

No Empathy without Self-Boundaries: A New Spatial Attention Concept for Understanding Empathy

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Abstract: Study of inter-personal perception has so far focused chiefly on the person doing the perceiving. In this article, we demonstrate by means of a spatial inter-personal model of attention how empathic perception of a fellow human presents a perfect opportunity to also take into consideration the person being perceived.

If we follow the logic of this new model, it becomes clear that the personal mental self-boundary is vitally important for the capacity for empathy. By comparing empathy with compassion and the theory-theory mode of perception, it is shown that the perception of others is determined by the spatially defined location of attention. At the same time, it becomes clear that the quality of these different perceptions of others are also determined by one's own self-boundary and that of the other.

Keywords: empathy, compassion, theory-theory, self-boundary.

Introduction

Theodor Lipps (1815-1914), a German psychologist, wrote in 1903: "If I see a tightrope walker, I feel as if I'm inside him" (Lipps, 1903, cited in De Waal, 2009). To describe this experience he used the Greek word "Empatheia", which is derived from the words "en" (in) and "pathos" (to feel). An important question that is rarely asked with regard to empathy nowadays is: with what are we empathising when we feel empathy? For the renowned psychotherapist C.R. Rogers (1975), it was the act of "entering" into another person's world that was of crucial importance for empathy. He wrote: "Empathy means to perceive the internal frame of reference of another with accuracy and with emotional components and meanings which pertain thereto as if one were the person, but without ever losing the 'as if' condition. He wrote: "Empathy is a process and that it involved: entering the private perceptual world of the other and becoming thoroughly at home in it. It involves being sensitive to the changing felt meanings which flow in this other person. It means temporarily living in his or her life, moving about in it delicately without making judgments, sensing meanings of which he or she is scarcely aware. To be with another in this way means that for the time being you lay aside the views and values you hold for yourself in order to enter another world without prejudice" (Rogers, 1975).

In current social neuroscience, there is rarely mention of entering into the world of another in this way. De Vignemont and Singer (2006) and Singer and Lamm (2009) define empathy as follows: we "empathize" with others when we experience an affective state which is isomorphic to another person's affective state that is elicited by observing or imagining another person's affective state and we become aware that the other person's affective state is the source of our own affective state. This definition pertains to affective states that arises in ourselves and others that we are able to perceive and attribute, but not of what we empathise with when we feel empathy.

In social neuroscience, the attention is focussed on the mind of the person who is empathic. For example, mirror neurons reflect the intentions (Rizzolatti et al., 2004, 2006) or emotions (Gallese, 2003) of the other. Preston and De Waal (2002) proposed a neuroscientific model of empathy suggesting that observing or imagining another person in a particular emotional state automatically activates a representation of that state in the observer, with its associated autonomic and somatic responses (Preston and de Waal, 2002). The question that I wish to examine more closely herein is the following: What takes place between two people when De Waal speaks of observing or imagining? Moreover what happens in the brains of both interactants in the empathic moment that Lamm et al. (2007) formulate as “how it would be for me, if”. With reference to Carl Rogers, I would also like to examine what he meant by the “internal frame of references of another”, or “entering in the private perceptual world of the other”.

The Inner World and Attention

It is likely that what Rogers is referring to is the “inner world” of another person. If such an intrapersonal space exists in others, into which we are able to enter, then we must also possess our own inner world. Thus there are three spaces in which we can be located, namely our own inner space, the inner world of another and the extrapersonal space that lies between (Blaser, 2013). This means that there is a mental self-boundary that separates the inner world from the outer world while simultaneously connecting them with each other. Only when another’s inner world or our own possesses such a boundary is it possible for us to enter.

Our Attention is the means by which we can move between our own inner world, the outer world and the inner world of a fellow person. Siegel (2012) defines attention as follows: “Attention is the process that shapes the direction of the flow of energy and information. Attention can be within consciousness so we are aware of the object of our attention or can be nonconscious, in that case the energy and information flow is being directed but we are not aware of that flow”. Because it is possible to practice attention

as a mental skill (Jha et al., 2007; Tang et al., 2007), it implies that if empathy is a form of attention, it is also possible to practice empathy. We are able to hold information in our awareness, we can update it and we can search for the right amount of information (Hanson and Mendius, 2009). What is this “information”, or to put it another way, what information flows, how does it flow and in which direction does it flow when we are empathic? Our emotions, our own experiences and our images of God and the world are located in our inner world, but our inner world are also comprised of individually perceived visual, acoustic and olfactory images, as well as conscious or unconscious beliefs (Blaser, 2012). These intrapsychic elements form a vital, constantly self-renewing and altering intrapsychic information and energy.

When we are empathic, we come into contact with another’s intrapsychic system in a way that differs from other modes of awareness of external information and energy. The emotions and images of the other person may be the same, but our perception of them can differ. As we will see, the quality of our perception of others depends on the “location” and “focus” of our attention. I will now elucidate this further.

As described above, there are three mental spaces in which we can dwell with the location of our attention (in our own intrapersonal space, in the intrapersonal space of another person or in the extrapersonal space that lies between). When the location of our attention is within our own inner world, we are able to physically connect with our intrapsychic elements, such as emotions, images and experiences. Mindful introspection is characterised by a subtle, simultaneous physical self-perception. For example, if we connect internally with a past experience, associated emotions become noticeable, and when we consciously listen within ourselves, subtle physical sensations make themselves felt (Gendlin, 1998). Among other things, this is what is practiced in mindfulness training (Kabat-zinn, 1990, 2003; Williams et al., 2007). In order to accurately describe the quality of empathic perception of others, I would like to

introduce a metaphor that will allow us to better understand the different qualities of perception of others' emotions and experiences.

Damasio (2010) classifies emotions as images. They arise out of the inter-relationship between body and mind: "The development of emotional consciousness is determined by the fact that we internalize emotional and physical images, so that they become a part of what belongs to us and thus can be clearly delimited and attributed to a particular person" (distinct inner world). As an approximate illustration of the relation between body and mind and its connection with empathy, I would like to introduce the metaphor of a musical instrument, namely the guitar. In this metaphor, the guitar represents the human body. Now, when we dwell with the location of our attention in our inner world, we are connected with our body and, metaphorically, in possession of this guitar, which may, for example, be resting on our lap. When we connect with an emotion from within, this can be compared to plucking one of the guitar strings, e.g. the A string. We direct our attention towards the guitar (the body) and either consciously or unconsciously choose a string (emotion, experience, image). With our hand, guided mentally, we can touch the string and, plucking it, make it sound. We might also do this unconsciously or as a reflex. By touching the string we create a sound and can be aware of our emotions as a felt sense.

Compassion

Let us now look at what happens if a person (person A) looks from within at another person (person B) who is located with her attention in her own inner world (thus external and unfamiliar to person A) and who, for example, is connected with her grief at the loss of a school friend (see figure 1).

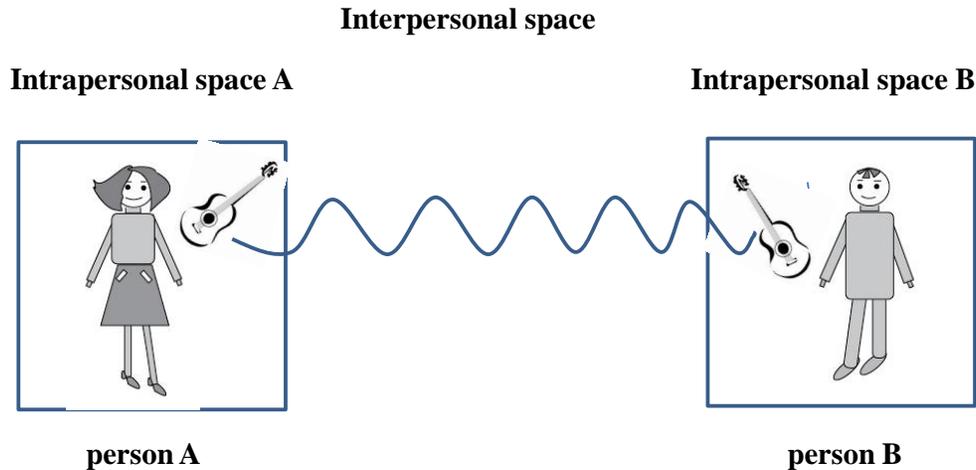


Figure 1. Mindful compassionate perception. Person A looks mindfully from within at an emotion in the inner world of person B while person B is connected with his/her emotion.

As we have already seen, person B will be in contact with his own body, i.e. will have sounded his A string. This mode of perceiving information from someone else's inner world occurs on the one hand by actually hearing the unfamiliar A note and on the other through the resonance of our own A string on our guitar. Person A knows, however, that he did not touch his own A string and, independent of the possible acoustic difference in sound and the weaker vibrations of his own sound box, is able to realise that the sadness he is now perceiving, both mentally and physically, was triggered by the grief of person B. This description is practically identical to Vignemont and Singer's description of empathy mentioned above. However, what is described here is not empathy but rather compassion, as person A does not enter into the emotional inner world of person B and is still located with his attention in his own inner world, not in person B's intrapersonal space. As we will see, this distinction is crucial in order to be able to understand the difference in quality between compassion and empathy.

The resonance of our own A string is most probably the process observed when the mirror neurons are activated (Rizzolatti and Arbib, 1998, Rizzolatti et al., 2004; Decety

and Chaminade, 2003a, b). Gallese (2009) calls this process “embodied simulation.” When observing the emotional state of another person (Wicker et al., 2003), as when seeing physical contact (Keysers and Gazzola, 2006) or observing others receiving a painful stimulus (Singer, 2004), an “inverse mapping” takes place. To understand what another person is feeling, we simulate his/her feelings using our own affective programmes (Keysers and Gazzola, 2006). Preston and de Waal (2002) describe resonance as a mindful perception of the emotions of an object which automatically activates the subject's representations.

Before we examine the concept of empathy more closely, with the aid of the guitar metaphor, we will firstly examine what happens when we leave our own inner world with the location of our attention and focus our attention from outside on the inner world of a fellow person.

Theory-Theory

When we leave our inner world with the location of our attention and enter the extrapersonal space, we are no longer able to completely connect physically with our emotions, experiences and images (felt sense). The connection with our own body is severed, we are disconnected or detached. In the metaphor of the guitar, we have left our guitar behind in our inner world. If person A now looks from the extrapersonal space at person B, who is still located in his own inner world and connected with his grief, person A will see person B plucking his A string and will hear the sound of the string (see figure 2).

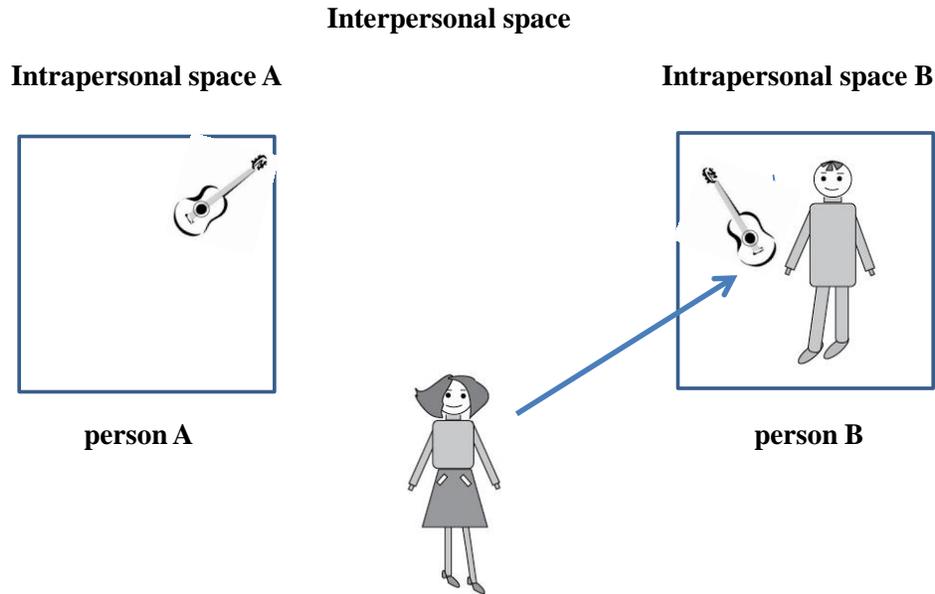


Figure 2. Person A tries to decipher the emotions of person B intellectually (Theory-Theory), e.g. while person B is located in his own inner world and is connected with his own emotions.

Person A will now be unable to “feel with” (have compassion for) person B, as she is not able to perceive the resonance of her own A string. The absence of this resonance makes it difficult for person A to classify and recognize the other person’s emotion. Person A will now try to cognitively comprehend the emotion with which person B is connected. If person A hears person B talking about the loss of his friend and at the same time sees tears in his eyes, she will cognitively reach the conclusion that person B is sad, without any form of bodily awareness. Person A will try to decipher person B’s mental state through a deductive process by means of a quasi naive scientific principle (Gopnik and Astington, 1988). In the metaphor of the guitar, person A will see that person B is plucking the second uppermost string and will know that the second uppermost string, the A string, represents grief. This form of perception of others is also known by the name theory-theory. It postulates that during the course of our lives, we develop an everyday theory about the mental states of other people (Gopnik and

Astington, 1988), a rational knowledge of guitarstrings. It is obvious that in our daily interactions, it is not always possible to clearly and unambiguously decipher either the topic of conversation or the plucking of the guitar string. Compassion is a much preciser and faster way of perceiving the emotions of others, as it occurs automatically, without the intervening cognitive steps. Gallese and Goldman (1998) pointed out that in theory-theory mode, the mirror neurons are not active. Theory of mind will not be discussed here, as mind-reading predicates that both persons A and B are located in the extrapersonal space, and what is dealt with is the adoption of a cognitive perspective and not the inner emotional world of person B (Blaser, 2012).

The intrapersonal space of the other

Let us now look at the third space, the intrapersonal space of a fellow person, where we dwell with the location of our attention when we are empathic. In order to feel empathy with another person, in order to enter into his or her inner world, we must cross the person's mental self-boundary (see figure 3).

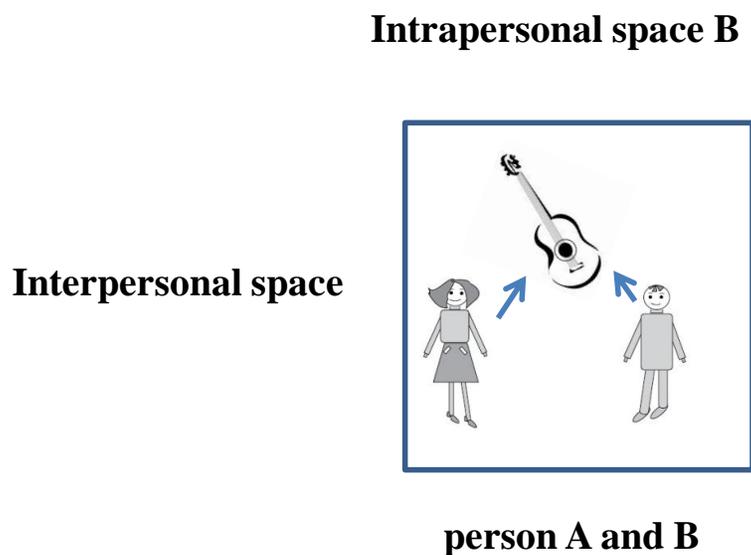


Figure 3. Person A establishes a direct physical connection with the emotion of person B.

This moment of crossing another person's self-boundary can be perceived physically. Entering into the intimate sphere of another triggers an automatic physical reaction in the empathic person. By entering the inner world of another person with the location of our attention, we gain an unfamiliar closeness to his or her emotions, experiences and images. In the metaphor of the guitar, the A string of person B now sounds louder because it is closer. Moreover, it is now possible, in a figurative sense, to lay one's hand on the sound box of the other's guitar and to feel directly the other's physical reactions. Now person A is not perceiving her own resonance, as with compassion, because she is still not connected with her own subtle physical sensations. Nor is person A dependent on cognitive deciphering of the other's emotions, as in theory-theory mode. In contrast to compassion, where resonance is only possible if person A also possesses an A string, person A is now able to come into contact with quite new and unfamiliar emotions, images and experiences. This implies that the capacity for empathy is capable of being learned, and that compassion is based on the experience of a known emotion. From a developmental psychological perspective, it is thus important for a child to be invited into the inner world of its parents (Fonagy et al, 2003), where it can come into contact, in an appropriate manner, with experiences it has not yet made itself. This empathic experience can subsequently be taken into the child's own inner world, or internalized, thus expanding the "repertoire of strings" with which the child will later be able to "resonate".

Lamm et al. (2007) showed participants videos of patients who had previously undergone a painful treatment. The first group of participants were asked to imagine themselves to be in the patient's situation (imagine how it would be for me), while the second group were asked to focus on the patients' emotions and expressions of emotion (imagine how it is for the others). The first, empathic group suffered more stress than the second, compassionate group. In addition, MRI studies showed greater

haemodynamic activity in the empathic group, e.g. in the anterior insula and amygdala, than in the participants who merely observed the patients' emotions. This experiment shows that the location of attention not only influences the quality of perception of another's emotions but also differentially activates particular areas of the brain.

The Mental Self-Boundary

How is it possible to enter the inner world of another person with the location of our attention, and how does the question "how would it be for me" bring this about? This question has not yet been examined scientifically, possibly because until now, the focus of research has been on the empathic person. If we try to perceive ourselves accurately, we will, as most of us know, react physically to another person entering our inner world. We know what it feels like when another person comes too close to us and thereby transgresses our mental self-boundary. Tightening of the stomach, contraction of various muscles and heat rising to the face may be physical reactions to an uninvited crossing of one's self-boundary. Studying the brain while empathy is being felt could lead to highly interesting new insights. This could be of great significance in achieving a better understanding of crossing of the self-boundary, a process which is essential for empathy.

Thus we come to the title of this article, "No empathy without boundaries". In order for person A to be able to empathize with person B, the former must be able to determine the point of crossing of the latter's self-boundary. To be able to switch from theory-theory mode to empathic mode, person A must know where the boundary between the external world and the other's inner world lies (see figure 4).

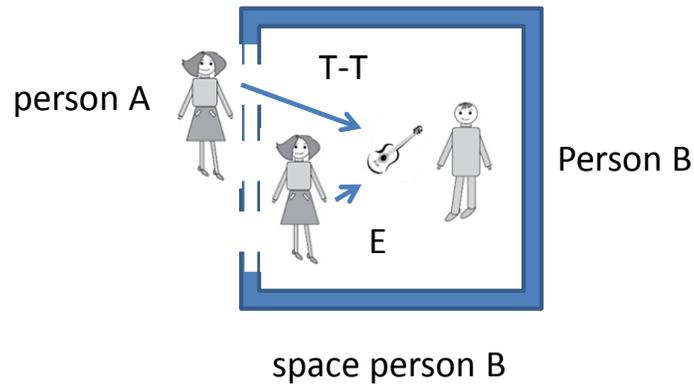


Figure 4. It is not clear if the location of attention of person A is inside or outside the inner space of person B. The inner world of person B is represented by a square. The grey bars above, to the right and below symbolize a robust, stable self-boundary. The dashed line on the left side depicts a thin, permeable, not clearly defined self-boundary. The focus of person A's attention is directed at the emotion of person B. It is uncertain if person A is in theory-theory mode (T-T) or empathic mode (E).

When an individual possesses a diffuse, indistinct self-boundary it is difficult for other people to be able to empathise with him or her. The causes of an indistinct, permeable mental self-boundary may be all kinds of trauma, lack of development of the mental self-boundary during the process of individualisation, familial patterns, e.g. parents with deficient self-boundaries (epigenetic factors may play a role here; Blaser, 2011) and possibly even cultural influences. From a psychiatric perspective, exclusion, family secrets, parentification, intrusive interactions and triangulation can all lead to individual boundary disturbances (Joraschky, 1996).

Blaser et al. (2014) developed a questionnaire, the Boundary Protection Scale (BPS-14), and showed a correlation between the self-boundary score and the score on the Freiburg Mindfulness Inventory. As can be seen in figure 4, it is also of crucial importance for person B to have a clearly defined mental self-boundary to distinguish between mindfulness (having the location of our attention within the inner world) and

a dissociative mental state (having the location of our attention within the extrapersonal mental space).

When another person empathizes with us, this can induce pleasant as well as unpleasant emotions. If person B invites person A into his inner world, and person A accepts this invitation, this will feel agreeable to person B. However, if person A asks person B probing questions, offends person B or enters person B's inner world without permission, this will be an unpleasant experience for person B. To distinguish desirable (empathic) from undesired (even psychopathic) crossing of the self-boundary, it would presumably be necessary to specifically investigate the interpersonal dynamics and function of the mental self-boundary.

In the described spatial mental model we are able to take different mental perspectives. Using EEG measurements of brain activity Hinterberger et al. (2014) was able to show highly significant differences between various mental locations and foci as mentioned above, including mindful and empathic mental states.

Targeted research projects examining the mental self-boundary could make an important contribution to a better understanding of the mental perspective empathy.

References

- [1] Blaser, K., Zlabinger, M., Hautzinger, M., and Hinterberger, T. (2014b), The relationship between mindfulness and the mental self-boundary: validation of the boundary protection scale-14 (BPS-14) and its correlation with the Freiburg Mindfulness Inventory (FMI). *J. Educ.Dev.Psychol.* 4, 155–162. doi: 10.5539/jedp.v4n1p155
- [2] Blaser, K. (2013), Intra- and interpersonal mindful and non-mindful mental states: comparison of a new spatial attention concept and the IAA mindfulness model of Shapiro. *Mindfulness*, 4, 64–70. doi:10.1007/s12671-012-0097-2
- [3] Blaser K. (2012), *Aufmerksamkeit und Begegnung: zwischenmenschliches aufmerksamkeits-repertoire, Ich-grenzen und die Kunst des Zusammenseins*. Kröning, Asanger Verlag.
- [4] Blaser K. (2011), Boundary based Awareness und transgenerationale Traumaweitergabe. *Zeitschrift für Psychotraumatologie, Psychotherapiewissenschaft, Psychologische Medizin*, 9, 75-81.
- [5] Damasio A. (2010), *Self Comes to Mind. Constructing the Conscious Brain*. New York, Pantheon Books.
- [6] Decety J., Chaminade T. (2003a), When the self represents the other: A new cognitive neuroscience view on psychological identification. *Conscious Cogn*, 12, 577-596.
- [7] Decety J., Chaminade T. (2003b), Neural correlates of feeling sympathy. *Neuropsychologia*, 41, 127-138.
- [8] De Vignemont F., Singer T. (2006), The empathy brain: How, when and why? *Trends Cogn Sci*, 10, 435-441.
- [9] De Waal F. (2009), *Een tijd voor empathie, wat de natuur ons leert over een betere samenleving (The age of empathy, Nature's lessons for a kinder society)*. Amsterdam, Harmony Books, Uitgeverij contact.
- [10] Fonagy P., Gyorgy G., Jurist E.L., Target M. (2003), *Affect Regulation, Mentalization, and the Development of the Self*, Karnac books, New York.
- [11] Gallese V. (2003), The roots of empathy: The shared manifold hypothesis and the neural basis of intersubjectivity. *Psychopathology*, 36, 171-180.
- [12] Gallese V. (2009), Die geteilte Mannigfaltigkeit. In: Metzinger T. *Der Ego-tunnel. Eine neue Philosophie des Selbst. Von der Hirnforschung zur Bewusstseinsethik*. Berlin, Berlin Verlag.
- [13] Gallese V., Goldman A. (1998), Mirror neurons and the simulation theory of mind-reading. *Trends Cogn Sci*, 2, 493-501.

- [14] Gendlin, E.T.(1998), *Focusing-Oriented Psychotherapy: A Manual of the Experiential Method*. NewYork:The Guilford Press.
- [15] Gopnik A., Astington J.W. (1988), Childrens understanding of representational change and its relation to the understanding of false belief and the appearance-reality distinction. *Child Dev*, 59, 26-37.
- [16] Hanson R., Mendius R. (2009), *Buddha's Brain - The Practical Neuroscience of Happiness, Love and Wisdom*. New Harbinger.
- [17] Hinterberger, T., Zlabinger, M., Blaser K. (2014), neurophysiological correlates of various mental perspectives, *Frontiers in Human Neuroscience*, Vol.8 Art 637, 1-16, doi: 10.3389/fnhum.2014.00637
- [18] Jha A.P., Krompinger J., Baime M.J. (2007), Mindfulness training modifies subsystems of attention. *Cogn Affect Behav Neurosci*, 7, 109-119.
- [19] Joraschky P. (1996), Die System- und Strukturdiagnose. In: M. Cierpka (Hrsg.), *Handbuch der Familiendiagnostik*, Berlin, Springer-Verlag.
- [20] Kabat-Zinn, J. (1990), *Full catastrophe living: using the wisdom of your body and mind to face stress, pain and illness*. New York: Delacorte.
- [21] Kabat-Zinn, J. (2003), Mindfulness-based interventions in context: past, present and future. *Clinical Psychology Science and Practice*, 10(2), 144–156.
- [22] Keysers C, Gazzola V. (2006), Towards a unifying neural theory of social cognition. *Prog Brain Res*, 156, 379-401.
- [23] Lamm C., Batson C.D., Decety J. (2007), The neural substrate of human empathy: Effects of perspective-taking and cognitive appraisal. *J Cogn Neurosci*, 19, 42-58.
- [24] Preston S.D., de Waal F. B. M. (2002), Empathy: Its ultimate and proximate bases. *Behav Brain Sci*, 25, 1-72.
- [25] Rizzolatti G., Arbib M.A. (1998), Language within our grasp. *Trends Neurosci*, 21, 188-194.
- [26] Rizzolatti G., Fogassi L., Gallese V. (2006), Mirrors in the mind. *Scientific American*, 5, 30-37.
- [27] Rizzolatti G., Craighero L., Fadiga L. (2004), The mirror system in humans. In: Stamenov M., Gallese V. (Hrsg.) *Mirror Neurons and the Evolution of Brain and Language*. Amsterdam, John Benjamins, 37-59.
- [28] Rogers C.R. (1975), Empathic: an unappreciated way of being. *Couns Psychol*, 2, 2-10.
- [29] Siegel D. (2012), *Pocket Guide to Interpersonal Neurobiology: An Integrative Handbook of the Mind*. New York, WW Norton & Company.

- [30] Singer, T., Seymour, B., O'Doherty, J., Kaube, H., Dolan, R., Frith, C. D. (2004), Empathy for pain involves the affective but not sensory components of pain. *Science*, 303, 1157-1162.
- [31] Singer T., Lamm C. (2009), The social neuroscience of empathy. *Ann NY Acad Sci*, 1156, 81-96.
- [32] Tang Y., Ma Y., Wang J., Fan Y., Feg Q., Lu Q., Yu Q., Sui D., Rothbart M, Fan M., Posner M. (2007), Short-term meditation training improves attention and self-regulation. *Proc Natl Acad Sci USA*, 104, 17152-17156.
- [33] Wicker, B., Perret, D. I., Baron-Cohen, S., Decety, J. (2003), Being the target of another's emotions: A PET study. *Neuropsychologia*, 41, 139-146.
- [34] Williams, M., Teasdale, J., Segal, Z., & Kabat-Zinn, J. (2007). *The Mindful Way through Depression: Freeing Yourself from Chronic Unhappiness*. New York: Guilford Press.