

# Instincts in affective neuroscience and analytical psychology

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## Abstract

The objective of this article is to establish connections between the analytical psychology of Carl Gustav Jung and the affective neuroscience of Jaak Panksepp. For this, the researcher made a comparison between the basic instinctive systems proposed by both theories. One of the main characteristics of Jung's thinking that sets it apart from other psychodynamic schools of thought is his emphasis on predispositions inherited from the psyche. Likewise, affective neuroscience focus mainly on the instinctual and inherited basis of human behavior, related to primary emotions rooted in subcortical structures. By studying these structures, Panksepp showed the influence of diverse instincts on human personality, a point that Jung also defend-

ed against the primacy of the sexual instinct in Sigmund Freud's theory. Furthermore, affective neuroscience and analytical psychology propose psychotherapeutic interventions that involve the instinctual aspects of personality, considering purely cognitive changes as insufficient. Thus, regardless of their materialist assumptions, Panksepp's researches have points in common with Jung's theory, outlining similar instinctual systems that demonstrate the importance of the history of species for the psychic constitution of human beings, countering the growing wave of social constructionism, which had its emergence driven by the behaviorist movements of the 50s, and which still permeates the popular imagination today. ■

## Keywords

affective neuroscience, analytical psychotherapy, Jung, C. G., 1875-1961; instinctive behavior, emotions

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## Instincts in affective neuroscience and analytical psychology

### The role of psychic inheritance in Jung's theory

Jung defended the importance of the evolutionary history of human beings in the constitution of their typical behavior, which could not be explained only by the personal life experiences of each individual. He stated that the human being's ways of thinking and acting are not the result of chance, but are influenced by pre-established pathways present in the brain structure itself (JUNG, 1975a, p. 230). Even so, Jung's model of the psyche was never materialistic; he never claimed that it was the result of brain chemistry. Analytical psychology represents the psychic and the physical as opposing manifestations of the same paradoxical phenomenon that is beyond rational apprehension so far (JUNG, 2013a, p. 619). By saying that, he did not deny the importance of the central nervous system integrity for proper psychic functioning (JUNG, 2013b, p. 318). On the interaction between psyche and brain, he states:

The psychic process underlying consciousness is, as far as we are concerned, automatic and its comings and goings are unknown to us. We only know that the nervous system, and particularly its centers, condition and express the psychic function, and that these inherited structures start functioning in each new individual exactly as they have always done (JUNG, 1975a, p. 227).

Therefore, Jung recognized that the centers of the nervous system at least condition psychic functioning according to certain instinctual forms, which constitute what he called the *collective unconscious*.

The concept of collective unconscious postulated by Jung came from his observations of the spontaneous psychic products of his patients,

such as dreams, delusions, fantasies etc. He noticed that recurring themes often appeared in these phenomena:

It was this frequent reversion to archaic forms of association found in schizophrenia that first gave me the idea of an unconscious not consisting only of originally conscious contents that have got lost, but having a deeper layer of the same universal character as the mythological motifs which typify human fantasy in general. These motifs are not invented so much as discovered; they are typical forms that appear spontaneously all over the world, independently of tradition, in myths, fairy-tales, fantasies, dreams, visions, and the delusional systems of the insane. On closer investigation they prove to be typical attitudes, modes of action—thought-processes and impulses which must be regarded as constituting the instinctive behaviour typical of the human species. The term I chose for this, namely archetype, therefore coincides with the biological concept of the “pattern of behaviour.” In no sense is it a question of inherited ideas, but of inherited, instinctive impulses and forms that can be observed in all living creatures (JUNG, 1972, p. 565).

Freud explained cultural activities and social relations as the sublimation of sexual energy (JUNG, 2013c, p. 46), while Jung saw them as results of different instincts. However, Jung does not deny the importance of sexuality for human beings, recognizing that many psychological conflicts have an erotic basis (JUNG, 2014, p.14). In his experience as a physician, Jung observed

other human needs and instincts that exerted equal influence on behavior and that could, if neglected, be sources of disturbances as serious as repressed sexuality (JUNG, 1975a, p. 230-1).

Even without the adequate instruments to prove his conclusions, Jung faithfully described the facts observed in his extensive clinical practice, facing many prejudices of his time. If talking about sexuality hurt the social morality of the time, which still saw the ideal human being as rational, touching on themes related to mythology and religion was a crime that could be punished with excommunication from the academic world, as it constituted a blasphemy against the materialist creed. Thus, Jung was relegated to the background and still considered a taboo subject in many universities. Jordan B. Peterson, the famous Canadian psychologist who brought Jung's ideas back to the world scenario, says that in his student years many professors cautioned him against discussing Jung's work (PETERSON, 1999, pp. 401). Fortunately, with the advance of neuroscience, there are perspectives for change in this picture.

## Affective neuroscience

Consolidated by neuroscientist Jaak Panksepp, affective neuroscience is based on research aimed at understanding the functioning of the human and animal brain.

As far as we know right now, primal emotional systems are made up of neuroanatomies and neurochemistries that are remarkably similar across all mammalian species. This suggests that these systems evolved a very long time ago and at the basic emotional level, all mammals are more similar than they are different" (PANKSEPP; BIVEN, 2012, pp. 4).

Of course, the affective neuroscience recognizes all the complexity that is added to human behavior due to their unique cognitive abilities. Even so, Panksepp and Biven (2012) states

that these cognitive functions are initially programmed by primary affective processes, which can happen in a healthy or pathological way. Thus, even if human beings develop a huge variety of cognitive functions, their psychic functioning never cease to be deeply rooted and influenced by these instinctual patterns (p. 5).

In this discipline, the brain is studied mostly from a bottom-up perspective, from the oldest to the newest structures. The term BrainMind is used when speaking from a bottom-up perspective, while MindBrain is used when speaking from a top-down perspective. This shows that there is a circular causality between levels of brain functioning, although the focus of affective neuroscience is on primary emotional processes. The lack of space between the two words indicates that it is a unified process; that is, brain and mind are inseparable. Thus, Panksepp and Biven (2012) adopts a monistic view of human psychological functioning (p. 7). This non-dualistic view resembles Jung's, described in the previous section, with the difference that affective neuroscience are based on materialist assumptions (p. 417) while Jung (2013a) preferred to adopt the perspective of psychological lack of evidence in this regard (p. 282).

The affective neuroscience research method is triangulated, considering the structure of the mammalian brain, their instinctual emotional behaviors, and the subjective mental states associated with these instincts. While most neuroscientists consider only instinctive behavior patterns and the brain structures involved, Panksepp and Biven (2012) includes the psychological aspect of this dynamic, arguing that instinctual emotional systems not only express themselves in patterns of behavior, but also influence the manner in which the individual experiences the world. The latter is only accessible through research with human beings (p. 23-4).

Considering the basic inherited instincts and their relationship to human ways of acting and organizing their experiences, many connections are possible between the affective neuroscience and Jung's theory.

## The basic instincts in Jung's theory

As stated above, Freud considered the sexual instinct, or the pleasure principle, as the main driving force behind human behavior, considering many cultural activities as replacements for a repressed or sublimated desire (JUNG, 2013c, p. 46). Later, he added the death drive as one of the forces influencing human behavior (JUNG, 2014, p. 33). Jung (1975b), however, considered psychic energy a neutral force that could change its application according to the natural needs of life and the internal pressure of different instincts. "The fact that the energy can be deployed in various fields indicates the existence of still other drives strong enough to change the direction of the sexual instinct..." (JUNG, 1975b, p. 239). This group of instincts is self-preservation, preservation of the species, reflective instinct, drive to activity, and creative instinct.

An example of self-preservation instincts is hunger, which he claims has a more prominent character in human life, especially in primitive, than sexuality. An example of the instinct to preservation of the species is the sexual impulse, which in humans is not only related to reproduction, but also to feelings, affections, and even spiritual and material interests.

The reflective instinct consist in the countless associations that human beings automatically make when faced with a situation, leading to the variability of their responses, working as a form of instinctive reasoning, which is at the base of the most complex cultural productions.

The drive to activity manifests itself when the needs of other impulses are satisfied, leading to an active search in the environment for new possibilities and also playful behaviors.

The creative instinct varies the most from person to person. In some, the need to create imposes itself with great violence and can subject the entire personality to its satisfaction, while in others this instinct is practically imperceptible throughout life. Due to this lack of universality and content, Jung (1975b) attributed to creativity

a nature similar to that of instincts. He also noted that creativity is associated with other instincts, such as the drive to action, sexuality and the reflective instinct, without being identical with any one of them.

## The seven primary emotional systems in affective neuroscience

Panksepp and Biven (2012) speaks of seven basic emotional systems with specific neurological circuits, consisting of characteristic patterns of reaction and affective states. When talking about these affective systems, he uses capital letters, indicating a reference to neurological circuits and not the popular meaning attributed to these words. These systems are RAGE, FEAR, SEEKING, PLAY, LUST, PANIC, and CARE (p. 34). For more details and illustrations of brain structures related to the seven systems, see the work of Panksepp and Biven (2012).

RAGE is the system that activates in mammals in stressful situations, such as when they are deprived of mobility, suffer irritation on the body surface, deprived of food, deprived of an imminent reward, and when they compete with others for resources (p. 149). Its characteristic responses consist of clenching teeth, punching, biting, scratching, and attacking, with the intensity of manifestation proportional to that of stimulation (p. 150). The main brain structures involved in the functioning of this system are the periaqueductal gray (PAG), the medial hypothalamus, and the medial areas of the amygdala (p. 151).

FEAR is the system responsible for preserving the organism when there is a threat to physical integrity, as in the case of encounters with predators. The most common response of this system is freezing and, at higher levels of stimulation, precipitous flight (p. 179). In general, the brain structures of FEAR is found in the dorsal area of the periaqueductal gray (PAG), connecting with the anterior and medial areas around the third ventricle of the hypothalamus, and also with the central area of the amygdala (p. 182).

PANIC is the system responsible for separation stress and is activated when the individual suffers some type of social loss, such as abandonment or rejection, being more sensitive in the first years of life. This system is named PANIC because, when abandoned, young mammals express a special form of anxiety, a state of agitated panic. Some structures involved in the functioning of PANIC are the periaqueductal gray (PAG), the dorsomedial thalamus, and the anterior cingulate cortex (p. 315).

These three systems are considered negative emotional systems, whose individuals avoid activation. There are also four positive emotional systems:

SEEKING is the most basic emotional system. It makes the individual an active explorer of the environment to find the resources necessary for survival and satisfy the needs of all other systems (p. 95), being also responsible for curiosity (p. 102). This system is activated during anticipation but not during the consummation of the rewards and causes the euphoric behavior to get closer to something valued. The main structures of this system are the ventral tegmental area (VTA), the medial forebrain bundle and lateral hypothalamus (MFB-LH), the nucleus accumbens and the medial prefrontal cortex, connected through the mesolimbic and mesocortical dopamine pathways (p. 104).

LUST is the system responsible for sexual arousal and gender-specific sexual behaviors, having different centers in the male and female brains (p. 249). The epicenter of male sexuality is the interstitial nucleus of the anterior hypothalamus (INAH), which has numerous testosterone receptors (p. 250), responsible for the production of neuropeptides, such as vasopressin, related to male sexual behavior, such as sexual arousal, courtship, and territorial aggression (p. 251). In females, sexual impulses originate in the ventromedial hypothalamus (VMH), mainly controlled by progesterone and estrogen (p. 255). The action of these hormones increases the production of oxytocin and sensitizes the receptors of this

substance in the VMH, making the female more emotionally receptive to the sexual advances of the suitors (p. 256). In humans, testosterone also influences female sexuality, although to a lesser degree than in male sexuality.

PLAY is responsible for the enjoyment of social interactions, such as the physical play of young animals, which happens when they are together in a safe and well-fed environment. Animals develop social and survival skills through play (p. 354). This system is crucial to the development of the mammalian brain, but negative emotions diminish its activities. The structures identified by the PLAY system so far are the parafascicular complex and the posterior dorsomedial thalamic nucleus (p. 364).

CARE is the system responsible for the care of mammals with their offspring, being more sensitive in females than in males (p. 286). Touching, bringing bodies together, creating a bond, and reacting to the offspring's stress signals are reactions arising from the activity of this emotional system. Some brain structures related to CARE are the paraventricular nucleus (PVN), the dorsal preoptic area (dPOA), the bed nucleus of the stria terminalis (BNST) with some projections reaching the ventral tegmental area (VTA), which can activate the SEEKING to perform typical maternal behaviors such as building safe nests and keeping offspring close (p. 293).

## Comparing groups of instincts with primary emotional systems

By comparing the two groups, it is possible to see a relationship between the basic instincts listed by Jung and the affective systems described by Panksepp and Biven (2012). In the group of self-preservation instincts, Jung uses hunger as an example in most passages, which Panksepp do not include in emotional affects, but in homeostatic affects, which are also among the primary affects (p. 10). Jung (2013d) also links the self-preservation instincts to the individual's general self-preservation, absent in many schiz-

ophrenic patients (p. 276). Therefore, one can include in this group the organism's preservation instincts, including behaviors associated with the RAGE, FEAR, and PANIC systems.

When Jung (1976) speaks of the species preservation instincts group, he uses sexuality as an example. But as the name preservation of species implies, the procreation, CARE and LUST are included in this group. Jung states that during the evolutionary process the sexual system was divided between procreation and care of the offspring (p.194), a hypothesis similar to that of Panksepp and Biven (2012), who also considered CARE and the LUST as evolutionarily derived from the same emotional system, but distinct in current's human brain (p. 290).

In contrast, the drive to activity and the reflective instinct are two distinct aspects of SEEKING, involving active exploration of the environment and using associations to solve problems and satisfy curiosity (p. 102). Jung (1975b) says about the reflective instinct:

Reflection re-enacts the process of excitation and carries the stimulus over into a series of images which, if the impetus is strong enough, are reproduced in some form of expression. This may take place directly, for instance in speech, or may appear in the form of abstract thought, dramatic representation, or ethical conduct; or again, in a scientific achievement or a work of art... Reflection is the cultural instinct par excellence, and its strength is shown in the power of culture to maintain itself in the face of untamed nature (JUNG, 1975b p. 243-244).

Likewise, Panksepp and Biven (2012) states about the SEEKING system:

In humans, strategic thinking plays a major role in SEEKING arousal because this system, like all our emotional systems, has abundant connections to the frontal

neocortex... When the SEEKING system arouses the human neocortex, it energizes thinking processes – a kind of virtual world – yielding complex learned behaviors that are not instinctual and may even be counterinstinctual... This system energizes all human creativity – it has been a mental engine for all civilizations (p. 102-3).

Just as Jung defines creativity as an impulse that relates to all other instincts, Panksepp and Biven (2012) says the same about SEEKING, as it is responsible for satisfying the needs of all other instincts, functioning as a state of excitement without a specific object. Jung also includes human play in the instinctual drive to activity, just as Panksepp and Biven (2012) does with the PLAY system.

In short, SEEKING and PLAY are in the group of drive to activity; CARE and LUST are in the group of species conservation instincts; RAGE, FEAR, PANIC, and also the homeostatic affects, are in the group of self-preservation instincts. The reflective instinct and creative instinct can also be related to SEEKING, especially in the interaction of the subcortical structures of this system with the neocortex, which can motivate counter-instinctive behaviors based on instinctual needs.

## Instinct and libido

Jung never tried to establish underlying neuronal circuits for different instincts, but rather to point out that diverse instincts participate in human activities. Remarkably, there are many relationships between the observations made in his clinical practice and the results of recent research in affective neuroscience. The influence of various instincts in the formation of the human personality, defended by Jung, is now a proven fact, in contrast to the theory of the primacy of the sexual instinct proposed by Freud.

Jung (1976) states that many activities that were evolutionarily derived from sexuality are now independent functions:

Thus, many complex functions, which today must be denied all trace of sexuality, were originally derived from the reproductive instinct. As we know, an important change occurred in the principles of propagation during the ascent through the animal kingdom: the vast numbers of gametes which chance fertilization made necessary were progressively reduced in favour of assured fertilization and effective protection of the young (p.194).

Similarly, Panksepp and Biven (2012) says:

Freud hypothesized that all nonsexual love, even maternal love, was a sublimation of an underlying sexual urge. He maintained that sublimation – the channeling of a basic emotional energy into socially useful purposes – occurred when sexual urges were transformed into social values capable of serving nonsexual purposes... Although CARE may have evolved from LUST, the two systems are now sufficiently distinct in the brain and they perform different functions. The LUST system generates the sexual urge while the CARE system generates nonsexual tenderness... (p. 290).

Panksepp and Biven (2012) also states that other emotional systems different from CARE and LUST, such as PANIC and PLAY, are relevant for social development and are not present in Freudian theory.

In addition to the seven basic emotional systems, Panksepp postulated the existence of an instinctive SELF, responsible for integrating bodily, environmental and emotional information into a coherent structure (p. 392). It is also possible to make a relationship between Panksepp's SELF and the Jungian concept of Self, which also functions as the organizing center of the psyche (ALCARO et al., 2017).

However, it is noteworthy to emphasize that, although Jung (1976) made this division of in-

stincts into groups, he believed that, from a dynamic perspective, they were different manifestations of the same energy, called libido.

In nature, of course, this artificial distinction does not exist. There we see only a continuous life-urge, a will to live which seeks to ensure the continuance of the whole species through the preservation of the individual... Similarly, the concept of libido as desire or appetite is an interpretation of the process of psychic energy, which we experience precisely in the form of an appetite (p. 195).

He preferred to adopt the energetic standpoint in his clinical practice due to the enormous communication among different instincts:

The energetic standpoint has the effect of freeing psychic energy from the bonds of a too narrow definition. Experience shows that instinctual processes of whatever kind are often intensified to an extraordinary degree by an afflux of energy, no matter where it comes from. This is true not only of sexuality, but of hunger and thirst too. One instinct can temporarily be de-potentiated in favour of another instinct, and this is true of psychic activities in general (JUNG, 1976, p. 199).

Panksepp and Biven (2012) saw instincts as inherited instruments, in the form of a system of codified values, to increase the organism's success in the game of existence and in facing its typical challenges (p. 67), that is, they are unified by the same purpose, the same appetites, even though they have different physical structures. In affective neuroscience, the activities of different instincts also influence each other, but not so broadly as in Jungian theory. For example, the PANIC activity counterbalances the CARE activity; negative emotions inhibit the PLAY etc.

## Jung and Panksepp's views on psychopathology

Both theories discussed here have a practical objective aim beyond simply understanding the psychological functioning of the human brain: to find more adequate ways to deal with psychopathologies through an understanding of instincts.

Jung (1976) considered pathological disorders as improper attitudes towards instinct. He says:

Instinct is a very mysterious manifestation of life, partly psychic and partly physiological by nature. It is one of the most conservative functions in the psyche and is extremely difficult, if not impossible, to change. Pathological maladjustments, such as the neuroses, are therefore more easily explained by the patient's attitude to instinct than by a sudden change in the latter. But the patient's attitude is a complicated psychological problem, which it would certainly not be if his attitude depended on instinct. The motive forces at the back of neurosis come from all sorts of congenital characteristics and environmental influences, which together build up an attitude that makes it impossible for him to lead a life in which the instincts are satisfied (p. 199).

Likewise, from the perspective of affective neuroscience, psychotherapy aims to reorganize interactions between instinctual affective systems and other levels of brain-mental functioning, divided into a Nested BrainMind Hierarchy of three levels: primary processes, consisting of subcortically based raw affects; secondary processes, consisting of learning processes located largely in the upper limbic regions; and tertiary processes, consisting of cognitive functions, located largely in neocortical areas. In this way, the levels of brain-mental functioning work in a circular dynamic, which can be healthy or pathologi-

cal, according to the predispositions of the organism's personality and environmental influences.

Thus, two-way, circular causation becomes an adaptive feature of the human mind and perhaps of mammalian minds in general, with bottom-up development and learning initially leading the way and top-down regulations and reflections becoming part of the healthy mature (or, in extreme cases, pathological) BrainMind apparatus. The challenge of biological psychiatry and psychotherapy is to facilitate reorganization of such BrainMind dynamics (DAVIS; PANKSEPP, 2018, p. 77).

Like Jung, Panksepp and Biven (2012) believed that the longest-lasting psychotherapeutic results happen when aiming at the instinctual levels of the personality, whereas purely cognitive changes are more fragile.

... [P]erhaps the most lasting effects occur if the therapeutic path has been paved by changing the primary-process affective tone. If so, the work of clinical practitioners may be facilitated by more fully assimilating and utilizing the available evidence about brain emotional systems arising from affective neuroscience, and aiming more fully to utilize the most direct affective maneuvers available (p. 457).

Thus, both Jung and Panksepp considered the instinctual base and its needs as a main focus of clinical work. However, in analytical psychology, the process of identifying neglected instinctual needs is the analysis of unconscious contents through methods such as dream analysis and active imagination, which are not present in the affective neuroscience. Even so, Panksepp and Biven (2012) stated that the function of dreams was to evaluate past affective experiences to resolve future situations (p. 378); that is, they have a prospective function, as in Jung's (1975c) theo-



ry: “The prospective function, however, is anticipation in the unconscious of future conscious achievements, something like a preliminary exercise or sketch, or a plan roughed out in advance. Its symbolic content sometimes outlines the solution of a conflict...” (JUNG, 1975c, p. 493).

The therapeutic methods proposed by the affective neuroscience are stimulation of positive emotional systems in the therapeutic setting to counterbalance the negative emotions that arise when remembering unpleasant experiences. This process is called memory reconsolidation (PANKSEPP; BIVEN, 2012, p. 464).

Finally, Panksepp and Jung believed that the therapist’s personality was, after all, a decisive therapeutic resource in the development of treatment:

Panksepp and Biven (2012): “We do know that the therapists’ personality traits – no doubt, especially their affective attunement abilities – are typically more important than the specific procedures they use (p. 455).

Jung (1985):

The intelligent psychotherapist has known for years that any complicated treatment is an individual, dialectical process, in which the doctor, as a person, participates just as much as the patient. In any such discussion the question of whether the doctor has as much insight into his own psychic processes as he expects from his patient naturally counts for a very great deal, particularly in regard to the “rapport,” or relationship of mutual confidence, on which the therapeutic success ultimately depends. The patient, that is to say, can win his own inner security only from the security of his relationship to the doctor as a human being (p. 239).

However, some limitations of affective neuroscience, a discipline based on animal research, make it difficult to study specific human behaviors. Panksepp and Biven (2012) said that each instinct must be accompanied by a certain im-

age, inaccessible through animal research, as it requires verbal description (p. 428). Jung (2013c) also described archetypes as images of instincts (p. 398), which are representations of patterns of human behavior and psychic functioning, that is, “a self-portrait of the instinct”.

Just as Darwin proposed that the same patterns of behavior in individuals in different regions may indicate inherited characteristics (DAVIS; PANKSEPP, 2018, p. 38), the repeated themes of human fantasy around the globe must also be considered indicative of an instinctual pattern. Unlike emotional brain systems, the specific structures that produce archetypal patterns remain unknown. However, some psilocybin research shows that some patterns of brain functioning are consistently related to mystical-type experiences (TIMMERMANN et al., 2018), including themes that Jung described as archetypal. The author will address this subject in more detail in another work, since it goes beyond the scope of the present discussion.

## Final thoughts

Jung was one of the theorists who brought the evolutionary perspective to psychology, describing psychic functioning as conditioned by the brain structures of the nervous system centers, when most theorists focused on how environmental aspects and personal history shaped modern man’s conflicts. He realized that ignoring the history of the human spirit and believing that all decisive points in development derive from personal experience led to the inefficiency of various therapeutic processes. Thus, Jung considered the instinctual side of the psyche and the personality type, helping patients to find the best way to position themselves according to the changes in attitude.

With the advent of affective neuroscience, the idea that effective interventions must address the instinctual needs of human beings and their particular personality traits, rather than just working on cognitive and environmental chang-

es, has gained an increasingly substantial evidence base. Panksepp demonstrated that many of the behaviors considered as learned for decades by behaviorists are instinctual. Emotions are the most prominent example, but other instinctual tendencies such as maternal behavior, personality differences, and some differences

in behavior tendencies between males and females are also on the list. Thus, the evolutionary perspective returns to the study of human psychology amidst the fever of postmodernist social constructionism that has gripped universities. ■

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## Resumo

### *Os instintos nas neurociências afetivas e na psicologia analítica*

*Este artigo visa estabelecer relações entre a psicologia analítica de Carl Gustav Jung e as neurociências afetivas de Jaak Panksepp. Para isso, foi feita uma comparação entre os sistemas instintivos básicos propostos por ambas as teorias. Uma das principais características do pensamento de Jung, que o diferencia das outras teorias psicodinâmicas, é sua ênfase na base instintiva da psique, constituída de pré-disposições herdadas. Da mesma forma, as neurociências afetivas se concentram principalmente na base instintiva e herdada de certos comportamentos humanos, relacionados às emoções primárias, enraizadas principalmente em estruturas subcorticais. Através do estudo dessas estruturas, Panksepp demonstrou que existem diversos sistemas instintivos envolvidos na formação da persona-*

*lidade humana, ponto que Jung também defendeu contra a primazia do instinto sexual na teoria de Sigmund Freud. Além disso, as neurociências afetivas e a psicologia analítica propõem intervenções psicoterapêuticas que levem em conta os aspectos instintivos da personalidade, considerando mudanças puramente cognitivas como insuficientes. Assim, apesar de seus pressupostos materialistas, as pesquisas Panksepp possuem pontos em comum com aspectos da teoria de Jung, com sistemas instintivos semelhantes, demonstrando a importância da história da espécie para a constituição psíquica do ser humano, contrariando a crescente onda de construcionismo social, que teve sua ascensão impulsionada pelos movimentos behavioristas dos anos 1950, e que ainda hoje permeia o imaginário popular. ■*

**Palavras-chave:** neurociências; psicoterapia analítica; Jung, Carl Gustav, 1875-1961; comportamento instintivo; emoções

## Resumen

### *Los instintos en las neurociencias afectivas y en la psicología analítica*

*Este artículo tiene como objetivo establecer relaciones entre la psicología analítica de Carl Gustav Jung y las neurociencias afectivas de Jaak Panksepp. Para ello, se realizó una comparación entre los sistemas instintivos básicos propuestos por ambas teorías. Una de las principales características del pensamiento de Jung, que lo diferencia de otras teorías psicodinámicas, es su énfasis en la base instintiva de la psique, formada por predisposiciones heredadas. Asimismo, las neurociencias afectivas se centran principalmente en la base instintiva y heredada de determinadas conductas humanas, relacionadas con las emociones primarias, enraizadas principalmente en estructuras subcorticales. A través del estudio de estas estructuras, Panksepp demostró que hay varios sistemas instintivos involucrados en la formación*

*de la personalidad humana, un punto que Jung también defendió contra la primacía del instinto sexual en la teoría de Sigmund Freud. Además, las neurociencias afectivas y la psicología analítica proponen intervenciones psicoterapêuticas que tengan en cuenta los aspectos instintivos de la personalidad, considerando insuficientes los cambios puramente cognitivos. Así, a pesar de sus supuestos materialistas, las investigaciones de Panksepp tienen puntos en común con aspectos de la teoría de Jung, con sistemas instintivos similares, demostrando la importancia de la historia de las especies para la constitución psíquica del ser humano, contrarrestando la creciente ola de construcionismo social, que tuvo su auge impulsado por los movimientos behavioristas de los años 50, y que aún hoy permean el imaginario popular. ■*

**Palabras clave:** neurociências, psicoterapia analítica, Jung, Carl Gustav, 1875-1961, comportamento instintivo, emociones

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