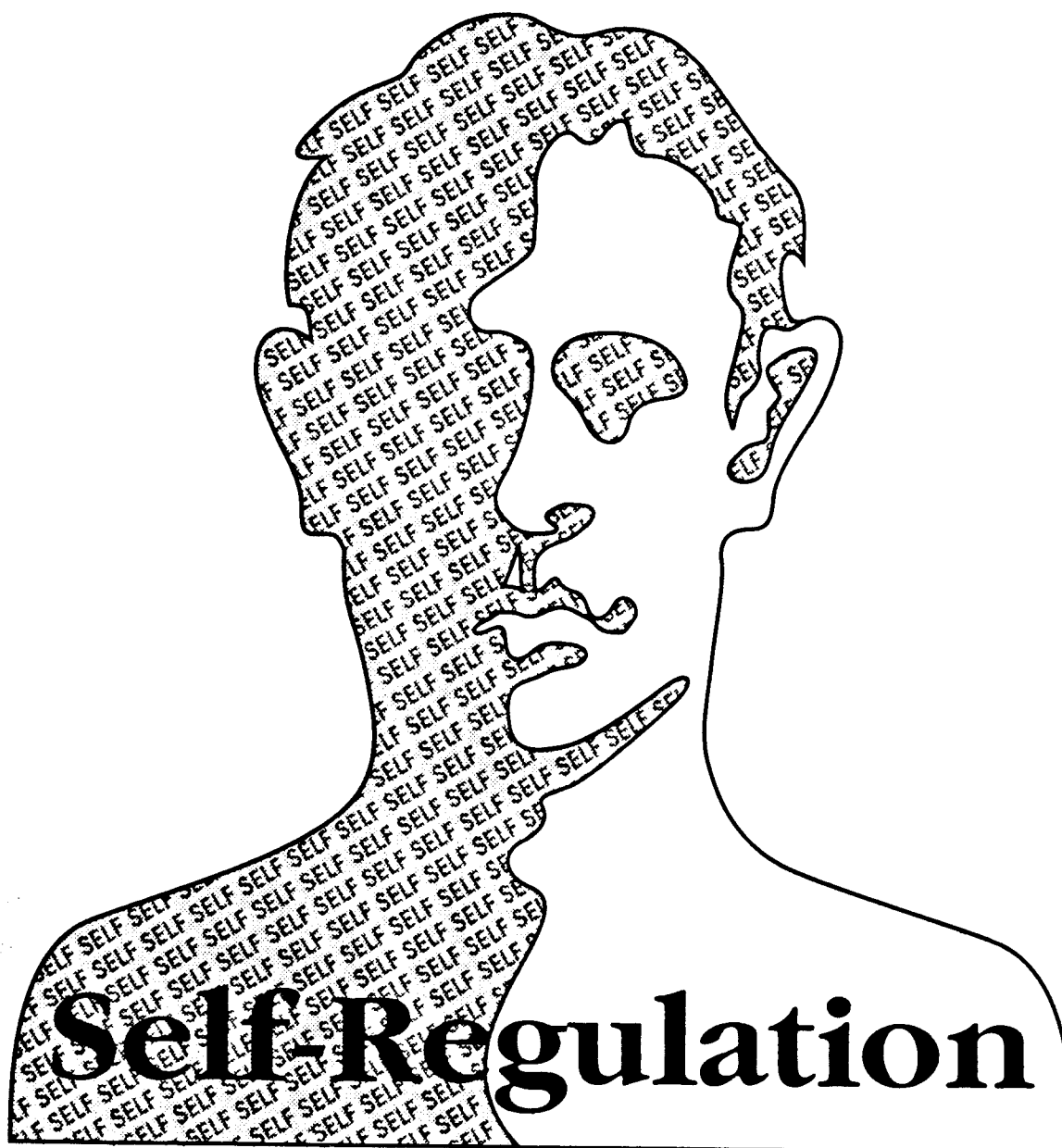


# BIOFEEDBACK

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## Development of the Self as Agent: Prerequisite or Primary Task in Biofeedback Training?

*William H. Rickles, M.D.*

Biofeedback practitioners and researchers have used a model of stress-related disorders which implies that our bodies cannot stand the psychosocial, cultural pace of civilization because of lagging phylogenetic evolution. That is, our purported cave man-type bodies are not suited for civilized behavior involving delayed gratification and social manners, but are evolved to handle stress by fight or flight. This heuristically useful and popular explanation is a therapeutic blind alley. Perhaps it is time to consider an alternative paradigm based on ontogeny gone-wrong. Accordingly, stress-related conditions are caused by psychophysiological immaturity and/or maladaptive methods of handling emotional reactions to stress which are those of an immature child or infant, instead of a cave man. Utilizing this model, a whole world of developmental data regarding human beings as they grow up *today* opens up to the biofeedback therapist to assist him/her in working with patients learning a biofeedback task. This essay is intended as an introductory first step in bringing the "psychophysiological self" as a sometimes imperfect and vulnerable achievement in biopsychosocial development to the biofeedback treatment room.

In her paper entitled "Affects and the Development of the Self," Virginia Demos combined Sander's observations of infant development via the mother/child system regulation of wake/sleep states with Sylvan Tomkin's theory of inborn psychophysiological affective responses to stimuli. She proposed that the mother/child system works to develop a systematic regulation of *affective*

*states* which may or may not include the baby developing a sense of self as agent. This outcome depends upon the degree to which the mother responds to *facilitate* what she accurately perceives as the infant's goals as part of the mother/child/infant system. The infant/mother system must be open to allow entrance of a new element, the infant-self as agent, into the system in a way that does not threaten the mother's sense of self as agent. Accordingly, it will be important in biofeedback therapy to facilitate the emergence of the patient's self experience in a way that the patient/therapist system is not threatened and so the derailed self-development/self-regulation can resume growth/evolution.

Demos proposed that the initial neonatal states are affective states, not just wakeful versus sleeping states. In effect, this creates the equation:

Awake State = Affective State = Self State

Accordingly, the state of *alert inactivity* described by Sander may be the same as an affective complex of *interest*. In the early weeks of life, this state produces quieting of the body and visual fixation on stimuli. Could it be that in order to calm our more restless and agitated biofeedback patients we need to take steps to generate an affective state of interest to get the reflexive quieting of the body?

In our clinical work we need to remember that the patient may be displaying the *distress*

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*affective state* which is identified in infancy by diffuse motor activity and anxiety. Likewise, a patient who is in back pain with a hyper-extended spine may be experiencing something akin to the *anger affective state* described in infancy which is accompanied by an extended body and arching back.

Sander and others have identified and described several different types of cry in the infant. Could it be that the pathology we see in our patients' breathing and talking patterns might correlate with these types of cry? For example, in our anxious patients, their shorter and more thoracic breathing pattern may be a derivative of the hunger or *basic cry* of infancy characterized by a brief 0.6 second cry followed by a short inspiration and rest. Our panic disorder patients may be displaying a breathing pattern associated with a variant of this cry which, when emitted with higher intensity, is called the *mad cry*. Recognizing the infant's *pain cry* as influencing breathing in our chronic pain patients may help us work with these unfortunate people. This cry is characterized by a long two - four-second cry followed by a seven-second breathing holding period.

This perspective adds a new emphasis in clinical biofeedback. A hitherto little studied aspect of the biofeedback situation, namely, the *self*, defined as an independent center of initiative and time-and-space perception, to whom we hope to teach self-regulation.

Our journal is entitled *Biofeedback and Self-Regulation*. Initially, our field studied biofeedback or the use of instruments to change physiology. Not much attention was paid to how this was accomplished. In fact, in his presidential address to the Society for Psychophysiological Research, Bernard Engel recounted how he gave up attempting to understand what his biofeedback subjects were doing mentally because he could make no sense out of the different internal mental experiences described as associated with learning the feedback task (Engel, 1972). Consequently, by default, we have used Model T era, therapeutic systems of bodily self-regulation (i.e., Jacobson's progressive relaxation developed in the 1920's and 30's

and 40's and Schultz's autogenic therapy which was also developed independently in Germany during the 1920's). Because we have had such *poor* guidance in selecting appropriate *scientific* theoretical systems for describing private, verbally reported intrapsychic experiences (see Rickles, 1989; Winnicott, 1985; Wolf, 1989; Horton, 1974), we have called on religious, quasi-mystical tradition and social custom laden systems of Zen and Yogi from alien cultures to guide us in assisting the patient's self toward the development of self-regulation. Presumably, the vague and sentimental translations of foreign and old ("ancient"! ) texts by obscure authors is assumed to be evidence of their wisdom and truth.

Focusing on the second part of the Journal's title, *self-regulation*, we may ask what, exactly, is being regulated? Obviously, we mean regulation of physiology. But it is now becoming clear that regulation of the sense of self must also be considered when the very experience of self cohesiveness and continuity is threatened. A healthy self is described by Kohut as "a center of initiative and sense perception, which is a continuous experience in space and time."

Autonomous self-soothing is always *only* relative and is developed in a facilitating physical and interpersonal environment with the help of: (1) instruments; (2) a person/trainer/therapist; (3) techniques; and (4) innate psychophysiological talents of the patient.

One of the appealing aspects of biofeedback therapy has been the deemphasis of psychopathology in the referral and therapeutic situation.

Fortunately, biofeedback has continued to avoid becoming enmeshed in psychopathological concepts, but there is an increasing awareness of the need for a more systematic paradigm to guide us when confronted by the patient who cannot learn to self-regulate.

I submit that Shellenberger and Green's (1986) mastery model is on the right track. All is well as long as: (1) the patient has

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previously experienced a sense of self, actively achieving mastery experience, (2) the self-maintaining functions being exercised by the therapist and the environment are provided fairly constantly; and (3) the false self (Winnicott, 1985) is not too overwhelming but functions as a caretaker until conditions are obtained whereby the true self can resume development; or (4) the experience of self as agent, or center of initiative, does not have phobic qualities deriving from idealization of "self experience" (sainthood) or overwhelming shame for being "selfish" (good little boy/girl) and feels prohibited from exercising self care.

Are there ways of self-organization which may make learning biofeedback-assisted self-regulation impossible or undesirable? Further, is there a systematic and common teachable clinical theory of the self which might be useful in treating these people with biofeedback and still retain the positive emphasis on personality growth and adaptation that has characterized biofeedback treatment?

I would like to propose an approach which I have found helpful in my clinical work with the typical biofeedback patient.

The past twenty years has seen a blossoming of a clinical approach in psychoanalytic psychotherapy called Self Psychology. In this system, the conditions treated are called *disorders of the self* or *self disorders*. They might well be called self-regulation disorders. This work began with Heinz Kohut in Chicago and focuses on the need for a caretaking person to carry out the *affirmation functions* of validity as well as regulation of dysphoric affects or bad feelings (Wolf, 1988). Someone who provides these functions is experienced as part of the self and becomes essential to the self's well being and feelings of energetic initiative.

Such a person is called a *selfobject*.<sup>1</sup> So far it appears that we need two kinds of selfobjects for optimum functioning and growth: a *mirroring selfobject* which provides validation to our point of view, and an *idealized selfobject* which provides someone to look up to, feel safe with, and be excited by or about. A lack of these selfobject functions produces lack of energy, joylessness, deficiency in motivation — which becomes depression or hypochondriasis when more severe. In genetically vulnerable individuals, psychophysiological breakdown can also be a consequence.

Without proper selfobjects functioning as caretakers in childhood, the child does not develop healthy ways to handle shame, humiliation, fear, anger, and anxiety. As a result, self-disrupting trauma is experienced and defenses or adaptive substitutes must be developed to isolate or dissociate these traumatic states of mind. A defense may be a destructive pathological condition, such as drug abuse, perversion, or eating disorders. These are self-regulatory disorders. An adaptation may be: to always be needed, be the best, biggest, or first.

We often see the resulting psychophysiological breakdown when these defensive adaptations are interfered with or lost. According to Self Psychology, these adaptations are learned methods of handling something missing in the personality. The biofeedback-aided, self-soothing that we teach helps our patients learn a new adaptive way to compensate for the missing self regulating functions. For those whose sense of self and self-function is only moderately derailed or under-developed, the treatment is straightforward. For those derailed earlier on in development and whose sense of self is so puny or fragile that even the sense of agency is underdeveloped, these aspects of the

<sup>1</sup> In this context, 'object' is a person or thing as opposed to the 'subject', or self. Thus, a selfobject is a person or thing which provides regulatory functions for the self which the self cannot provide for his/her-self. In as far as this function is concerned, the object is a needed part of the self, hence the term, selfobject.

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relationship — *mirroring and idealization* — are extremely crucial.

Severely alexithymic people are concrete and may easily lose sight of their sense of agency when experiencing stress (Rickles, 1986). For example, one patient could see no point in developing an inventory of her daily stresses since "It would only let you know how stressed I had been on that particular day." She had no sense of agency in responding to stresses differentially herself. Other conditions which may interfere with learning self-regulation might be: (a) a self-experience which is actually avoided phobically because of an anticipated humiliation which is unacceptable if they fail; (b) of a fragmenting self if left alone without stimulation while learning self-regulation; (c) of grandiose self-expectations with the first success and resulting embarrassment and retreat to self-effacement when this cannot be maintained; and (d) of rage when the grandiose expectations may not be fulfilled.

When these patients have an experience of themselves in a safe environment which has neutralized these interfering reactions to experiencing self as agent, they usually feel great exhilaration with this first experience of self-affirming success. This exhilaration may be replaced or followed by a sense of awe at this potential for self-soothing and regulation

On the one hand, a mirroring attitude affirming the patient's point of view with accurate empathy is clearly different from merely comforting or sympathizing. By allowing idealization of the therapist, their doctor or psychologist, etc., the biofeedback instruments, their childhood, spouse, the president, etc., you are performing a very important task in fostering the patient's emerging sense of agency. This function is particularly important for patients who, in the past, have been required to diminish this experience in order to be safe.

These rather sophisticated theoretical and clinical developments allow us to view the self as being an open system which can contain both dependent, independent, and

modulating variables with definable, organized states of attention and affect which may be dramatically modified by historical experiences in time and space and the manner in which other persons reflect or mirror the self-system seeking validation and surcease from psychological pain. This emergence of the self in self-regulation brings to an end our grandiose fantasies of cure of human ills through inhuman application of technology and sets us back on the road of dealing with people, not with mystical or mechanical techniques, but through the hard work of understanding ourselves and our clients/patients as imperfect, inter-dependent human creatures, finite, but evolving in time, trying to work and love and play as best we can.

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*William H. Rickles M.D. is an AAPB member in private practice in Los Angeles, CA. He is a member of the 1991 Program Committee.*