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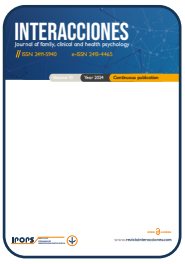

ORIGINAL ARTICLE

Affective Behavioral Disturbances: An Interbehavioral Analysis

Alteraciones Afectivo-Conductuales: Un análisis interconductual

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ABSTRACT

Background: The progress of any science, such as psychology, is achieved not only by accumulating empirical evidence but also by refining the conceptual structures that give theoretical meaning to such evidence. **Objective:** To analyze the concept of mental health and the logical-conceptual structure that supports it, describing its limitations and contradictions. Alternatively, based on the postulates of interbehavioral psychology, the concept of affective behavioral changes is proposed, and a classification of these changes is developed, based on the functional quality of the disturbed behavior. **Method:** This research is a theoretical study. **Conclusions:** Dualistic traditions in psychology have pathologized affective behavioral alterations as if they were diseases (mental or brain). The interbehavioral postulation outlined here is a conceptual alternative that can support theoretical and methodological developments that improve the position and contribution of psychology to theorizing and solving human problems in the field of health.

Keywords: Health, affective disturbances, behavior, analysis, psychology.

RESUMEN

Introducción: El progreso de cualquier ciencia, como la Psicología, se logra no solo acumulando evidencia empírica sino también refinando las estructuras conceptuales que dan significado teórico a dicha evidencia**. Objetivo:** Analizar la noción de salud mental y la estructura lógico-conceptual que la sustenta, describiendo sus limitaciones y contradicciones. Alternativamente, a partir de los postulados de la psicología interconductual, se propone el concepto de alteraciones afectivas de la conducta y se desarrolla una clasificación de las mismas, basada en la cualidad funcional de la conducta que se altera. **Método**: Esta investigación es un estudio teórico. **Conclusiones:** Las tradiciones dualistas en psicología han patologizado las alteraciones afectivas del comportamiento como si fueran enfermedades (mentales o cerebrales). La postulación interconductual que aquí se esboza es una alternativa conceptual que puede apoyar desarrollos teóricos y metodológicos que mejoren la posición y contribución de la psicología a la teorización y solución de problemas humanos en el campo de la salud.

Palabras claves: Salud, trastornos afectivos, comportamiento, análisis, psicología.

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Most psychologists likely accept as an unquestionable truth that psychology is responsible for preserving mental health and treating its alterations. To doubt this could be judged as utter folly or, in the extreme of disciplinary anger, as a manifestation of insanity. However, since science progresses not only by accumulating empirical evidence but also by refining the conceptual structures that give theoretical meaning to such evidence (cf. Kantor, 1958, 1963, 1969; Kuhn, 1962; Turbayne, 1962), this paper briefly examines some conceptual assumptions on which an important part of the professional practice of psychology in the clinical or health field has rested, especially those related to the notion of mental health, the nature of the mental, and the idea of altered affective states. Based on this examination, an interbehavioral point of view is presented to support a different, objective, and naturalistic approach, which can help improve the psychological contribution in the field of health, with special emphasis on affective alterations of behavior.

MENTAL HEALTH: DIMENSION OF A STATE OR FIELD OF PSYCHOLOGICAL ACTION?

The well-known experience of Clifford Beers during his time in different psychiatric hospitals in the early twentieth century (Beers, 1908/1980) was one of the first and most transcendent calls for attention to the deplorable state of psychiatric treatment of the insane or mentally ill and also represented the starting point for the social movement of *mental* hygiene (Beers, 1980; Dain, 1980; Deutsch, 1937; Grob, 1994; Ridenour, 1961), that the United States of America initially promoted the *National Commission* of Mental Hygiene (created in 1909) and later the Committee of Mental Hygiene (founded in 1919), whose work allowed to consolidate the *World Federation of Mental Health (*formalized in 1948) as the most visible international organization that claims and promotes more respectful treatment of the dignity and human rights of persons held in psychiatric care facilities. A fact of interest in this process is that the arguments used by these organizations to support their claims were, and still are, ideological, political, and legal rather than conceptual, technical, or scientific. In this regard, it is revealing the indistinct use they usually make of the concepts of mental *hygiene and mental health* to refer to their subject of interest in their basic documents and even in the institutional name that identifies them.

At the end of the 1940s, the demands of pro-mental hygiene (or health) organizations were strengthened thanks to the interest of some governments to address the growing cases of mental problems (e.g., severe anxiety, addictions, insomnia, suicide attempts, irritability, anguish, panic attacks, etc.) in ex-combatants of the Second World War, which had high economic, political, and social impact. This may explain why, since its creation in April 1948, the World Health Organization (WHO) has included a section on mental *health* that would be dedicated exclusively to the attention of this problem (cf. Bertolote, 2008; Lopera, 2015), giving it such importance that it even appears as a central element of its declaration of principles, which states that "Health is a state of complete physical, *mental* [emphasis added], and social well-being, and not only the absence of disease or infirmity" (WHO, 2020, p. 1).

In this definition of health, it is evident that the mental constitutes a *constituent aspect* of health that must be treated with the same rigor as its other aspects, the physical and the social; however, many notice in it the explicit recognition of a special type of health, the mental. To tackle this incorrect interpretation, Bertolote (2008) points out that:

> "It should be noted that mental, in the definition of health of the WHO (as well as physical and social), *refers to dimensions of a state and not to a specific domain or discipline* [emphasis added]. Consequently, according to this concept, it is incongruous to speak of physical health, mental health, or social health. If we wanted to specify a particular dimension, it would be more appropriate to use the term well-being and not health (e.g., mental well-being or social well-being). This negligent use of the word health seems to have begun when mental hygiene (social movement or domain of activity) was replaced by mental health (originally intended as a state and then transformed into a domain or field of activity). (p. 114)

To this, it should be added that the definition of health proposed by the WHO refers to it in the singular and with a capital letter, which also prevents it from being interpreted as a "holistic" additive result of mental health plus social health *plus* biological health. Consequently, if it is incorrect to speak of mental health as a field of phenomena in itself, then it is also incorrect to grant legitimacy to the so-called professions and institutions of mental health as if it delimited a professional field of action (psychological or psychiatric) and not an aspect or dimension of that state called health. However, an incorrect and self-serving interpretation of the WHO definition of health by medical associations, mainly psychiatric, and some organizations for the human rights of psychiatric patients insists that "mental" refers to a type, and not an aspect, of health, to justify their (i.e., their labor market) as ad-hoc specialists (cf. Szasz, 1976, 1978, 2019), sheltered in the cartesian dualistic philosophical and psychological traditions that have conferred on the mental the onto-epistemic status of private, internal, and unobservable events (cf. Kantor, 1966; Tomasini, 1988, 1995, 1996, 2008, 2016; Ryle, 1949; Wittgenstein, 1953; Kantor, 1966; Tomasini, 1988, 1995, 1996, 2008, 2016).

The dualistic characterization of the mental

Among the most important difficulties that psychology faces in collaborating satisfactorily with other disciplines (biological and social) in the solution, prevention, or attenuation of health problems is the *unquestioned* adoption of the status that the dualistic tradition has given to the mental as a thing that can only be known through its behavioral "manifestations" or "expressions" and through the verbal report of the people who "experience it privately". (e.g., Descartes, 1980; Locke, 1976; Wundt, 2019, etc.). This characterization rests on the Cartesian theory of mind (cf. Descartes, 1980), called by Ryle (1949) the "myth of the ghost in the machine" or "official theory of mind", which postulates the existence of two coexisting substances in the human being: an extensive substance that is characterized by occupying a place in space (the body) and a non-extensive

substance (ergo not occupying a place in space) that inhabits it and is characterized by thinking (the soul).

The psychological theories that have assumed the core of the official theory of mind have omitted to consider even the most obvious and serious contradictions and paradoxes in their formulation, among them that: a) if it is affirmed that the soul does not occupy a place in space then it is not possible to preach of it any location and, therefore it cannot be said to be within the body or to be contained by it; b) since it is not corporeal or occupies any place in space, neither can it be postulated that the soul interacts *from within* with the body that supposedly contains it, that is, it cannot be proposed that the soul is capable of moving it, activate, animate or boost it; c) by not recognizing spatial extension to the soul, the official theory of mind is unable to refer to its hypothetical operation (i.e., thinking or cognition) in the same terms and temporal-spatial coordinates that are used to refer to the occurrence of all known natural events, and; d) Since the claim that the soul is within the body is untenable, it logically follows that the action of the body could express, manifest or reveal the action of the soul, which in turn would cancel out any possibility of knowing or identifying when and how the soul acts (i.e., thought, cognition, will, etc.).

Despite the above, based on the dualistic assumptions and assuming a nominalist conception of language, according to which words are names or labels that designate and identify the things of the world they refer to (cf. Tomasini, 1988, 1995, 1996; Wittgenstein, 1953;), dualistic psychological traditions assume that expressions involving terms such as thinking, perceiving, attending, remembering, imagining, reasoning, and others of this type are references, denotations, or descriptions of different events that occur in temporal-spatial coordinates different from those of the situations in which such terms are used (cf. Ryle, 1949). Thus, for example, if a person were to tell another (whom he hugs, kisses, and caresses while secreting certain hormones and presenting various reactions of excitement) that he *loves* him and that he *likes* him, dualistic approaches would affirm that this person is informing, describing, narrating, or offering testimony of the events that occur within him (i.e., the passionate acts of love). With such statements, a single episode is conceptually divided into two: one of a public nature (i.e., hugs, kisses, caresses, excitement, etc.) and another of a private nature (i.e., passions and feelings) that are connected descriptively by the terms "mentalistic" used (i.e., the sentimental or emotional verbalizations emitted during the love episode). Some studies that illustrate this theoretical perspective are, for example, the works of Barrett, Quigley, Bliss-Moreau & Aronson (2004), De-Damas-González & Gomariz (2020), Lolas (1987), Kyrylenko & Bobrovytska (2017), Scherer (2000).

Dualism and mental health

The dualistic reasoning of the previous example is not only found in cases of reference to hypothetical affective or cognitive processes but also when terms are used that supposedly refer to states or processes associated with the so-called *mental health* of people and their alterations, such as anxiety, depression, anguish, etc. (Cfr. Ezama, Alonso & Fontanil, 2010) To illustrate, imagine that a woman consults a doctor, psychologist, or psychiatrist about possible solutions to the discomfort (e.g., tremors, dry mouth, incontinence, stuttering, dizziness, etc.) that she suffers when night comes and anticipates that her husband will arrive drunk and violently assault her, as he usually does. In this hypothetical consultation, it would be very likely that the woman reported fear, anguish, or anxiety as a cause of insomnia, loss of appetite, physical discomfort, etc. The dualistic reasoning in this example would again involve transforming a single episode (i.e., the woman's exposure in the consultation) into two distinct episodes: one public and observable (i.e., the woman's verbalizations of how she feels) and an internal, private, and unobservable one (i.e., anxiety, anguish, fear, and "described" thoughts). In this reasoning, a causal relationship is again postulated between events, processes, or mental events (in this case the fear, anguish, and anxiety supposedly referred to) and the physical alterations that "express" or "manifest" them publicly (in this case tremors, dryness, stuttering, incontinence, etc.). The causal connection thus proposed between "the behavioral" and "the mental" constitutes the core of the dualistic conceptualization of mental illness as a physical expression of internal alterations not directly observable (Cfr. Bertolín-Guillén, 2023; Lemos, Restrepo & Richard, 2008; Ramos-García, Gutiérrez-Yáñez, Escamilla-Gutiérrez & Ortega-Andrade, 2023; Szasz, 1976, 2019).

Those who have assumed the dualistic assumption that the mental is not publicly observable have attempted to solve the problem of privileged access to its structural and operational characteristics by constructing instruments that hypothetically assess verbal reactivity to standardized "items" (whether in the form of "tests," "instruments," "batteries," "scales," and other variants of planned conversational interaction) by interpreting it as a reliably revealing manifestation or expression. of the events, states, or processes that occur in a private and unobservable way inside the person who responds to them.

With some procedural or instrumental variants, this strategy is overwhelmingly dominant in contemporary psychological research, whose tools have ended up turning behavior into a simple indicator or epiphenomenon of the mental, as represented in Figure 1 that shows the dualistic conceptual architecture described and the postulated causal relationships between: a) the existence of psychopathogenic factors in the physical environment, social or psychological with the potential to cause disturbances in "normal" or "healthy" mental state or functioning; b) the alteration of internal affective processes (mentally or cerebrally controlled, depending on the specific theoretical model adopted), and; c) the external public expression or manifestation of internal disturbances, in the form of unwanted, unexpected or unacceptable behavior.

THE INTERBEHAVIORAL POINT OF VIEW: A NATURALISTIC OPTION

Unlike the dualistic conception, interbehavioral psychology (Kantor, 1924, 1926, 1933, 1956; Kantor & Smith, 1975) opposes the idea that episodes involving mental, affective, or cognitive terms and expressions (e.g., fear, think, reason, imagine, love, miss, crave, worry, distress, etc.) involve the existence of

internalized extra-episodic events or events. Instead, it proposes to eradicate the dualistic dichotomies around the hypothetical mind-behavior relations and to assume as a matter of psychological study the *interaction* or adjustment between the total action of complete organisms and the corresponding activity of specific segments of their environment, assuming that in this adjustment are basic factors both the biological equipment of the organism and the physical characteristics of the objects of the environment. whose functional properties evolve in the specific interactive history between them.

The proposition that it is the activity of the whole organism that interacts with the activity of the objects and events of the environment eliminates for psychology the need to describe independently, partially, and separately the operation of each of the multiple biological subsystems involved in each interactive segment. Also, and above all, it avoids the temptation to locate in any of these biological sub-systems specific psychological functions (a frequent temptation in neuropsychological models and theories), without limiting or questioning the legitimacy of analyzing the particular operation of cells, tissues, or organs under particular stimulating conditions at non-psychological descriptive levels, as occurs in the research of nephrologists. Neurologists, pulmonologists, gastroenterologists, pathologists, endocrinologists, etc.

This allows the interbehavioral postulation to emphasize that the psychologist does not have this task of physiological description but that of conceptualizing and describing the *simultaneous* operation of *all* the biological subsystems organized during the interaction, not as a molecular physiological and summary description of the entire biological operation but molarly as integrated action in functional adjustments to the objects and events of the environment. For this purpose, Kantor (1933; Kantor & Smith, 1975) developed the concept of *reactive system* to refer to the configuration or organization of *all* biological reaction systems (endocrine, neurological, motor, skeletal, visuomotor, gustatory, olfactory, thermomechanical, etc.) during the organism's adjustment to the conditions of the environment with its objects and events.

From this point of view, in all interactions, the entire biological team of the organism is involved, although its functional configuration is varied and unique in each of them, with differentiated preeminences in each case. As an example, consider that when dancing a Son Montuno in Old Havana (case 1), it is especially important to enjoy and exercise, have a good hearing capacity, a reasonable kinesthetic, and acceptable motor coordination. Of course, this does not mean that dancing suspends other activities of the body, such as gastrointestinal activity or kidney functions (in fact, a sudden variation in these or some other would most likely drastically modify the dance). In another example, when cutting wood for the home (case 2), although all biological systems also operate, the most relevant are others, such as vision and the musculoskeletal system. It is clear that the participation of each biological system is not equally critical in both examples, but this does not mean that any operation is suspended while the others act, so interbehavioral psychologists would affirm that it is the person who dances and not the feet or ears, and that it is *the people*. those that cut the wood and not the hands or arms; that is, it is the whole organism and not some of its isolated parts that interact psychologically.

A relevant fact that should be emphasized is that reactive systems are configured through historical processes of integration or learning of skills and competencies that take place throughout the interactive life of each person. Therefore, it can be said that psychological behavior and its development are necessarily individual, singular, unique, and unrepeatable, and their description cannot be limited to the invariant relationships described by the chemical-biological sciences (Carpio et al., 2007).

On the previous definitional basis, interbehavioral psychology proposes that, although the biological team is the substrate of the reactive systems, the description of these is not equal to or reduced to that because the first develops as a result of the phylogenetic evolution of the species while the others are configured based on the ontogenetic vicissitudes of the individual. In this way, psychological action itself is conceptualized as the functional result of the joint and organized operation of all the biological components of the organism, integrated into multiple systems or varied and changing reactive configurations, not static. In fact, the processes of integration of the reactive systems through which the psychological interaction capacities of organisms are shaped (i.e., skills and competences) correspond to what has traditionally received the generic name of *Learning and development processes* (Carpio et al., 2014). This postulation has, at least, two important consequences for the study of psychological behavior: One, that the description

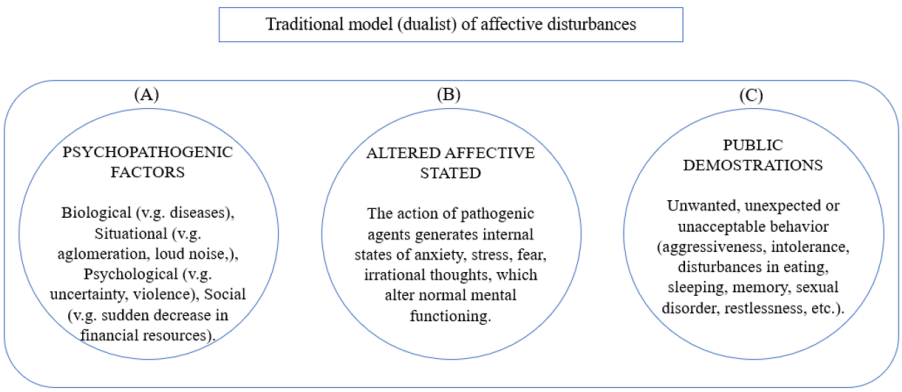

Figure 1. Traditional model of affective disturbances.

and characterization of behavior, as a relationship and adjustment between actions of the *whole* organism and the actions of the objects and events of the environment with which it interacts, cannot be reduced to a topographic or morphological inventory of the actions of the organism; Two, that the relationship cannot be given spatial location because relationships do not occupy a place in space (although the objects and events that are related to occupy it) and therefore one cannot speak of "internal" or "external" behavior, and therefore it is incorrect to propose that an "external" form of behavior (e.g., verbally answering a questionnaire) is an indicator of another "internal" form of behavior (e.g., cognitive processes, affective states, etc.) or that this is the cause of it.

Based on the interbehavioral postulation, it is not rejected or denied that people think, reason, imagine, love, sadden, or distress, but the dualistic assumptions of psychological theories that have conferred on these expressions the status of reference and evidence of trans or extra-episodic, internal, private, and unobservable events are questioned. On the contrary, interbehavioral psychology conceptualizes them as part or integral components of interactive adjustment, along with all other actions that are executed during interactions, colloquially called "cognitive", "emotional" or "mental". For this reason, it also proposes to elaborate objective and naturalistic descriptions to give them a more coherent treatment in the conceptual sense and a more congruent methodological approach that allows for better integration with other disciplines in the construction of solutions to the multiple problems in the field of health (cf. Kantor, 1933; Kantor & Smith, 1975).

A GENERAL OBJECTIVE ORIENTATION TO SO-CALLED MENTAL HEALTH

That our heartbeat is not, in any way, an alarm signal. However, if the heart palpitations are so intense and accelerated that they cause us to suspend our regular activities in a certain situation, this will likely have undesirable or unpleasant effects. Similarly, if at any time sudden changes occur in our sensory-motor abilities (such as when we "stop feeling" a part of our body or feel that we "cannot move it"; when we "cannot see" or our "tongue locks", etc.), the usual course of the activities and tasks we were performing at that moment will most likely be altered, subtracting effectiveness, appropriateness, congruence, or behavioral coherence. Cases like these and others similar (such as insomnia, lack of concentration, some sexual dysfunctions, aggressiveness, intolerance to ambiguity, eating disorders, addictions, nightmares, etc.) are usually called diseases, alterations, disorders, pathologies, or "mental" problems, and it is common to postulate as their causes *anguish* or *anxiety* in most dualistic psychological approaches, which use these terms practically interchangeably to postulate various types of states or responsible internal entities, inevitably incurring the logical problems of dualism (v.gr. Arita, 2001; Silva, 2007; Simon, 2009).

In contrast to dualistic psychology, behavioral orientation, in general, has sought a much more objective naturalistic approach without appealing to internal mental entities or processes. For example, formulations based on the theory of conditioning (cf. Pavlov, 1927; Skinner, 1931, 1935, 1938) have conceptualized anxiety as the alteration, or disruption, of current behavior by the presence of a conditional stimulus that generates affective responses (i.e., those that by themselves do not produce effects on the stimulating conditions of the environment) that are intense, incompatible, or competitive with the altered behavior. This formulation is illustrated by Watson's famous work with the child Albert (Watson & Rayner, 1920), which showed how the "ear or anxiety responses" (e.g., crying, startling, distancing, etc.) that the child presented to a white rat that previously did not provoke them developed from being repeatedly made to coincide with a sudden and strong noise produced by the tapping of a metal plate. Additionally, Watson and Rayner (1920) observed that these conditioned fear responses were also presented to a dog, a coat, or pieces of wool, that is, generalized towards objects similar to the white rat.

Similarly, Estes and Skinner (1941) defined anxiety as "the response to some present stimulus that, in the past, has been followed by a disturbing stimulus [...] This disturbing stimulus does not precede or accompany the emotional state but is anticipated in the future" (p. 573), and to evaluate its quantitative properties, they used 24 albino rats of six months, which they subjected to a program of fixed interval (FI) of four minutes, reinforcing the leverage response. After two weeks under FI, they introduced during the session a tone that lasted three minutes, followed by an electric shock, repeating this arrangement several times during some sessions. Subsequently, the tone duration was increased to five minutes, and the tone-shock arrangement was presented only once during the sessions, although the tone alone, without the shock, was presented several more times. The results showed that the response rate decreased markedly in the presence of tone. This suppression of the response, or "freezing," during the tone was precisely the disturbing effect of the conditioned aversive stimulus, that is, anxiety as a conditioned suppression of the response maintained independently by positive reinforcement.

A consequence of the work of Estes and Skinner (1941) was the consolidation of the area of experimental research on conditioned suppression, with the study of Hunt and Brady (1951) being one of the most recognized in the field. In that study, the authors worked with water-deprived rats subjected to a variable interval (VI) reinforcement program, also reinforcing the leverage response. Subsequently, with a classical forward conditioning procedure, they presented a sound for five minutes, followed by an electric shock.

Of such an arrangement, they observed an almost total decrease in the lever response in the presence of tone, as well as gasps, tremors, and defecation in rats. These effects of suppression of the operant response and the appearance of conditioned emotional responses have been repeatedly confirmed by other authors (e.g., Arcediano et al., 1996; Di Giusto & Bond, 1978; James et al., 2013; Kelleher et al., 1963; Riddle, & Cook, 1963; Sidman, 1958).

In addition to the suppression of operant responses and the emergence of conditioned emotional responses such as those described, other studies have shown the development of organic lesions as part of a "behavioral anxiety syndrome" (e.g., muscle pain, headaches, ulcers, etc.). An example of these

studies is that of Sawry and Weisz (1956), who placed a group of rats in a box, which at one end contained water and at the other end contained food; both containers were electrically charged. In the case of remaining in the center of the box, the animals did not access the water or food; on the contrary, only if they approached any of the containers did, they receive an electric shock (for some in the water and others in the food). In one more group, rats received food and water in the containers without receiving electric shocks. The results showed that six of the nine rats in the first group developed gastric ulcers, while none of the subjects in the other groups did. The design of the study allows us to consider with a reasonable margin of certainty that the ulcers were not caused by the electric shocks but by the presence of the stimuli (i.e., the containers) associated with them.

Another work with results compatible with the previous ones is the well-known study of the "executive monkeys" in which Brady (1958) worked with pairs of monkeys, one of which (the "executive monkey") could operate a lever and thereby postpone the occurrence of an electric shock in the feet of both monkeys. Every 20 seconds, a light was presented, indicating the occurrence of the next electric shock and also signaling the opportunity to emit the avoidance response. Each day, pairs of monkeys spent six hours in the chamber for six hours of rest. In all cases, the executive monkeys developed gastric ulcers, in some cases so severe that some of them died from them, while the passive monkeys did not develop any lesions at all. Based on these results, Brady (1958) concluded that the anticipatory responses to the experimental situation that occurred during the rest period were those that favored the development of ulcers.

Obviously, a notable advantage of the works described above is that none of them postulate internal, private, and unobservable mental entities or processes (e.g., anxiety, anguish) as responsible for the observed behavior and its pathological effects on the organism, but all focus their explanation on the relationship between stimuli (public, observable, measurable, and manipulable) that makes one of them a sign of a subsequent aversive event, evoking incompatible responses (e.g., "freezing") with the suppressed response or harmful to the organism (e.g., excessive secretion of gastric acids, increases in blood pressure, increases in heart rate, etc.).

Despite the conceptual improvement represented by the Skinnerian tradition, Kantor (1933; Kantor & Smith, 1975) considered it necessary to go beyond the theories of conditioning and proposed to distinguish affective reactive systems (in which the action of the organism has no effect on the objects and events of the environment with which it interacts) from effective reactive systems (those in which the action of the organism does produce direct effects on the objects and events of the environment with which it interacts) and, based on this, to differentiate emotional *interactions* from sentimental *interactions*.

According to Kantor (1933; Kantor & Smith, 1975), in emotional interactions, the presence of a certain stimulus activates the operation of the reactive system always in the same way in all intact organisms of the same species, so that the behavioral result of its interaction with effective reactive systems is *the functional disorganization of these*, regardless of the interactive history of organisms, so they are biological and not psychological. An illustrative example of these interactions is in cases in which the presence of an intense, sudden, and surprising stimulus functionally disorganizes the effective action that is taking place, as occurs when the sudden and intense sound of a horn while driving a car alters the precision of driving to such an extent that control of the vehicle can even be lost. These interactions also occur when, for example, the pain produced by the bite of an animal surprises us while we read, and we immediately suspend the reading by orienting our eyes to the area of the picket. In this case, the effectiveness of the reading behavior is momentarily lost by the operation of the affective-reactive system (sensory, in this example) activated by the picket. A further example of the emotional interactions thus characterized is when there is a sudden loss of lift (as in the excessively rapid descent of an elevator, during an episode of turbulence in a flight, or in an intense earthquake) and immediately the interaction that is taking place is disorganized, affecting for a moment the operation of the effective reactive systems. In all these cases, the operation of the affective-reactive systems occurs in the same way in all people, regardless of the experience or history they have with the stimuli involved, and always as a momentary disturbance or disorganization of effective behavior. This is why Kantor (1933; Kantor & Smith, 1975) stresses the non-psychological nature of emotional interactions.

Unlike the above, Kantor (1933) argues that in sentimental interactions, the operation of affective reactive systems obeys the history of previous interactions that individuals have had with objects and events in particular situations, so this does not occur in the same way in all individuals. To illustrate, consider the case of a car driver who begins to cry, tremble, and moan when crossing a bridge whose railings are painted green, in such a way that he even loses control of the vehicle. This, of course, does not happen to all the people who cross said bridge, because neither the bridge nor the railings or their green color by themselves produce these reactions, but these occur only because that driver has a particular history with them in certain situations (it could be that on that bridge or in a very similar one, the driver suffered a strong love disappointment). In this case, the intense activity of the affective reactive systems is due to the fragmentary elements of that situation (the bridge and its green railings), and it is precisely because of the intensity of the affective activity that the effectiveness of the behavior in that situation is altered. Insisting, it must be said that this happens because of the peculiar interactive story of the driver, different from that of the rest of the other people, in which neither the bridge nor its green railings will produce the disruptive affective activities described. What should be insisted on is that this experiential ontogenetic characteristic is what confers the psychological character to the affective alteration of behavior that Kantor (1933; Kantor & Smith, 1975) calls sentimental interactions.

From the Kantorian interbehavioral point of view, it is assumed that affective reactive systems involving glandular, sensory, autonomic neuronal activity, smooth muscle activity, etc. participate outstandingly, and it is emphasized that this does not

suppress in any way the operation of effective reactive systems involving the activity of striated muscles, skeletal action, central neural activity, etc., but is integrated into the setting. From this, it follows that these are constituted and are *always* present as components, aspects, or dimensions of all psychological interactions. In this way, it can be said that affectivity and effectiveness are adjectives that qualify or characterize reactive systems but not total behavior as interaction, so it is not correct to speak of emotions or feelings in isolation, nor of emotional or sentimental behavior, *but* of the affective and effective dimensions of psychological behavior, whose balance can be altered at a specific time, in particular situations, by the predominance of one over the other in such a way that one or more of the *functional qualities of behavior* is altered.

FUNCTIONAL QUALITIES OF BEHAVIOR

According to Carpio (1994), the functional qualities of behavior can be identified based on the adjustment criteria that individuals must satisfy in each of their interactions. Such criteria constitute the performance requirement indispensable for the functional adequacy of the individual's actions to the characteristics of the objects and events of the medium in each interactive episode and may derive from the morphological characteristics of the situation but may also be imposed by other individuals (in the form of orders, requests, instructions, suggestions, etc.) and even by the individual himself (as a self-instruction, objective, or goal).

In the simplest case, the criteria of ajustivity establish the requirement that the activity of the individual is adapted morphologically in time and space to the morphology and temporo-spatial structure (duration, intervals, density, place of occurrence, etc.) of unique stimuli (as in temporal conditioning procedures) or paired with others (as in simultaneous or delayed conditioning procedures, forward or backward). In these cases, behavioral functionality occurs as a temporo-spatial adjustment of the individual's activity that, in some cases, seeks contact with some stimulating events (as in appetitive conditioning) or distancing from others (as in aversive conditioning). In this case, the functional quality of the behavior is precisely the ability to adapt, or ajustivity, to the morphology and temporal structure of the stimulating environment.

The second type of adjustment criteria defines effectiveness as the characteristic functional quality of behavior. In the words of Carpio (1994):

> *"Effectiveness refers to the temporal, spatial, topographical, durational, and intensive adequacy of the response to regulate the occurrence and temporo-spatial and intensive parameters of stimulus events...Operant conditioning and its procedures, phenomena studied as practical intelligence and others, are examples of this level in which the effectiveness of the responses is the central characteristic of the interaction* [emphasis added]*"* (p. 64).

One type of functionality, more complex than effectiveness, derives from the criteria of appropriateness. This functionality was originally characterized as:

> the effective variability of the response and its *properties according to the variability of the environment and its conditions. The answer, to put it another way, must be situationally relevant to operational contingencies and their continuous variation...Sample matching procedures, studies on concept formation in animals, and rule learning, among others, illustrate the level at which the central characteristic of interaction is appropriateness* [emphasis added] (Carpio, 1994, p. 65).

To characterize the functionality of behavior that derives from fit criteria linked to the functional correspondence between interactive segments say-do and say-tell, Carpio (1994) proposed that:

> congruence *describes a characteristic that is only present in interactions in which reactivity is morphologically independent of the physicochemical properties and the spatio-temporal parameters of the situation, that is, when functional contingencies are established by linguistic substitution. Congruence in these interactions refers to the correspondence between linguistically substituted contingencies and actual situational contingencies. Finally* [emphasis added], at the most complex level, in which the organization of contingencies occurs as contingencies between substitutions as a linguistic product, that *is, that the individual with his behavior establishes new relationships between linguistic products abstracted from the concrete situations in which they are elaborated, coherence, as an organization of the correspondences described at the previous level, is established as the functional characteristic that describes the correspondence between sayings as a way of doing*[emphasis added]. (pp. 65-66).

In short, the functional qualities of behavior constitute the updating of the interactive capacities of individuals who depend both on their biological equipment and on the skills and competencies they learn and develop throughout their individual interactive history, and whose functional appropriateness is differentially "selected" moment by moment by the criterion of adjustment to be satisfied and by the morphological and functional characteristics of the situations in which every interaction occurs. Table 1 synthesizes the functional qualities of behavior as interactive capabilities.

AFFECTIVE ALTERATIONS OF BEHAVIOR

The concept of affective alteration of behavior that we propose here refers to the condition in which the exacerbated operation of the affective reactive systems modifies the functional quality of the distinctive behavior in an interaction or set of functionally linked interactions at a given time (Cfr. Alonso-Vega, Núñez, Lee & Froján, 2019; Kantor & Smith, 1975; Piña, 2008). This characterization assumes that the affective operation is triggered by the presence, physically or verbally enunciated by the individual himself or by others, of stimulating elements that arouse it due to a particular learning history (as in the aforementioned example of the green railings of the bridge that shock a person who passes by). Equally, it assumes that the alteration may imply the deterioration of the corresponding

functional quality but also its improvement. These variants illustrate the freezing that a person can suffer before the sudden appearance of an aggressive animal (e.g., a dog that barks and throws itself fiercely) or the rapid escape to a safe place (e.g., a high and inaccessible place for the animal) without having previously exercised that climbing capacity. In another example, it is common to observe the "nervousness" of some people in exam situations, in which they forget even the most elementary of what the exam explores, while in others their intelligence and memory are "sharpened," which makes them overcome the exam in question more successfully.

Terms such as "phobia", "depression", "anxiety", "stress", "burnout", and "affective alterations of personality", among others, constitute labels that are placed on behavioral observations that correspond to what we conceptualize here as affective alterations of behavior. The difference is not only nominative, but also much deeper, it is conceptual: the postulation of internal entities (mental or cerebral) as causal agents of behavior is rejected; departs from medical conceptions that pathologize behavior (Cfr. Szasz, 1961,1976); abandons the dichotomy between affectivity and behavior by recognizing that in all the interactions of individuals there is always an affective and an effective dimension; it transcends the reflexological tradition that only recognizes one functional level of behavior (the conditional reflex) by postulating five levels of interactive functionality; eradicates the notion that any affective alteration implies a deterioration of interactive functionality by warning that in some cases these can improve it; it becomes independent of dualistic conceptions by locating the origin and singularity of affective alterations of behavior in the interactive history of each individual, linking it with the learning processes that occur in it.

Based on the above, it is possible to envisage a tentative functional classification of affective alterations of behavior, different from those derived from dualistic theories. An advantage of attempting a functional classification is that it can guide research and intervention according to the level and type of interactive functionality that is altered. For this purpose, it is possible to propose five functional variants of affective behavioral alterations:

1. Affective alterations of interactive ajustivity;
2. Affective alterations of interactive effectiveness;
3. Affective alterations of interactive appropriateness;
4. Affective alterations of interactive congruence;
5. Affective alterations of interactive coherence.

For the identification of each of these variants, the functional quality of the behavior that is altered (negatively or positively) by an exacerbated operation of the affective reactive systems, which is due to the presence of stimulant components that form or have been part of other interactions of individuals, is privileged. Thus, the presence of, for example, a stimulus that has previously been related to an aversive event can alter the behavior of the individual, but depending on the altered functional quality, we could be facing one or another type of affective alteration. At this point, the functional quality of the altered.

BY WAY OF PRELIMINARY CONCLUSION

The dualistic traditions in psychology have produced theoretical models that, regardless of the most flagrant logical inconsistencies, have pathologized affective alterations of behavior as if they were diseases (mental or cerebral) that the psychologist, physician, or psychiatrist must prevent, cure, or alleviate through action strategies that, they suppose, are essentially therapeutic. For this reason, they have developed methods of research and intervention that privilege the verbal report of people, to which they grant the character of "revealing", "informative", or "descriptive" of their mental interiority to which only each one has access due to the private and publicly inaccessible character that is granted to the mental or psychic.

The critical examination of the logical-conceptual structure of the dominant mentalist traditions in the field of so-called mental health leads to the search for more coherent, objective, and naturalistic theoretical alternatives that enhance psychological research and intervention on more solid foundations. The interbehavioral postulation outlined here is, in our opinion, a conceptual alternative that can support theoretical and methodological developments that improve the position and contribution of psychology to the theorization and solution of human

Table 1. Functional qualities of psychological behavior

Functional qualities of behavior	Definition
Ajustivity	Capacity to adjust the spatio-temporal, morphological and intensive distribution of the activity with the spatio-temporal parameters of the stimulating conditions, unalterable by the individual.
Effectiveness	Capacity to produce effects on the distribution and spatio-temporal parameters of stimulating conditions, regulating their values (including their occurrence or omission).
Appropriateness	Capacity to adapt the spatio-temporal, morphological and intensive distribution of the activity to the local functional variations of the stimulating conditions.
Congruence	Capacity to deploy activities conventionally corresponding to linguistic conditions of stimulation.
Coherence	Capacity to establish and apply functional correspondence criteria between different segments or linguistic products.

problems in the field of health.

Behavior (and the type of alteration) warns against the theoretical temptation to characterize it morphologically and to try generic-universal explanations that avoid the singularity of the processes of the historical constitution of individual behavior.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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DATA AVAILABILITY STATEMENT

Not applicable.

DECLARATION OF THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE

The authors declare that they have not made use of artificial intelligence-generated tools for the creation of the manuscript, nor technological assistants for the writing.

DISCLAIMER

The authors are responsible for all statements made in this article.

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