usually appropriates in the outer reality via the physical body” (Steiner, p. 116-123).

Have we always possessed this ‘second body’ (Monroe, 1985/Monroe, 2000) or do we have to understand it as an anthropologically new evolutionary acquisition?

The observation of the philosopher Jean Gebser (2007) is remarkable to me in this context, namely that the representation of the physical body stayed quite two-dimensional until the 15th century (i.e. in the church’s iconography, in the art of weaving carpets and in paintings). Thereafter, there were several scientific discoveries that fundamentally changed the perception of the human body: Kepler’s discovery of the planets’ movements founded the transition of the geo-centric to the heliocentric worldview. Galileo Galilei clarified that the celestial bodies, as well as the Earth, are not discs but balls. He thus created the preconditions for a change in the perception of space. The important anatomist Vesalius eventually broke the church’s taboo of opening the human body. Through his anatomical studies, people in the West were, for the first time, able to learn about the interior of their bodies (Gebser, 2007). In his important work about body image in ancient Egypt, Hans Georg Brecklinghaus (2002) writes, that, although the artistic representation of humans took place in the form of reliefs at the time, there was already a three-dimensional self- and body perception, although he does not discuss it any further. Schipperges (2001) quotes Albertus Magnus from the 12th century: “As an animal perfectissimum man is a model for that cosmos that is planned in a transparent way from above, from below it is formed in layers, seen from the inside it is so transparent that it has all its creatures participate in being to various degrees.” It is questionable if the perspective of medieval scholars of the universe also corresponded to the experiential reality of people in those days.

At the turn of the 20th century, we eventually find the first texts with detailed descriptions of body image. Bonnier (1905) assumes that there is a possibility for it in the central nervous system. He thinks that body image is part of our phylogenetic heritage and that it is, as such, the foundation of essential functions concerning our attitude and behaviour. He also writes that, “we do not register many functions in their normal state but only when there is a dysfunction.” It is my hypothesis that with the discoveries of the 15th century, not only did perspective in painting come into existence, but also a new perception of the human body. Gebser (1970), for instance, talks of the change from the theocentric to the anthropocentric world image. The physical perception of the inner space has to be seen as a rather new human ability. In the process of becoming human beings, we each must learn it individually in the pre- and perinatal phases. From attachment research (Stern, 1985/Stern, 2007), we are able to understand today how vulnerable we are when we establish it and how significantly it can negatively affect our lives when this process is disturbed. I assume that there is a neurologically fixed part of that body image in us, one that has been passed on phylogenetically, and another part that gets established in our early relationships. We become conscious of its existence only when there are dysfunctions, injuries and accidents to our body image. We also have to expand our body image when we have to master special challenges in the fields of arts or sports.

In summary, the existence of body image enables us to perform the following everyday activities:

- Noticing how our body and its individual parts are organized, how far it is extended and if there are any deviations from common physical experiences without having to check them visually. Thus, we are able to estimate the power, extension and speed of our movements and their relation to certain objects: we touch a glass of wine in a different way than we handle a rugby ball without having to think about it.

- Orienting appropriately in time and space: To know up from down, right from left. Because we are able to sense ourselves now, we are also able to determine the past and the
future. With the help of our body image, we are thus able to find out in front of a mirror which physical representation of our bodies we are occupying due to practical reasons.

- Perceiving our physical needs in a differentiated way and gauging their fulfillment through our actions or contact with other humans, animals, flowers, stones. The perception of contact allows us to feel our longing for touch from another human being, the longing to touch an animal or to feel the surface of a diamond.

- Intensiﬁng experiences by increasing association with the body while experiencing pleasure, or weakening experience by increasing dissociation while dealing with pain.

- Having our bodies assume certain conscious or unconscious positions, or learning new positions that will later become part of our automatic repertoire of behaviors (for example, how we get up, how we sit, how we ride a bike and how we walk). On the one hand this gives us the freedom to occupy our mind with other things while acting (i.e. where do I want to go to, etc.). On the other hand it narrows our behavior when we have forgotten how to change a compromising automated behavior. (Once we have a certain automated head position when we are reading, we will then have a hard time figuring out how we can read without tension.)

- Reviewing/expanding our skills in situations that are merely imagined (creative imagination) or anticipating an action in our mind so often that we eventually dare to act on it; for example, a skipper or driver expands the physical sensation of the body to encompass the whole vehicle while using it at the same time; an athlete anticipates achievements in sports on a visual level. Compellingly, there are examples of these visualizations having a tangible inﬂuence on our physical appearance, the so-called phenotypic effect. (Zane, 2008; Murphy, 1992/Murphy, 1996)

- Adapting our behavior to various realities: letting our body ‘fly in a dream’, for example; being eaten by beings from our dreams and still knowing where we are; having conversations with plants in our imagination and learning how to understand our sense of hearing in an inner dialogue.

- Perceiving perturbations in mental states and adapting behaviour appropriately before the physical body falls sick, or — when we are already sick — acting in a way that has a regulating/balancing effect on our physical body. (When we sense what would be healthy we can behave in a suitable way.)

In summary, it can be said that there is a well-established assumption of the existence of something that feels like our body, but is not the same thing that we sense in the surrounding of our skin; while Blakeslee & Blakeslee call it ‘peripersonal space’ (2007), in this article this will be called ‘second body’ in our tangible reality. This is revealed to people in various life situations, and it has been given different names throughout history. The original matrix of the ‘body image’ perhaps naturally involves a certain plasticity, so that it develops dynamically by training and changes in consciousness into ﬁelds that can seem mystical.

The central thesis of this article is that only body psychotherapeutic techniques are able to change ‘body image disorders’ while giving our clients the psychomotor-feedback the brain needs to change the ‘second body’, the ‘peripersonal space’ or however you would name it.

We are now going to have a look at different theses, to explain these phenomena.

How can we theoretically explain ‘body image’?

One of the phenomena described could be explained by changes in nervous conduction or by changes of the representation in the so-called ‘somatosensory homunculus’ (Schlage, 2008).

The illustration shows the different representation of body parts in the motor-cortex: you may see that hands and tongue are represented as much bigger, because of their functions in movement, eating or speaking (Ludwig).

Another aspect can easily be explained through diseases that impair the afferent neurological pathways or of their respective representations in the cortex, as is found, for example, within the neglect syndrome. (See the example in the previous section).

Ramachandran’s experiment, ‘Pinocchio’s nose’, clarifies that our brain organizes realities according to probabilities (i.e. according to habits, even if the result of a given representation might seem rather bizarre). This leads us to those aspects of the body image experience that have to do with perceptual psychology. How detailed, how deeply and how consistently we experience our body is directly connected to what we experience on a physical level and what we have experienced in our life. Pinocchio’s dissociation or a trauma patient’s stress-related dissociations could provide researchers with indications as to which brain area is the origin of body image disorders.

Singer (2004) explains neurobiological connections, which let us recognize how the brain deals with itself and how “meta representations of one’s own states” (p. 235) can come to existence “by iteration of cognitive operations and reflexive applications on oneself” (p. 255). He not only explores the human body image, but also searches for an explanation for the existence of self-awareness. Furthermore, we know from infant research which kinds of sensory and movement experiences are needed to develop a complete body image and by which interventions this experience can be neurologically enhanced at an early age. Taking into account the research that has been done by Blakeslee & Blakeslee, we can assume that the neurological resource of body image disorders is located in the parietal part of the brain.

But how can we understand the ‘out-of-body’ aspects of body image?

In the framework of this article, we first have to free ourselves from the impression of an esoteric view of these experiences. Hence, we postulate that all experiences in this regard necessarily rest on the changes of the incoming sensory stimuli. Hans-Peter Dürr describes in his book, Traumzeit, (1984) how such phenomena are made possible by substances that have a sedating effect on the skin receptors. We also know that sensomotoric and kinesthetic perception is decreased in patients with dissociation (Anzieu, 1991).

Does this mean that if somebody has out-of-body experiences (consciously induced or due to illness) we have to assume a dysfunction of the sensorimotor feedback of the skin stimuli or of the sense of gravity in a person’s vestibular system? One option would be a study on potential body image disorders with astronauts who were in a state of weightlessness for a longer period of time and who suffer from exactly the same lack of sensorimotor feedback, which is what we assume to be the basis of out-of-body experiences.

Another place to turn to for possible answers is the well-documented neuro-immunological effects of visualization exercises in oncological treatment and allergy research. Can we infer from our consciousness’s capacity for cell change that it is possible to separate proprioceptive
and kinesthetic sensual experiences from their sensory input, so to speak, to then transfer them to another (i.e. imagined or dreamt) reality and thus achieve a particular perception of body image akin to the sensation of flying? Dysfunctions of the body image would then only be creative imaginings of our mind. Would it then also be possible to explain the rainbow body phenomena of the Tibetans with the help of recent space-time-models such as Stephen Hawking’s ‘wormhole theory’ (1988, p. 200) or Brian Green’s model ‘teleportations’ (2004)?

If we follow these speculative assumptions, we can understand why people with a so-called ‘body integrity identity disorder (BIID) syndrome’ sometimes feel that one of their extremities, experienced as strange and lifeless, might have come from a ‘former life’. On the practitioner side of things, it is amazing to behold the strange research that concludes that people can not only have a normal life after successful amputation, but indeed that sufferers of BIID would strongly wish to be amputated in the first place (Bayne & Levy, 2005).

If we now want to describe the variety of body psychotherapeutic approaches when dealing with body image disorders, we need to differentiate various notions. For that, I mainly follow the basic differentiation developed by Frank Röhrich and the Dresden Werkstatt Körperbild (Dresden Body Image Workshop, 2009).

Röhrich, Joraschky, and Loew’s (2009) assumptions about the gamut of body image disorders have served as the basis for the development of different therapeutic treatments, and are as follows. Body image disorder treatments:

- aim at the establishment of a ‘body schema’ (approaches of perceptual psychology)
- aim at body knowledge and the fantasy about the body, making the ‘body-self’ tangible as connected with, or differentiated from, outer relationships and which allow for differentiation between the outer and inner perception
- are on the topic of our emotions when we deal with our body or our satisfaction or dissatisfaction with its existence — the so-called body-cathectic
- deal with ‘physical expression’ (facial expression, gestures, posture and movement patterns).

Thus the approaches inherent in the psychology of perception are considered basic for the therapy of body hallucinations which accompany a psychosis. Approaches referring to the ‘body-self’ are of paramount priority in the treatment of a trauma and the so-called functional disorders. Some authors (Röhrich, Joraschky & Loew, 2009) also report test procedures concerning the diagnosis of an existing disorder and its dynamic therapeutic process.

If we take a look at the range of body psychotherapeutic approaches as presented in the current standard work regarding the variety of methods (Weiss & Marlock, 2006), we discover another field of applications based upon the influence of ‘body image’ in its various presentations. Among them we find neo-Reichian therapies, such as orgone medicine or vegetotherapy, dance therapy, catarhymic image perception, structural therapy methods (such as rolfing and postural integration) and psychosomatic therapy. We also find work with body image disorders in clients suffering from eating disorders as well as schizophrenia, analytical methods which work with the “embodiment of the unconscious”, pre- and perinatal psychology and the neurological promotion of development. Additionally, sensorimotor processing of post-traumatic disorders, breathing therapies, movement education and the application of neurophysiological findings in the educational field of learning, the use of imaginative approaches in (competitive) sports up to the methods of transpersonal psychology such as Felicitas Goodman’s trance techniques are also relevant.

Even though the above is not a complete enumeration of all the procedures that could be mentioned in this context, it still clarifies in just how many professional fields specific body-image techniques find their implicit or even explicit application. It also suggests how meaningful a comprehensive development of specific therapeutic tools may contribute to a greater efficiency of the approaches.

**Conclusion**

The Fall of Man has taken place. We have eaten from the Tree of Knowledge. Ken Wilber (2001) would probably write that we have left the self that merely conforms with regulations and roles, and that now we strive to recognize a uniqueness that conforms with our individual consciences. In doing so, we have left the basic unity of body mind and soul. We are alienated. The body no longer is the “basis of our perception” (2003) and does not serve anymore as a ‘sensitive instrument of our knowledge’ as it was postulated by the sensualists of the 17th century (Baumgarten, 1983) and as Goethe appreciated it.

The body has long become an object of our volition: it is subject to ideas of beauty, as is the case in the new excessive body cults around bodybuilding, tattooing or piercing (Hauner & Reichart, 2004) and it has to be altered according to our personal ideal image of it. It is deprived of ageing naturally and is subjected to all kinds of anti-ageing concepts. Embryos are bred using in vitro fertilization methods and they are examined for genetic diseases before they are born. The search for the ideal, allergy-free, attractive, designed embryo clone without any cancer genes is already a reality in our society. The last remaining or developing defects may eventually be cured by invisible neuro-implants.

Body psychotherapeutic approaches with their possibilities of working toward the restoration of coherent experiences in an individual, and in their varied forms of expression, will play an important role in this culture in the future. The treatment of dysfunctions of the ‘second body’ is of practical importance as a corrective at this level of experience. This seems to precede all other aspects of our phenotype, i.e. our physical appearance in a reality of consensus. New and further research in this still-young field of scientific and practical findings can certainly be regarded as a central endeavour to the professional relevance of body psychotherapy in the realm of psychotherapeutic approaches in the health system.

A fast and result-oriented collaboration of all parties involved is of great importance for the well-being of psychosocial development. The author invites varied and creative feedback to this article!

**BIOGRAPHY**

Bernhard Schlage has given workshops in most European countries and has been teaching since 1980. He has run a private body psychotherapy practice since 1984 and has given lectures at international congresses in San Francisco, Paris and Sydney. Bernhard Schlage is author of more than 100 articles about body image and has written four books. He co-founded an adult education center for health care in northern Germany in 1986 and later was in charge of a mental health center until 2008. He has been a trainer for Postural Integration since 1999 and an ECP-holder since 2001. Specialised in treating psychosomatic disorders, he is now focusing his work on training the next generation of healthcare practitioners and body psychotherapists.

Email: post@bernhardschlage.de Website: www.bernhardschlage.de
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THE ART AND SCIENCE OF SOMATIC PRAXIS
(formerly US Association for Body Psychotherapy Journal)

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We welcome you to this exchange and to a celebration of the many methodological approaches and cultural stances in the understanding of human beings that Body Psychotherapy represents.

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