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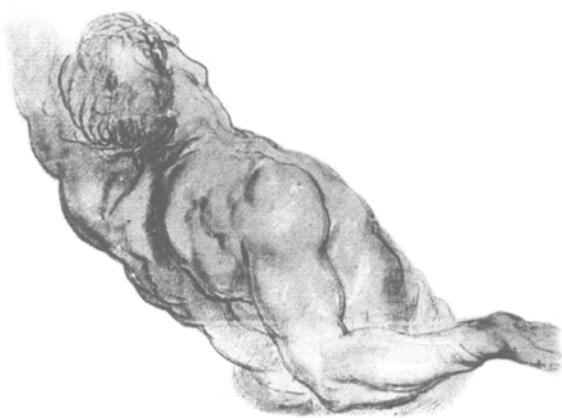
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USABP Mission Statement

The USABP believes that integration of the body and the mind is essential to effective psychotherapy, and to that end its mission is to develop and advance the art, science, and practice of body psychotherapy in a professional, ethical, and caring manner in order to promote the health and welfare of humanity.

A Body-Mind Integrative View of the Development of Characteristic Emotional Regulatory Patterns

Daniel Hoffman

Abstract

Many theorists have explored the development of characteristic patterns of emotional regulation. Recently, research in the neurobiology of attachment has shed light onto the mechanisms underlying these strategies, and suggests connections to earlier somatic theories of emotional regulation such as those proposed by Lowen. Exploring the connections between these theories can lead to a more comprehensive mind-body understanding of how the human organism learns to interact with its environment. This article explores these connections and suggests possible directions for future research.

Keywords

Attachment – Character – Emotional regulation

Since the beginnings of contemporary Western psychology, there have been currents of support for a view that integrates the mind and body. Reich, a student of Freud, created techniques of mobilizing the body through breathing and other methods and found that emotional processes were associated with this increased mobilization of the bodies of his patients. Lowen (1975), who was a student of Reich, starts from the premise in Bioenergetics that a person *is* his or her body. A similar view of the human being is proposed by Damasio (1998) who speaks of the “deeply interwoven mesh of body and brain that defines a complex living organism” (p. 84). Contemporary research in the field of attachment speaks of the way in which body-mind organic systems interact with their (especially social) environments to meet the complex needs of those systems (Schore, 2001; Siegel, 1999). It is time we embrace this systemic view of ourselves in order to gain a fuller understanding of the functioning of the human organism. The development of emotional regulation is one area in which we can explore how body and mind integrate into the functional unity of the human being.

Emotion is more than just a feeling. Many thinkers and researchers have defined emotion as a process that occurs on the level of our entire organism. Lowen (1975), starting from his premise that we *are* our bodies, defines emotions as physical experiences within the body that are inseparably linked with impulses for movement (p. 55). He speaks of how the mind functions as part of the body in the consciousness of this process. Siegel (1999) and Damasio (1998) include the body’s role in emotion, and further clarify other levels that are also actively involved. Siegel (1999) sifts through many theories on emotion and arrives at some commonalities. Many theories of emotion, he states, include the idea that emotion is a multi-level process involving physiological and neurological elements, cognitively experienced aspects, and active expressions and behaviors. Emotion, he says, is the dynamic process regulating a human system in relationship with its environment, including social and interpersonal aspects of that environment. Damasio (1998), in his discussion of emotion, talks about the importance of viewing it as an organic process, and considering the human system as comprised of an integrated body, mind, and brain, which cooperate in the process of emotion to maintain bioregulation.

Emotional experience is at the core of human experience. Damasio (1998) describes emotion as “the highest order direct expression of bioregulation in complex organisms,” which speaks to the fundamental importance of emotionality in our lives (p. 84). He goes on to explain some of the functions of emotion in our lives, including its foundational role in organic regulation within the context of a social environment. Lowen (1975) considers emotions to be a direct expression of the life of the organism, the means through which the organism expresses itself and relates to the surrounding world. This all contributes to the notion of emotion as regulation that Damasio proposes, since expression and relating are the mechanisms through which the organism can achieve the fulfillment of its needs in such a social environment. In addition to serving the purpose of relating to the outside world to further the survival of the organism, Siegel (1999) notes that not only are emotions regulatory, they are also regulated. The organism starts with a range of emotional expressive capabilities, and then staunches those which it learns are not effective in its environment.

From the viewpoint of Bioenergetics proposed by Lowen (1975), emotions naturally arise from the developing infant organism. Depending on early childhood experiences, the child either learns that certain emotions are acceptable, with their accompanying impulses, or that they are not. This occurs, he says, through the parents’ responses to the actions of their children. If the parents are not tolerant of certain modes of expression, the movements associated with those emotions are inhibited.

Lowen noticed that inhibition occurs within the level of the musculature. For example, a child who is made to feel ashamed when she reaches for her parents as part of a longing for care will cease this action by inhibiting the muscles involved in reaching. This is the process of what is known as “armoring” the consistent tension that occurs as a result of the inhibitory process (p. 144). Initially, Lowen believes, this inhibition is fleeting, but with repetition, it becomes ingrained in the system.

The summation of all the armoring in the body becomes what Bioenergetics calls “character” – a person’s habitual way of being (p. 41). Character is the way a person has learned to emotionally interact with his or her environment as a result

of his or her early experience of the world. From Lowen's viewpoint, psychological health relates to the capacity for free self-expression. He states, "a person expresses himself in his actions and movements, and when his self-expression is free and appropriate to the reality of the situation, he experiences a sense of satisfaction and pleasure" (p. 49). Attachment theorists (Schore, 2001; Siegel, 1999) share this view that the process of building an emotional life occurs through early caregiver relationships. They, however, have focused more intently on the effects of these experiences specifically in relation to the developing brain.

Current attachment theory research focuses on how the brain's development is conditional upon characteristics of the relationship between caregiver and infant. Schore (2001) and Siegel (1999) explain that a child's ability to regulate his or her emotional state is not innate, but develops out of that relationship. Schore explains that the capacity to regulate emotions, to increase and decrease arousal and activation as appropriate to the situation, is a property of the limbic system and right brain. He relates this ability to regulate emotions with socio-emotional events that occur during the period from the third trimester in utero until the age of 18 to 24 months and the way in which they interact with the genetically programmed formations of brain structures and the connections between them. This occurs when an initial genetically produced overabundance of neural connections is pruned through the process of competition to select those which are most congruent with environmental experience. This creates an emotional landscape in the child that is sort of a best-fit to the environment in which he or she grows up. This is the healthiest emotional situation for the child because it optimizes the fulfillment of his or her needs under those conditions.

Emotional health can be defined as the ability to respond to a situation in such a way that the organism's needs can be efficiently met in relation with its environment (Schore, 2001). This requires flexibility because the environment is in a state of flux, and so different responses will be appropriate under different circumstances. In order for the organism to effectively accomplish this, the limbic system must be functioning optimally because it is the system responsible for the adapting to novel situations through regulation of the stress response (Schore, 2001). Because the limbic system's development is dependent on the attuned relationship between caregiver and infant, this capability is the result of the infant's experience of having their emotional expressions effectively met and regulated by those caregivers (Schore, 2001; Siegel, 1999). Schore elaborates that this process is primarily non-verbal, involving the synchronization of the mother's vocal tone, posture, facial expressions and movements with those of the infant, which he states creates the groundwork for sensitive social interaction and facilitates the kind of maturation of the infant's limbic system which mediates the ability to respond flexibly to a changing environment.

These exchanges create patterns of socioemotional interaction between infant and caregiver, which are created as the infant learns to selectively send social cues to which the caregiver is sensitive (Schore, 2001). If the caregiver is able to respond to a wide variety of social and emotional expression on the part of the infant the ability to send that range of expressions continues to be available to that infant. Unfortunately, if the caregiver is unresponsive to certain expressions on the part of the infant these modes of communication are eliminated as part of the pruning process that is at work finding the best fit between the infant and its environment. In terms of Lowen's (1975) view of this process, physical emotional impulses that are thwarted become armored against, which effectively accomplishes the same end. Under either framework, the infant's capacity for flexible emotional expression becomes limited, compromising the above-defined standard of emotional health.

What happens to these pathways of emotional expression which are "lost"? Siegel (1999) speaks of the shame states that result from the lack of attunement between infant and caregiver surrounding an emotional event. He explains that when a caregiver is not able to respond sensitively to an emotional expression, by responding in a fear-inducing manner (which may be a dissociation on the part of the caregiver that compromises the resonant connection, or a violent response to the infant's expression) a state of shame results from the simultaneous activation of the sympathetic arousal system and the parasympathetic inhibitory system, resulting in the release of stress hormones. Shame states are normal in the child, as certain emotional states may have to be met with an external "no" in the case where the infant's expression may put him or her in danger, as in the case of excitedly running into the street to retrieve a ball. Normally, this misattunement, or lack in congruence between the emotions of the child and caregiver, is immediately repaired, and it is only when the misattunement is left unresolved that shame states persist as what Siegel terms humiliation, which compromises the integration of that particular emotional expression. Lowen (1975) believes the mechanism behind this lack of integration is physical in nature.

Lowen (1975) believes armoring is the way in which these impulses are kept from emerging from the organism. Recall his definition that an emotion exists along with an accompanying impulse for action (p. 55). In order to neutralize the experience of an emotion, as must occur in the case where expression of that emotion is seen as dangerous (continuously met with a shame-inducing fear-provoking response from the caregiver) the infant must neutralize that action. This occurs through physical inhibition, which Lowen believes takes the form of an opposite muscular response to that of the original impulse. Again, when this occurs repeatedly, this pattern of inhibition becomes the normal pattern of the organism, and that emotional expression is blocked from the repertoire of that human being. The summation of all of these armors an organism may develop, and thus its general pattern of relationship, is referred to as character and is manifest through the overall posture of that individual. Lowen developed his ideas on character armoring through his own experiences under the tutelage of Reich and his personal and clinical explorations as a therapist. Now that research on the attachment-dependent development of the infant brain has shown clear pathways for the development of the capacity for emotional regulation from a neurobiological standpoint, the questions remain: are the contributions on emotional regulation through the body made by Lowen in line with these theories, and can they contribute to our understanding of human emotional patterns? Research on the relationship of muscular armoring to compromised mental health has not been forthcoming. However, there are many suggestions in the literature (Schore, 2001; Siegel, 1999) on the attachment-dependent development of emotional regulatory systems of the brain

that point to the body's involvement in the process. This indicates that further research along the lines of Lowen's theories may prove beneficial to our wider understanding of these phenomena. The remainder of our exploration will expound on these possible areas of connection and suggest potential areas of inquiry.

One connection comes from Schore's (2001) assertion that during the first two months postnatally, the primary connections being made with the amygdala are from the somatosensory cortex, which suggests the importance of this area in early emotional attunement relationships. Schore elaborates that relating along this pathway occurs through touch, and it is the sensitive emotional touch of the caregiver that facilitates the development of this pathway. Lowen (1975) also suggests touching is a "primary form of contact" (p. 27). He states deprival of caring touch in infancy creates an inhibitory pattern in the organism towards reaching out for physical contact later in life, depriving the individual of the ability to engage in this primary form of socio-emotional contact later in life. Both theorists speak of how important touch is, and say in their own ways how deprival of this touch creates conditions which inhibit the later capability of the organism for engaging with the socio-emotional environment.

Another area of exploration involves the effects of the caregiver's response to spontaneous gestures originating from the infant. Winnicott (1962) states that these gestures represent an unfolding of that infant's "true self" (p. 145), to which an attuned caregiver response serves to reflect that infant's self-state back onto itself and allows an internal representation of that self-originating state to form. Schore (2001) suggests that this creates entrainment of the right brain systems of infant and caregiver, generating a resonant state that serves as the context for brain organization. This organization manifests as increased connectivity between right cortical and subcortical systems, allowing a self-regulating functional unity to form, which allows for a higher level of complexity to develop. This higher level of complexity contributes to mental health as it facilitates the capacity to flexibly and appropriately respond to a changing environment to achieve bioregulation.

The idea of the "true self" proposed by Winnicott (1962) corresponds well with Lowen's (1975) idea of those impulses originating from what he calls the "core" or "heart" level of the human being. Lowen divides human personality's functioning into four layers: the ego layer, the muscular layer, the emotional layer, and the core. Rigidities in the top three layers (ego, muscular, and emotional) serve a defensive function, and are hypothesized by Lowen to develop out of the infant's caregiver experience. Operating from the core position without rigidity in the top three layers would be characterized by coordinated and appropriate emotionally based responses to external situations, which is notably an almost identical definition of mental health to Siegel's (2001). The interesting area of potential research here is examining to what degrees the ego, muscular, and emotional defenses proposed by Lowen correspond to compromised brain system development that results from chronic misattunements, as well as the role the caregiver's response to spontaneous gestures on the part of the infant contributes to the formation of these defenses.

Perhaps it is also possible to examine whether Lowen's (1975) emotional layer defenses which he calls "suppressed feelings" may be emotions which, in terms of Siegel's (1999) theory, have been dissociated from awareness as a result of engrained shame states resulting from chronic misattunement. Lowen's muscular layer, which consists of the muscular rigidities which prevent the expression of emotional impulses, may also be related to the phenomenon of the influence of somatic state representational systems on the limbic system's functioning. Schore (2001) explains that certain parts of the limbic system (the orbitofrontal cortex, amygdala, and anterior cingulate) are connected to the spinal cord and vagal nerve and thus receive real time information concerning the somatic state of the body. This information feeds into the limbic system, which integrates it with information concerning the external environment to create an emotional process. If areas of musculature are inhibited by chronic tension, it may be reasonable to assume that this information concerning this muscular inhibition of a possible emotional response pathway would be fed back to the limbic system in such a way as to reflectively inhibit the neurological aspects of that emotional expression as well. An example of research that suggests this correlation comes from Strack, Martin, and Stepper (1988) whose study demonstrates that activating the muscles involved in smiling increased the perceived humor response in subjects shown cartoons over those in the control group. What remains to be studied is the effect *chronic* (as opposed to induced) muscular activation patterns have on the subjective experience of emotion.

We have mentioned previously Lowen's (1975) idea of "character," the idea of a person's general way of being in the world that develops as a response to his or her early environment and is manifested through postural and physical patterns. This, too, is echoed in the attachment literature. Schore (2001) states, "In the developing brain, states organize neural systems resulting in enduring traits" (p. 212). He explains that traumatic states (including his idea of relational trauma as defined by chronic misattunement in the attachment relationship), when they occur during the sensitive period of the structural organization of regulatory functions in the limbic system, create characteristic styles of emotional response that limit the organisms ability to relate to shifting external conditions and integrate novel experience. A specific area of the limbic system known as the insula creates internal somatic state representations that serve a key role in emotional experience (Craig, 2002). According to Schore, this is one area that can be negatively impacted as a result of early relational trauma. If enduring patterns of activation in this area are indeed created as he suggests, this would have an interesting correlation with the lack of the awareness of certain bodily emotional processes. Because Lowen believes that a lack of the awareness of certain physical pathways of emotional expression is part of what perpetuates a person's character, this presents an area of correspondence between these two branches of theory which could potentially be explored further. Throughout this examination, we have made correlations between current Attachment theory and Bioenergetics theory, suggesting commonalities as well as ways in which both theories can combine to form a richer understanding of the human emotional life. Emotional processes occur on the organismic level, meaning that the ways in which they serve to regulate the organism as well as the ways they are, in turn, regulated, occur on the level of physical structural adaptations, both in terms of the structure of the brain and the structure of

the rest of the body. These structural adaptations serve to attune the emotional patterns of the organism to the environment in which it develops, creating a regulatory strategy. If the experience is one in which sensitivity to the natural expressiveness of the infant by his or her caregiver predominates, the ability to engage in this emotional interaction flexibly develops, and person maintains the capability to express a wide and complex array of emotional responses as appropriate later into life. In non-optimal situations, this capability is limited as certain emotional pathways are pruned out of the structure of the limbic system and/or armored against in the musculature to curtail those expressions. By integrating the understanding of both brain-based and muscular-based methods of emotional regulation, it is possible that a more complete picture of the functioning of the human organism can be allowed to form.

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Biography

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