

# **A Neuroscientific View on the Enneagram of Personality**

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## **ABSTRACT**

The Enneagram is a personality typing system that categorizes individuals into nine distinct types based on their emotional and instinctual patterns. Recently, this typology has gained considerable attention from neuroscientists, in terms of its potential to help us chart the complexities of emotional brain processes. This article will explore the correlations between the Enneagram and the seven primary-process emotional systems charted by neuroscientist Jaak Panksepp: FEAR, RAGE, GRIEF, SEEKING, LUST, CARE, and PLAY. These correlations may potentially have significant implications for our future understanding of the connection between neuroscience and personality.

*Keywords:* (enneagram, personality, affective neuroscience)

## INTRODUCTION

The Enneagram is one of the most renowned personality typing systems in the world today. It is widely used in therapy and personal development, offering insights into how individuals experience themselves and interact with the world. The Enneagram categorizes people into nine distinct types based on their underlying emotional and motivational patterns. Many people attest to this system's astonishing accuracy in mapping different patterns of human personality.

But if the Enneagram is an accurate description of personality, one would expect it to have a basis in the neurobiology of the brain. And indeed, the Enneagram has awakened some interest within neuroscientific circles. For instance, neuroscientist Dan Siegel has acknowledged the Enneagram as unique in outlining the "internal architecture of mental functioning" (2010). However, the connection between the Enneagram and neuroscience is still a matter of speculation.

The study of personality patterns in the brain touches upon one of the greatest mysteries in science today: the connection between body and mind. It remains largely unclear exactly how activity within the brain can give rise to the diversity of personalities seen among individuals. Yet, some significant research developments have been made. Neuroscientists have demonstrated how specific brain regions become active when a person feels a particular emotion or behaves in a certain way, which can be linked to various aspects of personality.

The Enneagram of Personality could be a valuable bridge between psychology and neurobiology, allowing us to gain a deeper understanding of how personality patterns arise from neurobiological processes in the brain. In such a way, the Enneagram could potentially

navigate us through the complexities of neuroscience, shedding light on the intricacies of brain function.

This article will explore the connection between the Enneagram and the neurobiology of the brain. The Enneagram will be paralleled with affective neuroscience discoveries made by neuroscientist Jaak Panksepp, who identified seven primary emotional networks in the brain: FEAR, RAGE, GRIEF, SEEKING, LUST, CARE, and PLAY. These seven emotional systems will be correlated to the Enneagram Triads and the Instinctual Drives.

## **OVERVIEW OF THE ENNEAGRAM SYSTEM**

The Enneagram was first introduced to the modern world by Russian-Armenian teacher George Gurdjieff, who established it as a psychological development system. It was later adapted as a personality typing system by Bolivian teacher Oscar Ichazo, and then integrated with concepts of Western psychology by Chilean psychiatrist Claudio Naranjo.

The Enneagram of Personality is a system of nine different personality types numbered One to Nine. The nine types represent specific ways an individual's personality constellates around one of three primary negative emotions: anger, fear, and grief. Accordingly, the nine types are assembled into three main groups, also called 'Triads':

- **The Anger Triad** (Types Eight, Nine, and One)
- **The Grief Triad** (Types Two, Three, and Four)
- **The Fear Triad** (Types Five, Six, and Seven)

During early childhood, a difficult experience will be predominantly felt as a variation of either anger, fear, or grief, depending on the individual's emotional temperament or

character. These variations form the basis of the nine Enneagram Types. All nine type patterns exist within each of us, but one pattern will be dominant, resulting in the dominant Enneagram Type.

The following is a brief description of the nine types regarding their specific emotional pattern and typical characteristics. These characteristics are given as they are described in the Enneagram Institute.

### *The Anger Triad*

- **Type Eights (The Challenger)** deal with their anger by acting it out and taking an oppositional stance toward others and the world. They tend to be self-confident, decisive, willful, and confrontational.
- **Type Nines (The Peacemaker)** deny their anger, and thus, they are mostly unaware of it and usually avoid conflict. They tend to be receptive, reassuring, complacent, and resigned.
- **Type Ones (The Reformer)** deal with their anger by attempting to control and suppress it, resulting in a critical attitude toward themselves and others. They tend to be principled, purposeful, self-controlled, and perfectionistic.

### *The Grief Triad*

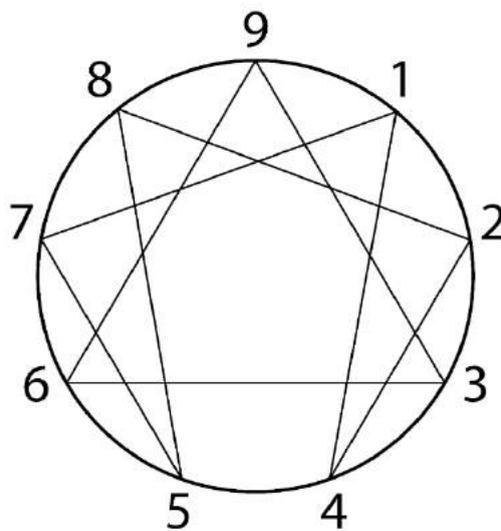
- **Type Twos (The Helper)** deal with their grief by attempting to gain love from others and being seen as helpful and caring. They tend to be generous, demonstrative, people-pleasing, and possessive.
- **Type Threes (The Achiever)** deal with their grief by denying it and strive to be seen as valuable and successful in the eyes of others. They tend to be adaptable, excelling, driven, and image-conscious.
- **Type Fours (The Individualist)** deal with their grief by becoming preoccupied with their sense of identity and uniqueness. They tend to be expressive, dramatic, self-absorbed, and temperamental.

### *The Fear Triad*

- **Type Fives (The Investigator)** fear being overwhelmed and unable to cope with the outer world. They deal with this fear by withdrawing into their inner, mental world. They tend to be perceptive, innovative, secretive, and isolated.
- **Type Sixes (The Loyalist)** deal with their fear by denying it and finding security from different sources such as relationships, alliances, or belief systems. They tend to be engaging, responsible, anxious, and suspicious.
- **Type Sevens (The Enthusiast)** fear their inner world and try to avoid feelings of pain and loss. They deal with this fear by keeping their minds distracted and engaging in stimulating activities in the outer world. They tend to be spontaneous, versatile, acquisitive, and scattered.

### *The Enneagram Symbol*

The Enneagram is portrayed as a circle where each of the nine types is positioned at equal distances along the outside (Figure 1). Inside the circle are several connecting lines showing how the nine types are related to each other.



*Figure 1: The Enneagram Symbol*

### *The Lines of Stress and Growth*

The Enneagram symbol (Figure 1) shows how the nine types are connected and related. There are several connecting lines inside the circle. Each Enneagram Type is connected to two other types via these inner lines. The lines represent how each type responds and behaves under different conditions. One line, the Direction of Growth, shows

how a type behaves when they are secure, thriving and growing. The other line, the Direction of Stress, represents how a type behaves under pressure or loss of control.

For example, Type Five is connected to Type Seven (via the Direction of Stress) and Type Eight (via the Direction of Growth). Under stressful conditions, a Type Five will behave similarly to an unhealthy version of Type Seven, becoming distracted and mentally scattered. However, when a Type Five feels secure and safe, they will tend to behave similarly to a healthy version of Type Eight, showing strength and decisiveness.

### ***The Three Instinctual Drives***

The Enneagram system further identifies three **Instinctual Drives** (also called Instincts). These are biological processes that motivate individuals to engage in certain behaviors, in order to promote their survival and the survival of their species. The Instincts are crucial to our functioning as biological organisms and, as such, have a significant influence on our personalities.

The three Instinctual Drives are:

- **The Self-Preservation Instinct:** concerned with survival, well-being, and security.
- **The Sexual Instinct:** concerned with attraction, courtship display, and sexual competition.
- **The Social Instinct:** concerned with social connections, relatedness, and intimacy.

Every person has (in addition to the nine type patterns) all the Instinctual Drives operating within them. However, for each person, one of the Instincts is more prioritized than

the others. This is known as the *dominant Instinct* and will receive the most focus and attention. The dominant Instinct, thus, has a stronger influence on the personality than the other two Instincts, and will significantly shape an individual's attitudes and values. Everything in the personality will gravitate around being able to meet the needs of the dominant Instinct. As such, each person will have a dominant Instinctual Drive and a dominant Enneagram Type pattern.

A person with a dominant Self-Preservation Instinct is called a Self-Preservation Type and is mainly concerned with matters of survival, well-being, and lifestyle. A person with a dominant Sexual Instinct is called a Sexual Type, and is primarily concerned with generating a sense of attraction and chemistry in their activities and interaction with others. A person with a dominant Social Instinct is called a Social Type and is primarily concerned with their social relationships.

### ***The Self-Preservation Instinct***

The Self-Preservation Instinct is the drive for survival and well-being. It is concerned with matters of health, comfort, food, shelter, routine, and material security. People whose dominant Instinct is Self-Preservation tend to focus on meeting those needs; they are often disciplined, practically oriented, and have the ability to set goals and fulfill them.

### ***The Sexual Instinct***

The Sexual Instinct arises from the primal urge to reproduce and ensure one's genetic material can make it into the next generation. It is more than simply a drive for reproduction;

it also involves the act of courtship display and attracting significant others. People with a dominant Sexual Instinct are often preoccupied with chasing the feeling of ‘chemistry’ and finding compatibility with another person. This can include a sexual partner, lover, or friend. They constantly seek intense and stimulating relationships, interests, and activities, and enjoy becoming wholly immersed and merged with them. This sense of merging is not to be confused with social intimacy, which is a concern of the Social Instinct.

### ***The Social Instinct***

The Social Instinct is the drive for social relatedness and intimacy. People with a dominant Social Instinct need to feel a sense of belonging and strive to connect with others. They are often well-attuned to other people. They may actively try to form new relations and have a keen eye for social hierarchies, using this to elevate their position and social standing. The Social Instinct can motivate a person to act altruistically, protecting and conserving groups for the greater good of everybody involved.

## **THE NEUROSCIENCE OF EMOTION**

Research into the science of emotion has made significant progress in recent years, largely thanks to advances in technological methods such as brain imaging. These advances have enabled researchers to map neural pathways and study the processes that underlie emotional experiences. As such, they can create realistic models of how emotions function in the brain.

Based on discoveries made through neural mapping of the brain, primary emotional responses have been found to emerge from the midbrain and limbic system (Panksepp & Biven, 2012; Venkatraman et al., 2017). These primary emotional responses are then further modulated and modified by higher regions in the neocortex. The neocortex acts as a control center, allowing us to reflect and contemplate on our emotions and regulate how we handle and express them. For example, when an individual is angry, the raw emotion of rage emerges from the midbrain and limbic system but is then modulated by the neocortex to be expressed in ways that are somewhat acceptable to the surrounding community.

## **THE SEVEN PRIMARY-PROCESS EMOTIONAL SYSTEMS**

Jaak Panksepp was a leading figure in the field of affective neuroscience, which studies how emotions arise in the brain. Through his neurobiological investigations in mammals, he charted seven primary emotional networks in the midbrain and limbic system (Panksepp 2004; Panksepp & Biven, 2012). These networks are genetically inborn and hardwired into the brain. In other words, they are instinctive and, therefore, do not need to be learned. They emerged very early in the course of brain evolution, arising from ancient structures deep within the most primitive parts of the brain. Panksepp called these the **primary-process emotional systems**, identifying **FEAR, RAGE, GRIEF, SEEKING, LUST, CARE, and PLAY**. Each causes distinct affective experiences and behaviors in the animal. They are capitalized to distinguish them from the ordinary usage of these words.

Each primary-process emotional system follows an ascending pathway that runs up from the midbrain to the limbic system, and finally connects to higher brain regions in the

neocortex. The PAG (periaqueductal gray) is an important region in the midbrain that is involved in all of these emotional systems.

Each of the primary emotional systems has either a positive or negative valence; they can cause attraction or aversion in response to a given situation. FEAR, RAGE, and GRIEF are modes of negative reaction, generating the primary emotions of fear, rage, and grief. SEEKING, LUST, CARE, and PLAY are modes of positive reaction, generating the primary emotions of excitement, sexual lust, affection, and joy, respectively.

The following is a brief overview of the seven primary-process emotional systems in the brain:

### ***The FEAR System***

The function of the FEAR system is to signal danger and orient the animal, so that it can avoid and escape the threat. It causes physiological changes in the body, such as increased heart rate and blood flow. It can trigger different types of behaviors depending on the perceived threat level, mobilizing the animal to escape or causing it to freeze in its place. When the FEAR system is activated, the animal will have a negative, fearful experience that urges it to get away from the FEAR-inducing stimulus, and the associated physiological changes will aid it in doing so as quickly as possible. When the FEAR system is experimentally stimulated in humans, subjects report feelings of intense fearfulness and anxiety with no apparent cause. The FEAR network runs through the PAG (periaqueductal gray), hypothalamus and amygdala.

### ***The RAGE System***

The RAGE system enables an animal to defend itself and fight against competitors. It is commonly activated when an animal has difficulty in meeting its needs or when it is confined or restrained. When the RAGE response is evoked, animals will move toward the cause of their frustration and engage in aggressive behaviors such as biting and scratching. Stimulation of the RAGE system in humans causes intense anger attacks. This system's neural network runs through the PAG, hypothalamus, and amygdala.

### ***The GRIEF System***

The GRIEF system is activated when an individual becomes separated from their caregiver or loved one, and is associated with feelings of distress, sadness, and loss. It can cause a young animal to exhibit distress vocalizations (crying), in order to be noticed by their caregiver and ensure they are taken care of. If contact with the caregiver is not re-established, the young animal will gradually stop crying and collapse into a state similar to depression. It is thought that human grief and sadness are caused by the GRIEF system. The GRIEF system is located in the PAG, thalamus, and anterior cingulate gyrus.

### ***The SEEKING System***

The SEEKING system motivates an animal to seek out resources necessary for survival. It is associated with exploratory, appetitive, and inquisitive behaviors that benefit individual animals by helping them locate food, shelter, and other beneficial resources. It

motivates them to interact and engage with their environment, and evokes feelings of excitement, anticipation, and curiosity.

The SEEKING system is also involved in all the other emotional systems and plays a supporting role in their functioning. For example, when coupled with the LUST or PLAY systems, it arouses a sense of purpose and interest.

The brain areas associated with the SEEKING system are the PAG, hypothalamus, ventral tegmental area (VTA), nucleus accumbens, and medial forebrain bundle. When activated, the SEEKING system causes the release of the brain chemical dopamine.

### ***The LUST System***

The LUST system motivates animals to find suitable mates and reproduce. It involves different feelings associated with sexual attraction and arousal. The LUST system prompts animals to engage in courting and mating behaviors, which vary widely depending on the species.

Traditionally, sexual lust is often not considered an emotion but a bodily instinct. However, Panksepp and many others argue that it should be regarded as an emotion because it produces complex instinctual behaviors, which are characteristic of emotions.

The LUST system is located in the PAG, hypothalamus, and amygdala. It is closely tied to the activity of sex hormones like testosterone.

### ***The CARE System***

The CARE system promotes nurturing and caring behaviors. It especially takes expression in the mother-child relationship, where it helps to ensure that offspring are properly taken care of, and all of their basic needs are met. The CARE system is associated with feelings of love and can result in various affectionate behaviors, such as caressing and embracing. Besides its role in mothering, it can also promote other social bonds where nurturance is involved. The CARE system is located in the PAG and hypothalamus. It is associated with hormones such as oxytocin and prolactin.

### ***The PLAY System***

The PLAY system promotes friendly interactions and enjoyment with other individuals. It stimulates laughter and playfulness and is particularly active during childhood. It prompts animals to engage in fun physical activities like chasing, poking, and wrestling. These activities help the animal learn social rules and develop social bonds. Behaviors associated with the PLAY system are accompanied by a feeling of intense social joy. The PLAY system is located in the PAG and thalamus.

## **THE THREE LEVELS OF EMOTIONAL BRAIN PROCESSING**

According to affective neuroscientific principles (Panksepp & Biven. 2012), there are three levels of emotional processing in the brain: primary, secondary, and tertiary. In addition to the primary-process emotional systems, there are also secondary and tertiary emotional

processes, which allow the brain to modulate, learn from, and reflect upon the primary emotions. Each of these processes exists in different brain regions, and they create a hierarchy that runs anatomically, from the midbrain to the limbic system and up to the neocortex. The primary-process emotions exist on the level of the midbrain and limbic system, the secondary processes occur largely in the limbic system, and the tertiary processes in the neocortex.

Moreover, The primary-process emotions are the foundation upon which the secondary processes can be established, and the secondary processes guide the formation of the tertiary processes. As such, the primary-process emotions are embedded (nested) and re-represented in secondary processes, which are, in turn, embedded within tertiary processes. Thus, the primary-process emotions influence the learning that occurs at the secondary-process level, and the secondary processes guide the formation of higher cognitive capacities at the tertiary-process level.

## **PREVIOUS NEUROSCIENTIFIC DESCRIPTIONS OF THE ENNEAGRAM**

In 2009, medical doctor Jack Killen published an article (Killen, 2009), which correlated the Fear, Anger, and Grief Triads to the FEAR, RAGE, and GRIEF systems within the affective neuroscience framework put forth by Jaak Panksepp. This grew out of Killen's collaboration with Dan Siegel, David Daniels, Denise Daniels, and Laura Baker. In the article, he further speculated how each of the nine types is based on a specific way of handling their underlying negative primary emotions, either through sustenance, suppression,

or shifting/reframing. This correlation between the Enneagram Triads and the negative primary emotional systems is a highly plausible argument.

## **THE ENNEAGRAM AND THE SEVEN PRIMARY-PROCESS EMOTIONAL SYSTEMS**

As has been explained, the Enneagram of Personality is a map of emotional and instinctual patterns. The brain regions primarily responsible for emotions and instincts are the midbrain and limbic system. Therefore, it is reasonable to hypothesize that the Enneagram has a neurobiological basis in these regions. Furthermore, the nine type patterns and Instinctual Drives may emerge from distinct neural networks within these brain regions. The most active of these networks might determine an individual's dominant Enneagram Type and Instinctual Drive.

The central proposition of this article is that the Enneagram Triads and Instinctual Drives correspond to emotional and instinctual patterns that arise from Panksepp's seven primary-process emotional systems:

- The Fear Triad corresponds to the FEAR system.
- The Anger Triad corresponds to the RAGE system.
- The Grief Triad corresponds to the GRIEF system.
- The Self-Preservation Instinct corresponds to the SEEKING system.
- The Sexual Instinct corresponds to the LUST system.

- The Social Instinct corresponds to the CARE and PLAY systems.

\*Note that the Instinctual Drives correspond to the *positive* emotional systems, while the Triads correspond to the *negative* emotional system.

Within this hypothesis, the nine Enneagram Types would be psychological patterns that emerge from the FEAR, RAGE, and GRIEF systems. They may be either different neural circuits within the primary emotional systems or higher processes of emotional modification.

The following sections will explore the correlations between each primary-process emotional system and its Enneagram counterpart.

### ***The Fear Triad and the FEAR System***

The fearful emotion generated by the FEAR system corresponds well to the underlying emotion of the Enneagram Fear Triad. The Fear Triad consists of Types Five, Six, and Seven, whose personalities are all constellated around the experience of fear. Thus, the neural circuitry of the FEAR system may give rise to the psychological patterns seen in the Fear Types, either on the primary process level or as higher secondary and tertiary brain processes that modulate the primary FEAR system.

### ***The Anger Triad and the RAGE System***

The feelings of anger and rage that are generated by the RAGE system correspond to the underlying emotion of Types Eight, Nine, and One, which make up the Anger Triad. Thus, the RAGE system may be the neurobiological basis from which the Anger Type

patterns emerge. The Anger Type patterns could either be different neural circuits within the primary RAGE system, or secondary and tertiary processes that modulate the primary RAGE system.

### ***The Grief Triad and the GRIEF System***

The grief and social distress generated by the GRIEF system correspond well to the underlying emotion of the Grief Triad, where the personality is constellated around the experience of grief. The GRIEF system serves to signal the loss of care and social support. It is triggered by separation from a caregiver and results in feelings of distress and sadness. The GRIEF system causes animals to exhibit distress vocalization (crying), helping them to be noticed by caregivers and reestablish contact. When activated, the GRIEF system can also prompt individuals to seek out the company of others.

Common to all three Grief Types is the desire to be noticed by others and adapting their behavior to gain love or admiration. For this reason, the Grief Types are often called the Image Types because they are often highly focused on their presented image to others. This relates to the function of the GRIEF system, which is to help an individual be noticed by others and reestablish social contact.

### ***The Self-Preservation Instinct and the SEEKING System***

There are many striking similarities between the SEEKING system and the Self-Preservation Instinct. Both are concerned with basic survival and well-being, the acquisition of resources, and the motivation to fulfill tasks and goals. Therefore, the basic aspects of the

Self-Preservation Instinct might correspond to the behaviors and motivations that emerge from the primary-process SEEKING system located in the PAG, hypothalamus, ventral tegmental area, nucleus accumbens, and medial forebrain bundle. Further aspects of the Self-Preservation Instinct may correspond to secondary and tertiary processes emanating from the higher reaches of the SEEKING system.

This section will use quotes from Enneagram authors and neuroscientists to compare the Self-Preservation Instinct and SEEKING system:

### **Descriptions of the Self-Preservation Instinct:**

Enneagram author Russ Hudson writes the following about the Self-Preservation Instinct (2020):

*It [Self-Preservation] is an awareness of our health, well-being, and of having the necessary resources for our survival. (p.3)*

....

*Self-Preservation is a fundamental to all life - it is a drive way more fundamental than anything in our personality. ... It manifests in animals as ways to obtain food and shelter, and avoid danger. (p.4)*

....

*The second zone of the Self-Preservation Instinct is practicality and resources. Part of survival is having necessary resources. In human affairs this also means the management and maintenance of those resources. These can include items such as money, possessions, time and energy. (p.4)*

**Descriptions of the SEEKING system:**

Jaak Panksepp and Lucy Biven write the following about the SEEKING system (2012):

*One of the most important instinctual - emotional systems of the brain is the one that allows animals to search for, find, and acquire all of the resources that are needed for survival. Arousal of this SEEKING system produces all kinds of approach behaviors.*

(p.95)

....

*Suppose that an animal is hungry. Hunger feels bad, but the encouraging sense of purpose that emanates from SEEKING arousal still makes the animal curious about its environment and sufficiently optimistic to engage in a focused and energetic search for food. (p.99)*

....

*SEEKING arousal then inspires animals to enthusiastically search for the many types of resources that they need. When animals are hungry, thirsty, or cold, especially when there are indications of available resources in the environment, their SEEKING systems go into overdrive as they forage for food, water, and shelter. (p.100)*

....

*The SEEKING - EXPECTANCY system is a general-purpose system for obtaining all kinds of resources that exist in the world, from nuts to knowledge, so to speak. In short, it participates in all appetitive behaviors that precede consummation; it generates the urge to search for any and all of the "fruits" of the environment. (p.103)*

....

*When we look forward to anything, when we work toward anything, and when we vigorously try to escape from anything, the SEEKING system energizes our behaviors and attitudes. (p.143)*

### ***The Sexual Instinct and the LUST System***

If comparisons are drawn between the Sexual Instinct and the LUST system, the similarity is evident: both are concerned with sexuality and the act of courtship display. Therefore, the basic aspects of the Sexual Instinct might correspond to behaviors and motivations that emerge from the primary-process LUST system in the PAG, hypothalamus, and amygdala. Further aspects of the Sexual Instinct may correspond to secondary and tertiary processes emanating from the upper end of the LUST system.

In this section, a comparison will be drawn between quote-descriptions of the Sexual Instinct and the LUST system:

#### **Description of the Sexual Instinct:**

Luckovich (2021):

*This [Sexual] instinct is the drive to put ourselves ahead of sexual competition. ... Organisms invest an enormous proportion of activity and energy in eliciting the attention and attraction of a potential mate. All the bright feathers, deafening calls, frenetic dances, and other impractical investments of energy seen in animals are for a sexual goal. This instinct discerns who or what we're attracted to and provides the*

*motivation to pursue it, to enhance and display characteristics that make us more enticing. (p.18)*

....

*The Sexual Instinct seeks sexual partners with whom we share suitably strong chemistry to bring us to a state of sufficient excitation for full surrender during the sexual act. (p.18)*

....

*The Sexual Instinct is attuned to and organized around patterns and pathways of excitation and physiological and psychological arousal. What begins as tracking sexual attraction extends to a sensitivity to what arouses energy when this instinct is engaged. (p.20)*

### **Descriptions of the LUST system:**

Panksepp & Biven (2012):

*When animals are in the throes of the LUST system, they exhibit abundant "courting" activities and eventually move toward an urgent joining of their bodies with a receptive mate. (p.36)*

....

*The LUST system lies at the very fulcrum of our attempts to understand basic mammalian physical drives (sexual affects). (p.245)*

....

*Sexuality in mammals, at the primary-process level, is a product of the LUST circuitries. (p.282)*

### ***The Social Instinct and the PLAY System***

The Social Instinct and the PLAY system share many similarities. Integral to both is a concern with social interactions, cooperation, and social hierarchy. Therefore, some aspects of the Social Instinct might correspond to behaviors and motivations that emerge from the primary-process PLAY system located in the PAG and thalamus. Further intricacies of the Social Instinct may correspond to secondary and tertiary processes emanating from the higher reaches of the PLAY system. There are also other aspects of the Social Instinct which may instead correspond with the CARE system; this will be discussed later in the article.

This section will compare descriptions of the Social Instinct and the PLAY system:

#### **Descriptions of the Social Instinct:**

Hudson (2020):

*When this zone [of the Social Instinct] is strong, we are able to show up with others and create truly collaborative and reciprocally beneficial relationships. (p.8)*

....

*SO [The Social Instinct] is about the ability to get together for whatever we might be creating or exploring. (p.8)*

....

*People strong in SO [the Social Instinct] work at their relationships and strive for reciprocity. (p.8)*

....

*This zone [of the Social Instinct] helps us in our ability to engage others, and to strengthen connections when it serves our purposes or desires. ... People strong in this zone value communication. (p.8)*

....

*The third zone of the Social Instinct is "Participation and Contribution." Humans need to be able to contribute, to know that their efforts are meaningful to others. It is instinctual. In this sense, we can also be passionate about what we contribute to others and this is Social.*

*Participation also brings a sense of belonging-that we are welcomed and that what we are doing matters. (p.8)*

### **Descriptions of the PLAY system:**

Panksepp & Biven (2012):

*The PLAY system allows children to learn about social rules of conduct-for example, when to cooperate and when to compete, and at times to retreat in good-humored ways and let someone else win. ... So when children play, they learn valuable social skills, such as the necessity of reciprocity and giving way on occasion. (p.xix)*

....

*The evidence indicates that PLAY is one of the primary-process, genetically determined social urges. (p.356)*

....

*Among the possible social functions [of PLAY] are the learning of various competitive and noncompetitive social skills. These range from behaviors that facilitate social*

*bonding and social cooperation, to those that promote social rank and leadership, as well as the ability to communicate effectively. (p.373)*

....

*Compared to animals that have had little history of play, those with a history of abundant play experiences spend more time with others suggesting a social-bonding (friendship) function of play. ... Such a function could be very useful for establishing future social alliances and cooperation and perhaps even empathy. (p.374)*

....

*The PLAY urge may be of critical importance in the cultural and epigenetic construction of sophisticated social brains that can understand the emotional states and motives of others, opening the doors to sophisticated social cooperation and fellow feelings of camaraderie, compassion, empathy, and solidarity with and toward others. PLAY promotes social intelligence. (p.379)*

....

*This [PLAY] activity helps to produce satisfied and self-actualized adults because it promotes emotional growth and social sensitivity. (p.385)*

### ***The Social Instinct and the CARE System***

The final comparison to be drawn is between the Social Instinct and the CARE system. Here too there are considerable similarities as both are concerned with caregiving, empathy, and intimacy. Thus, the caregiving aspects of the Social Instinct may correspond to behaviors and motivations emerging from the primary-process CARE system in the PAG and hypothalamus. Further intricacies of the Social Instinct may correspond to secondary and tertiary processes emanating from the upper end of the CARE system. Other aspects of the

Social Instinct may instead correspond to the PLAY system, as was shown in the previous section.

This section will compare descriptions of the Social Instinct and the CARE system:

**Descriptions of the parental and social caregiving aspect of the Social Instinct:**

Hudson (2020):

*SO [the Social Instinct] began with parenting. Most species on earth do not parent - it is a fairly late development in evolution. But the awareness of the state of the young became crucial as more complex animals required more time to "grow up." So the parental bond is the origin of Social [Instinct]. (p.7)*

....

*It [the Social Instinct] is also what helps us be good parents/caregivers - we have to be able to sense what the child needs. It helps us adapt and respond to what we detect in others. (p.8)*

Luckovich (2021):

*The origin of the Social Instinct in mammals is in the bond between a mother and child. To be able to read and attune to another's experience, needs, and intentions is important for negotiating survival within a group, but an even more basic principle for mammalian life is that offspring must matter to parents. (p.22-23)*

**Descriptions of the parental and social caregiving aspect of the CARE system:**

Davis & Panksepp (2018):

*The CARE/Nurturance system motivates and coordinates the caretaking and rearing of infants from the time they are totally dependent newborns throughout the long period of early childhood development. ... However, the CARE system may also motivate social helping behaviors in general. (Ch. 1)*

Panksepp & Biven (2012):

*This chapter will focus on the CARE system, which is epitomized by maternal devotion. We will discuss emerging knowledge about the ways mammalian brains generate nurturing impulses; then we will briefly discuss how these chemistries may control social learning and higher social cognitions. (p.284)*

....

*Research on the primary-process aspects of the social brain is currently moving forward rapidly. The neuroscientific community is recognizing the importance of CARE and the other primary social systems in the brain. (p.286)*

Panksepp & Biven on the role of oxytocin in social CARE behaviors (2012):

*The hormone oxytocin, along with some other chemicals, plays a crucial role in generating maternal behaviors within the CARE system. ... Animals become both less aggressive and more confident and nurturant when their brains are awash in oxytocin. (p.37)*

....

*In many experiments oxytocin does promote various pro-social behaviors and attitudes in animals and humans. Among humans, it increases the willingness to trust others in economic exchanges. ... Under the right conditions (with someone you already love) oxytocin makes us more pro-social - more tolerant and friendlier. (p.38)*

....

*Social temperaments of animals can be modified by either promoting or diminishing the genetic expression of oxytocin or vasopressin. Not only do these changing neurochemical tides modify primary-process social responsiveness, but they also percolate through the nervous system to regulate many higher brain processes such as social memories and cognitions. (p.308)*

## **CONCLUSION**

This article has taken a comprehensive look at how the Enneagram Type patterns and Instinctual Drives might relate to the neurobiology of the brain. The Enneagram Triads and Instinctual Drives show a high degree of correlation with Panksepp's primary-process emotional systems.

Affective neuroscience and the Enneagram may be seen as complementary fields of study that can help inform one another. They are both concerned with emotions, which lie at the intersection between body and mind. As such, the two can work to achieve a greater understanding of the body-mind connection.

The Enneagram can shed some light on the inner workings of the brain by offering a model that explains how the different primary emotional systems are organized. It can also indicate how the emotional systems combine in different ways to produce secondary

emotions. In this way, the Enneagram might serve as a map that can guide neurobiological research through the intricacies of emotional brain processes.

Thorough studies will be needed to support the correlations and hypotheses outlined in this work. Of particular interest is the use of brain imaging technologies, which can identify neural pathways that are activated when subjects report specific emotions. The results of such studies can be compared and contrasted to Enneagram analyses to determine if there are any correlations or patterns of interest. In the future, a fully integrated neurobiological model of the Enneagram may possibly be developed through further research.

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