

# **SPECTRUM OF EMOTIONS**

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## **From the evolution to the revision of the modern psychiatry and psychology**

Master Thesis submitted in fulfillment of the Degree

Master Business Administration

in MBA Study Program

Submitted to Dr. Christian Weismayer

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Vienna, 07.01.2020



## Affidavit

I hereby affirm that this Master's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

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## Abstract

The thesis describes the phenomenon of “emotions” from a different perspective. The objective of the thesis is to present different theories and research about emotions and examine how the phenomenon has changed through the centuries. For this reason, the title of the thesis also includes “evolutionary.” The different schools and different approaches have tried to define emotions and determine how to classify them.

The thesis builds a connection among the most three most important persons in the psychology: Sigmund Freud, Carl Gustav Jung and Stanislav Grof. It shows how these persons are connected in terms of their work, mainly related to the unconscious, and it also includes other important persons in the field of psychology such as Charles Darwin, Karl Jaspers, Robert Plutchik and Paul Ekman. The phenomena of consciousness, the unconscious and suppressed memories constitute important parts in the thesis, offering an insight into the problematic as well as self-healing potential of the human body.

Finally, the last part of the thesis is devoted to transpersonal psychology, which has been omitted or rejected by modern psychiatry and psychology for no specific reason. The work also connects the emotional theories to empirical work like in marketing or advertising. The conclusion of the thesis also suggests how theories about emotions can be linked to empirical world, and used in marketing or advertising.

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## Introduction

The term 'emotions' has been widely described by many researchers and evolutionists. My objective was to choose a relevant content and introduce research and theory about emotions in such a way that even a reader without previous knowledge will get an overview of the issues. The modern research contains endless number of pages comparing various emotional phenomena from different perspectives. That is why it is important to choose just a certain topic and deal with it more profoundly to avoid confusion and feeling being lost. In my case, I have worked on theories and research about emotions from an evolutionary perspective.

The thesis gives an overview on basic emotional theories and research of emotional episodes, moods, basic or complex emotions. A theoretical part introduces the brain and its influence on emotions. I believe that without this medical contribution, the thesis would be incomplete.

Finally, the source for the thesis has been specialised literature and dozens of scientific journals, from predominantly modern research. The last fifty years of psychological and psychiatric research under Professor Stanislav Grof, in particular, has an enormous benefit for modern society and offers a new path to the self-discovery. As already mentioned in the abstract, the transpersonal approach in psychiatry has been omitted and rejected without a logical reason: however, the thesis supports a positive approach and offers valuable arguments for readers and people working in the psychiatric and psychological fields.

# 1. Definition of emotions

## 1.1. *What are emotions?*

To analyse the word “emotions” is not an easy task. Linking emotions to words like joy, love, hate, anger and grief - these are probably the first thoughts that come to one’s mind. But even to try defining the emotions with just one simple definition is impossible, because they consist of many different “aspects”, such as various experiences, stimuli, situations and responses (Kringelbach, 2014). Already George Mandler (1975) said that an attempt to try and define emotions must result in a huge failure (Eelen, 2018).

The probable explanation for why it is not possible to clearly define the term is the fact that when trying to do so, a simple definition seems to exclude other important features, and thus the term becomes inexact. According to Nakonecny (2017) the emotions can be recognized mainly by our facial “language” (laughter, tears, grimacing, excitement or joy) or, alternatively they can have a hidden character. It is also important to note that the emotions can be long lasting (for example: hate, love) or short lived (anger or fear) (Nakonecny, 2017).

Some emotional aspects can also be private, but they always tend to manifest publicly (blushing, vocalization). Consequently, while emotions can be highly communicative (signals, signs), they can also be merely reflective or they can simply evaluate a situation (Nakonecny, 2017).

The emotions can even be useful or unwelcome, socially appropriate or socially inappropriate (tears or laughter due to excitement) (Kringelbach, 2014). Additionally, they may be caused by social obligations (feelings of guilt or remorse) (Kringelbach, 2014). Lastly, the emotions are not limited by either location or time, because they can manifest spontaneously (for example by thinking of someone or a situation, watching TV or reading newspapers) (Kringelbach, 2014).

It is well known that the emotions are linked to physiological changes and to feelings. They are mostly short-term, but the lasting effects may last longer and create a huge impact on a human health, mood or even personality. For this reason, the border line between the mood and the emotion may seem unclear or very thin.

Finally, they are normally provoked as a response to a certain stimulus, even though that stimulus may have a different origin (Nakonecny, 2017).

The features vary from point to point, depending on the researchers’ perception and interests of researchers. On one hand, cognitive psychologists describe how emotions are caused and how emotions influence processes such as memory, attention and reasoning (Oatley et al., 2014). On the

other hand, neurophysiologists are interested in neurophysical changes, and behaviourists in expression or behaviour (Stuchlikova, 2007).

Paul Ekman (1994) refers to the term “basic emotion”, which should be examined in terms of evolution, and their current function. Furthermore, since the emotions have developed as a reaction to fundamental human tasks, other authors refer to human circumstances (predicaments) that are universal, such as achievement, loss and frustration (Johnson-Laird and Oatley, 1992).

Tooby and Cosmides (1990) also stress the evolutionary approach to the emotions. Moreover, they believe that evolution has a great merit for human understanding of the emotions. According to the authors, the emotions are linked to recurrent (adaptive) solutions including fighting, falling in love, escaping predators or confronting sexual infidelity. Each of these “solutions” has been repeated in terms of evolution (Cosmides et al., 1999).

## *1.2. Various definitions of emotions*

As mentioned in the previous chapter, to be able to define the emotions correctly, one needs to take into consideration a much larger scale of emotional processes including emotional relations, episodes, moods and affects.

Scherer (1987) deals with the term “affects” and states that affects are somehow superior to all emotional states (from pleasant to unpleasant, called valence), because the affect actually includes the following patterns: emotions (they can be negative or positive), emotional episodes (for example: arguments between partners), moods (euphoria), dispositional beliefs (state of readiness, tendency to act in a specific way) and traits (irritability).

Paul Ekman (1977) defines the emotions in this way: *“Emotions refers to the process whereby an elicitor is appraised automatically or in an extended fashion, an affect programme may or may not be set off, organised responses may occur, albeit more or less managed by attempts to control emotional behaviour”* (Kringelbach, 2014).

Robert Plutchik (1980) gives the following definition:

*I. Emotions are generally aroused by external stimuli.*

*II. Emotional expression is typically directed toward a particular environmental stimulus, which it has been aroused.*

*III. Emotions may be, but are not necessarily or usually, activated by a physiological state.*

IV. There are no “natural” objects in the environment (like food or water) toward which emotional expression is directed.

V. An emotional state is induced after an object is seen or evaluated, and not before” (Kringelbach, 2014).

Scherer (1987): “Emotion is defined as an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism.”(Scherer, 2016).

Lazarus describes (1991) the emotions as follows: “Emotion is...’ - a complex disturbance that induces three main components: subjective affect, physiological changes related to species-species forms of mobilization for adaptive action, and action impulses having both instrumental and expressive qualities [...]. The quality and intensity of the emotion and its action impulse all depend on the particular kind of cognitive appraisal of the present or anticipated significance of the transaction for the person’s well- being” (Kringelbach, 2014).

To simplify the task, Paul Ekman (1972) introduces six basic emotions: happiness, anger, sadness, surprise, disgust and fear. However, love and guilt are not considered to be pure emotions, because they are to be considered as blends of emotions (Nakonecny, 2017).

### ***1.3.Distinguishing between emotions versus moods***

Moods and emotions may sound familiar, but they describe two different emotional episodes based on different factors. The reason they may sound familiar is the fact that they feel almost the same in terms of experience. Most academics even mention that the terms “mood” and “emotion” are related, but are also distinct phenomena (Ekman & Davidson 1994). Furthermore, they state that most academics admit that although emotions and moods are somehow close, they are often defined as very distinct phenomena (Beddie et al., 2005).

Similarly, some researchers have even noticed the confusion in terminology (Alpert & Rosen, 1990; Batson, Shaw, & Oleson, 1992; Bless & Schwarz, 1999; Ekman & Davidson, 1994; Ketaj, 1975; Lormand, 1985), and others describe the research on emotion and memory as ambiguous (Parkinson, Totterdell, Briner, and Reynolds, 1996) (Beddie et al., 2005)

Paul Ekman wrote the book called *The Nature of Emotions (1994)*, where he described a few factors distinguishing emotions from moods.

Firstly, duration is a very important feature in differentiating between moods and emotions (Ekman & Davidson, 1994). According to Ekman, it is impossible to generalise about how long emotions last, but the latest research shows that moods last longer. Likewise, he describes emotions as brief, lasting from a few seconds to a matter of minutes. However, if emotions last for an extended time, he refers to emotional episodes rather than to constant or consistent emotions. If the emotional state lasts for weeks or months, then one refers to an affective disorder (Ekman & Davidson 1994).

Secondly, in the case of mood provocation, the emotions do not seem to have such a high “bursting” moment before a reaction. For example, when a person is in an angry mood, not much is needed to start a quarrel, and even a slightly unpleasant situation can be irritable.

Thirdly, in terms of modulation, it seems to be more difficult to regulate someone’s emotions if they originate during a mood (Ekman & Davidson, 1994). For example, a person who is in an irritable mood is less likely to be able to control their mood compared to another person. Furthermore, the anger in the irritable mood is described as more intense and less controlled (Ekman & Davidson, 1994).

Fourthly, according to Paul Ekman the moods do not bear their own unique facial expression, whereas, many of the emotions do (Ekman & Davidson, 1994). He points out that one infers an irritable mood from a person’s facial expression, but there is no distinctive facial expression of being irritated, what is more, there is no such expression for any other mood, emotional trait or affective disorder (Ekman & Davidson, 1994).

Fifthly, the other feature distinguishing moods from emotions is how they are called forth. Ekman (1994) suggests that a person should be able to specify the event (environment, memory or imagined event) that arouses emotions, but it is impossible to do the same for a mood. Additionally, he suggests two ways in which the emotions are brought forth: the first is a change in one’s neurohormonal or bio-chemical state (for example, lack of sleep or lack of food). The second way is when a mood is generated by a dense emotional experience. This is the case when a specific emotion is called forth at a very high intensity, and repeats again and again with a very short time in between (an example is when one becomes very angry and someone else adds even more tension). As a result, anger and tension are intensified at a higher level, but there is an interval of a few seconds between two stages: tension, and bursting into anger (Ekman & Davidson, 1994).

Lastly, it is important to describe the term “mood” and try to distinguish it from its stereotypical use. Mood is defined as all possible sorts of negative and positive feelings. Moods can be divided into two groups: long lasting feelings (aspects of the temperament of emotions), and short-lived feelings (pain

or pleasure). To be more precise, mood is described as a scale, moving up and down from unpleasant to pleasant. (Grinde, 2012).

The discovery of six basic emotions by Paul Ekman has had massive implication in different fields. Moreover, it proved that emotions are measurable. It is not arguable that marketing theories of emotions rely primarily on knowledge of psychology and its theories: in other words, the marketing theories on emotions enrich the psychological theories. The dilemma remains which theory or classification to apply, but, it depends on an objective and a task. Some theories such as Plutchik's wheel of emotion (1980) and Russel's Circumplex Model of the Emotions (1980) have been remodelled and reused in different models in advertising. Thanks to these models, one can observe nuances among emotions and, it is possible to combine them and thus one can approach customers more closely.

Ekman and Friesen (1978) updated the Facial Action Coding System (FACS), which describes all possible facial expressions that people can make (according to Ekman and Friesen there are 46 various units that can describe each facial movement) using algorithm viola jones cascaded classifier. However, it is important to note that the FACS catalogue is widely used ,for example, in medicine (depression monitoring), human resources (online employee recruitment), advertising and media testing (prediction of campaign advertising), and in the automobile industry (prevention of falling asleep when driving) (Crivelli & Fridlund, 2018)

"Eye see" is one of the facial coding services that have achieved great results in marketing (TV commercials, outdoor ads, online ads, social media and web pages). It has been proven that facial coding is twice as efficient as surveys in estimating the viral potential of videos. The latest research (2018), which was conducted on 1539 respondents and applied 56 online commercials, proved the efficiency of this method (Crivelli & Fridlund, 2018)

## 2. Categorisation of feelings

When mentioning the emotions, many other researchers refer to the similar term “feelings” at the same time. Karla McLaren, researcher and the author of the bestselling book *The Language of Emotions* (2010), believes that an emotion is a psychological experience that provides a human with information about the world, whereas a feeling is a conscious awareness of the emotion (McLaren, 2012). “Emotion is a noun, and feeling a verb” (McLaren, 2012).

*Emotion → Feeling → Naming → Acting on the information the emotion provides (McLaren, 2012)*

*Emotionally evocative stimulus → Emotion → Feeling → Naming → Acting on the information the emotion provides (McLaren, 2012)*

**Figure 1: Flowchart from emotion to action**

It is thus possible to divide feelings different into categories according to the school or approach (for example: phenomenology, existentialism), whereas emotions are divided into: primary and, secondary emotions, according to the object or operation, along with other classifications. On the other hand, not just the characterisation, but also the functionality of emotions forms an essential basis for understanding the phenomenon.

### *2.1. Max Scheler and his categorization of feelings*

The German philosopher Max Scheler was a pioneer in the development of phenomenology. He believed that humans are practical beings who try to master and manipulate their environment in order to get the desired results and avoid future suffering. He was convinced that practical knowledge and practical consciousness are to be considered individually (from a genetic point of view), and that human beings are not only concerned with practical affairs, but rather possess an ability to comprehend the world in the sense of human beings and their essence (Nakonecny, 2000).

Scheler’s most influential and important work is the book *Formalism in Ethics and a Non-Formal Ethics of Value* (1973). The motivation for his work was Immanuel Kant’s critique of scientific or formalistic approaches: Kant greatly influenced Scheler’s work and his perception of the world.



Scheler suggests that a material or a non-formal approach primarily arises in experience, especially in value experience. According to him, value is latent in all experience. For example, an object of perception such as a tree is not only green or high, but also beautiful and magnificent. These so-called objects of experience are actual bearers of values. (Scheler et al., 2009).

As a result, Scheler distinguishes among five types of shared co-feelings:

A., Feeling with one another

B., Vicarious feelings

C., Fellow feeling

D., Psychic contagion

E., Identification

1., To be more precise, *feeling with another* describes two or more people feel the same feel together. An example given by Scheler (1973) is parents who share love and pain for their child. If they should lose their child for example during an accident, they would both experience the same feelings: anger, sadness, loss or despair (Scheler, 2009).

2., *Vicarious feelings* are not marked by co-experiencing or genuine feeling. They are referred to as an “incarnation” of feeling into another without any subsequent feelings; the empathy belongs here (Scheler, 2009).

3, *Fellow feelings* are co-feelings understood under the term “sympathy or pity”. The intention of the other or a feeling for another is typical for this kind of feeling (Scheler, 2009). To be able to distinguish *fellow feelings* from *vicarious feelings* more precisely, Scheler (1982) gives an example of cruelty. According to him, the reason why human beings are good at torture is that human beings can feel, imagine and embody the feelings of being abused or harmed. *Vicarious feelings* do not involve sharing the pain with another person. On the other hand, with *fellow feelings*, one not only shares suffering with others, but one also identifies with the person who suffers (Scheler, 2009).

4, *Physic contagion* describes experiences that occur when a feeling is adopted to such a great extent that a person gets lost as a result. Scheler uses as an example a situation in which a person goes to the bar after a whole day spent in the office. Naturally, there is a tendency to forget troubles and

atmosphere at work, and a person absorbs the “contagious” atmosphere in the bar (Nakonecny, 2000).

5, *Identification* describes the feeling when “I” becomes lost and is transformed into feelings for the other. This means that one does not feel pain in oneself, but rather in another person. It may happen that they identify with the experiences of the other so much that they live the other person’s life (Nakonecny, 2000).

## ***2.2. Karl Jaspers and his categorisation of feelings***

The psychiatrist and existentialist Karl Jaspers, who was inspired by Kierkegaard’s perception of anxiety, freedom and human existence, formulated his version of “being” in the following way: *“The first answer to the question of being arises from the following basic experience: Whatever becomes an object for me is always a determinate being among others, and only a mode of being. When I think of being as matter, energy, spirit, life, and so on ... in the end I always discover that I have absolutized a mode of determinate being, which appears within the totality of being, into being itself. No known being is being itself”* (Frykman et al., 2016).

Jaspers understands the world in terms of transcendence (something that transcends the natural world; this is expressed, but not adequately described in religion). He suggests that it should be possible to give an empirical explication of the world where there is no supreme being who could answer the question the human existence (Bennett-Hunter, 2017).

Jaspers suggests that the concepts “the world” and “feeling” both remain unclear and confusing. He is also sceptical about emotional research, because he believes that the present research has omitted crucial questions, and thus for him, all of the research has become incomprehensible.

As a result, he came up with his own synthesis of the classification of feelings categorising emotions according to their relationship to body, senses and mind (Fuchs et al., 2014). This classification, however, adopted an empirical approach and was considered confusing and not satisfying by other researchers.

Furthermore, Jaspers classifies abnormal affective states (he lists six different states). It is important to note that these abnormal affective states are here divided into two large groups:

1., Affective states evoked genetically

2., Endogenous affective states that come from somewhere in the human soul. These states cannot be explained logically, as in the case of genetic states, but rather they require one to deal with extra “conscious cases” (ausserbewusste Ursachen) (Fuchs et al., 2014).

Jaspers’s own classification of feelings (1913):

I. *“Purely Phenomenological Perspective (existential questions):”*

*A., “feelings as an aspect of conscious personality and defining the self (my sorrow)*

*B., distinction by means of opposition (pleasure, displeasure)*

*C., feelings without an object (how I feel at the given situation).”*

II. *According to Objects:*

*A., “feelings of fantasy (based on suppositions*

*B., serious feelings (based on actual objects)*

*C., feelings of value (directed at the person or something extraneous: they can be either affirmative or negative (pride or humility, love or hate).”*

III. *According to Source (classification is based on different layers of our mental life):*

*A., “localised feeling sensations*

*B., vital feelings that involve the whole body*

*C., psychic feelings (joy or sadness), spiritual feelings (state of grace).”*

IV. *“According to Significance: Significance of feeling with regard to life or purposes of life (feelings of joy can count as the expression of the promotion of a purpose in life, whereas feelings of dis-taste can count as expressing a hindrance).”*

V. *“Particular feelings vs. All-Inclusive Feelings: Particular feeling are directed on specific objects at partial aspects of the whole, and the all-Inclusive feelings are when the separate elements are combined into comprehensive affective states (irritable, or the feeling of being alive).”*

VI. *“According to Intensity and Duration: Jaspers uses the term “the old and practical” when making a division, thereby distinguishing.”*

*A., feelings (the unique and original commotions of the psyche)*

*B., affects (described as “momentary and complex emotional processes of great intensity with conspicuous bodily accompaniments and sequels”*

*C., moods (characterizing the state of mind or inner disposition): according to Jaspers at the mood is a result of prolonged feelings, and colours the whole mental life while it lasts.*

VII. *Feelings vs. Sensations: Jaspers defines feelings as “the states of the self,” and sensations as “elements in the perception of the environment and of one’s own body (colour, tonal pitch, temperature)”, furthermore; Jaspers distinguishes between sensations that are object-directed and those that express the state of the body.” (Fuchs et al., 2014)*

### **2.3. The other classification of feelings**

David Krech and Richard Crutchfield published the book *Elements of Psychology* in 1958. It brought a new insight to psychology by introducing a new classification of feelings:

1. *“Primary emotions (given by birth)*
2. *Emotions evoked by sensory stimulation*
3. *Emotions related to self-evaluation (shame or pride)*
4. *Emotions towards other people (love and envy)*
5. *Evaluative or appreciative emotions (humour, beauty, admiration)*
6. *Moods (longer lasting states: sadness)” [translated from Czech] (Nakonecny, 2012).*

Another classification of emotions was introduced by Arnold and Gasson (1968). According to them, the whole theory of emotions needs to deal not only with emotional experience, but also with emotional action and emotional expression. Furthermore, it should not only answer questions about how emotions are elicited, but it should also describe the consequences of emotions and deal with the role of the emotions in the architecture of the mind (Reisenzein, 2006).

Arnold and Gasson (1968) classified emotions according to:

A., their objects,

B., operations that are linked to them (emotions are described as the experiencing of tendencies).

A., according to their object, they distinguish:

- 1., positive tendencies (tendencies toward a useful object)
- 2., negative tendencies (tendencies away from a harmful object)

B., according to an operation, they distinguish:

- 1., impulsive emotions (tendency towards something or away from something)
- 2., “struggling” emotions (occur when attempting something or going against something)  
(Nakonecny, 2000).

## *2.4. Different approaches to the functionality of emotions*

The function of emotions is another important criterion for their classification. The various classifications contain different functions according to different researchers. Thus, although it is impossible to generalise the functions, one can divide them into two large groups:

1. social functions.
2. biological functions.

Meyer & Horstmann (2006) classified the functions of emotions as follows:

*I. Biological function: As a result of evolution, this function was particularly important in species adaptation.*

*II. Dispositional function: It supports the organism when dealing with problems: in the case of fear, this is referred to as a physiological aspect (injection of cortisol and adrenalin hormones into the blood in stressful situations).*

*III. Motivational function: It has a central function (fear results in a tendency to flee or hide).*

*IV. Self - Perceptual function: The subjective aspect of emotions such as joy, fear or anger provides information to the given subject and thanks to this information, the subject can plan or evaluate an action (try to calm down and avoid bursting into aggression).*

V. *Social – Communicative function: Aspect of emotional expression that provides information to another person about what this person is experiencing or planning to do (sorrow, anger, disgust, fear or surprise). Such information can influence the behaviour of an observer, and for this reason, some emotional responses are suppressed (anger).*

VI. *Social function: This aspect describes the influence of emotions with regard to social background and society.*

VII. *Importance of emotions in dyadic relations: Parents, children, lovers, boss vs. staff (emotions create a certain interaction among classes or groups of people: they can be friendly or unfriendly, and they do not have to be expressed verbally).*

VIII. *In a group of people doing the same action: A group of people watching a football match. In this case the emotions have a “coherent” function: we share the same emotions.*

IX. *On a cultural basis: Different cultural norms in different countries. (for example, anger towards relatives is perceived negatively in Japan whereas in the USA it is acceptable as an instrument for protecting authority and independence).” [translated from Czech] (Nakonecny, 2012).*

The German psychiatrist Frank Schneider (1990) believes that emotions have the following primary functions:

*“I. They enable a subject to choose an appropriate behaviour in different situations.*

*II. They regulate the intensity and duration of behaviour when reaching primary or secondary goals.*

*III. In the process of learning the emotions have an influence on what an individual will or will not learn.” [Translated from Czech] (Nakonecny, 2016).*

Paul Thomas Young (1961) applied a behaviouristic approach to defining the function of emotions. He concluded the following points:

*“I. Emotions activate or provoke an action, activation is dependent on sensory stimulation and not on affective agitation*

*II. Emotions maintain and define behaviour (if the excitatory potential and positive hedonic valence are maintained and occur again under the same circumstances. If the excitatory potential and the negative hedonic valence (reaction to a painful hit), the patterns of behaviour do not continue or they are reduced*

*III. Emotions have a regulatory function: they define whatever appetitive behaviour or aversive behaviour will develop and they enable basic patterns of evaluation without using specific behaviourist cognitive information*

*IV. Emotions organise neurobehavioral patterns that are supposed to be learnt: thanks to emotional associations with certain activities and situations, the organism develops patterns of appetites and aversions to certain stimuli.” [Translated from Czech] (Nakonecny, 2016).*

On one hand, “behavioural” aspect contains facial expressions, voice tone or posture. Furthermore, the “physiological” aspect includes: endocrine, autonomic and somatic responses, as well as the central nervous system. Taking into consideration an “emotional episode”, it comes without warning and normally takes a few seconds. The three above-mentioned aspects (physiological, subjective and behavioural) are very complex systems having their own control mechanisms, which act independently (Nakonecny, 2016).

Emotions have a certain capacity to activate certain behaviours that would not normally emerge, as they are stored at the bottom of behavioural hierarchies. For example, under certain circumstances anger results in fighting in a “calm and balanced” person, or sadness can progress into weeping. Different types of behaviour such as expulsion, fleeing, fighting or withdrawal require different psychological demands (Nakonecny, 2016).

## ***2.5. Animal versus human emotions***

It is also important to distinguish between animal and human emotions. Maisonneuve (1960) argues that human emotions are linked to cultural values, whereas animal emotions are linked only to the physiology of the organism. The term “feeling” is specifically linked to the human being, and human emotions and feelings can have their origins in the physiology of the organism (hunger, fatigue). Undoubtedly, animals, especially domesticated ones and the more developed species, also experience emotions (the fear or happiness of a dog when its master enters the house) (Nakonecny, 2016).

The Russian psychologist Sergej Rubinstein (1921) also dealt with human and animal emotions. He stated that human emotions can be observed primarily as social emotions (love, envy, grief, malice), “higher evolutionary” feelings linked to the cultural values of humanity (aesthetic, ethical and intellectual feelings), and also as emotional feelings among people (Nakonecny, 2016).

The Polish psychologist Szewczuk (1966) also dealt with human and animal emotions. He said that human emotions have a social character, and the cognitive content, and are objective. In the case of highly developed mammals such as apes (orangutans), social emotions can be observed (male orangutans at the head of the packs get very angry when they are not fed first) (Nakonecny, 2016).



### 3. Emotions and the human brain

#### *3.1. Evolution: Shaping of the brain*

It is well known that the human brain is regarded as be the most complex masterpiece in the universe. To understand the complexity of emotions, it is necessary to analyse the human brain, and understand the brain's mechanism, and its modules that shape mood.

To be more precise, the human brain has been adapting during human evolution. According to Grinde (2012), there is a gap between what the brain was originally adapted for and the environment of the new era.

Brain modules are partly responsible for mood changes by generating or affecting mood processes. According to Watson & Platt (2008), they deliver rewards and punishments: positive and negative stimuli (Grinde, 2012).

According to Leknes & Tracey (2008) modern research shows that certain neuronal networks are independent, and they are responsible for the particularity of each emotions and sensations (Grinde, 2012).

Panksepp & Berridge (2003) described the term "positive effect", which contains two primary modules: seeking (wanting or incentive salience) and liking (the reinforcement of feelings) (Grinde, 2016). From an evolutionary point of view, seeking and liking were created with two different primary functions: animals were supposed to search for relevant information in the environment, such as food, and then feed on the items (Grinde, 2016).

Scientifically speaking, the mood modules seem to run at steady and stable state, which is what one experiences during the day. When this steady level is somehow disrupted or affected this schema is going to be anchored in the subconscious brain. While one experiences positive feelings, it is not possible to get rid of negative emotions. The explanation is simple and thus the mind is not likely to override the force of subconsciousness.

When comparing human beings with animals (for example reptiles or mammals), it is possible to find similar emotional patterns. For instance, mammals show love by caring for raising their offspring (positive emotions) (Grinde, 2012).

On the other hand, negative emotions (anger, rivalry or aggression) also have their evolutionary purposes, and they have enabled competition among species. Competition among species, between

carnivore and its prey does not involve anger, but rather delight (referring to the seeking module in the hunter role, and fear in the case of being chased) (Grinde, 2012).

Certain feelings can activate liking and seeking modules. For instance, the desire for food follows various stages from smelling the food, to eating and enjoying the taste. Emotions that are primarily negative, such as anger, can become partly positive. Bjorn Grinde (2012) mentions the example of anger which is primarily associated with negative stimuli. According to him, anger involves frustration and thus activates the punishment module, but on the other hand, it can activate the reward module (for example: fear that protects a person from danger or self-harm) (Grinde, 2012).

### *3.2. Importance of the amygdala*

The amygdala is a part of the limbic system located under the cerebrum (consisting of the hypothalamus, hippocampus, and amygdala), defined as a map of regions and organs that work together and define the human being. It is responsible for emotional responses such as love, hate, fear and sexual desire, as well as for crucial biological functions related to our mood such as hyperventilation or sweating (McKay, 2016).

Neurotransmitters such as serotonin and dopamine are chemical messengers that send signals across areas of the brain. The area of the brain receives a signal, evaluates the situation and assigns it a certain emotional value, in order to be able to guide human behaviour (McKay, 2016).

Furthermore, the amygdala plays a role in the perception of emotions and responses to them (Le Doux, 1998). The parts of the amygdala are very closely linked to feelings such as fear, submission, fleeing or being frozen. On the other hand, some other parts evoke positive feelings such as joy or peacefulness.

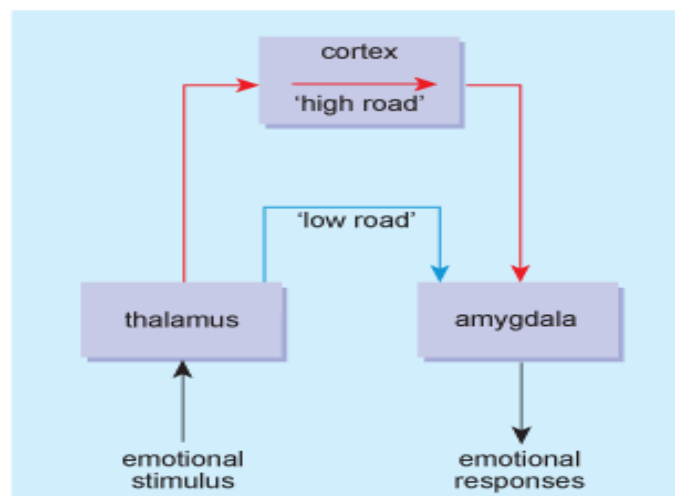
Incidentally, the fight-or-flight reflex is also monitored by the amygdala, and situations that can be dangerous and require quick decisions are evaluated by the amygdala as well. As an example, it is easy to imagine a situation where one is walking alone at night in the street, and suddenly a noise appears. In this case, there are obvious symptoms such as sweating or a quickened heartbeat. The information about potential danger is transmitted to the amygdala, which sends an alert message and, finally, the information is evaluated. (McKay, 2016)

Experiments with animals at Shippensburg University in the USA (1950) underline the importance of the amygdala in the brain. When it was electrically activated, the animals showed aggression: when it was removed; the animals showed abnormal or even dangerous emotional responses. Such experiments were conducted, for example, on apes, who, after having their amygdala removed, were

conducting themselves in an extraordinary way: becoming fearless, hypersexual, emotionless or aggressive (described as Kluver – Bucy syndrome, 1939) (Datta and Rostron, 2015).

Another experiment was done by Ralph Adolphs (1998), who chose three people with severe damage to their amygdala. Based on photographs, the participants had to make a judgment on the approachability of people (Killcross et al., 1997). As a conclusion, they rated individuals more likely to be approachable.

The other research was conducted by a group of scientists led by Andy Young at the University of York and Andy Calder at the University of Cambridge (Calder et al., 1996) who studied people with damaged amygdala. The research showed just a few disadvantages compared to people with “standard” amygdalae, and it proved that even those people could cope very well in everyday life. It should also be mentioned that the results concerning damaged amygdalae are not so exact when tested in the laboratory, because the full potential can only be analysed when a participant is exposed to everyday life, including all complex human and social interactions



**Figure 2: The Importance of Amygdala**

According to Stannard (2018), information concerning emotional stimuli comes to the amygdala via a direct pathway from the thalamus, called the ‘low-road’. The other way is a pathway from the thalamus via the cortex, called the ‘high road’ to the amygdala. According to Datta and Rostron (2015), the “low-road” enables to transfer information from the ear to the amygdala via the thalamus (‘the subcortical route’). This route is quite fast and unconscious.

On the other hand, a cortical route (“the high road”) is transmitted via the thalamus and cortex. For this reason, the transmission takes longer, it is indirect, and it allows for the acquisition of more information about the stimulus (Datta and Rostron, 2015).

The above-mentioned schema shows that emotions can react rapidly and unconsciously. If a person is found in a very stressful situation or is in fight-or-flight mode, he or she will probably be responding emotionally to situations and stimuli, without even thinking (Killcross et al., 1997).

However, such emotional responses can be modified and corrected by our consciousness and through appropriate responses. If a person spills a coffee on someone else, the first reaction is to determine if it was done purposely or it was just an accident (Killcross et al., 1997).

In addition, the amygdala is also implicated in many mental illnesses. Typical illness such as schizophrenia, depression and anxiety disorders are closely related to the functioning of the amygdala. Another research example is the examination of the role of the amygdala in associate learning (Killcross et al., 1997).

Finally, associate learning is defined as changing or modifying behaviour based on stimulus and response (Spanella, 2015). It has been proven that animals with a damaged amygdala seem to learn well when a signal predicting the arrival of food, but they do not seem to retain much knowledge about that food (Killcross et al., 1997).

Hatfield et al. (1996) did an experiment with normal animals and those with a damaged amygdala. Healthy animals can learn the relationship between reward and stimulus: the researches can be some slight changes in rewarding by for example by pre-feeding. This phenomenon is called sensory-specific satiety. Naturally, these changes affect the animals’ response to the predictor or the reward. This shows how associative learning works; it demonstrates that responding is determined by the relationship between signal or response and reward representation. On the other hand, animals with a damaged amygdala fail to show sensitivity to these changes (Killcross et al., 1997).

### *3.3. Other important parts of the limbic system*

The amygdala is not the only important part of the limbic system that influences feelings, the limbic system is composed of the cerebral cortex, orbitofrontal cortex, hippocampus, prefrontal cortex, ventromedial cortex, hypothalamus and cingulate gyrus (Grinde, 2012).

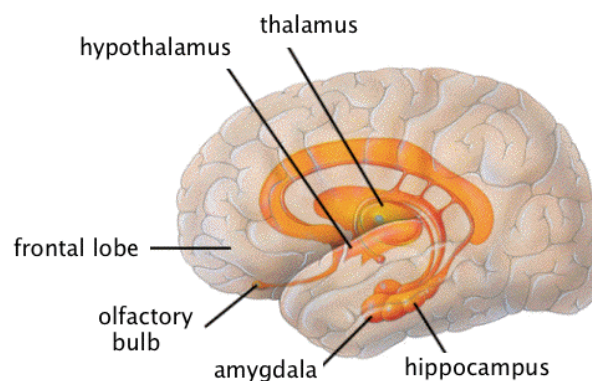
The cerebral cortex is one of the most advanced parts of the brain. It provides us with an advanced intellect, and plays a key role in our consciousness, self-awareness and free will. Consequently, this

brain module is involved in conscious and subconscious parts, as well as in cognitive and affective processes (Grinde, 2012).

Equally important, according to Boeree (2009) the cerebral cortex is responsible for the processes of thoughts, memory, perception and it plays a key role in social abilities, language or problem solving.

The hippocampus is a small curved formation in the brain. It is linked to formation of new memories, learning and emotions. It is also responsible for connecting sensations or emotions to memories. The hippocampus consists of two different subregions. The front part of the hippocampus is involved in spatial memories (Cherry, 2018).

Researches have proven that the hippocampus receives information, registers it and stores in long-term memory (it is also responsible for present memories) (Grinde, 2012).



**Figure 3: The limbic system and the brain (Boeree, 2009)**

The Prefrontal Cortex (PFC) plays also a crucial role in the process of regulating emotions. Studies (Boeree, 2009) show that people with low activity in the prefrontal cortex are likely to suffer from deep depression (Boeree, 2009). To be more precise, the other parts of the PFC such as the lateral, orbitofrontal and ventromedial regions are responsible for mood affection. Therefore, the PFC is also closely linked to the other parts of the brain that are responsible for dopamine, norepinephrine and serotonin (Boeree, 2009).

The lateral PFC is closely linked to various aspects of behavioural control. The orbitofrontal cortex seems to be a crucial part related to decision-making, although this part remains poorly examined (Grinde, 2012).

The hypothalamus is the busiest part of the brain and cooperates on homeostasis. Boeree (2009) describes homeostasis as a “thermostat” returning or setting “something” to the primary position. Furthermore, the hypothalamus is responsible for the regulation of hunger, thirst, level of pain, and, sexual satisfaction, and, it also regulates the autonomic nervous system including pulse, blood pressure and breathing (Boeree, 2009).

James Olds and Peter Milner (1954) from the University of McGill have proven the existence of the reward centre in the brain. In their research (1954) they mention the septal area, which is an area in the middle of the brain just above the hypothalamus. The examination was conducted on rats, which would press a lever to receive a short pulse of electrical stimulation in the septal area. Thus, both researchers proved that there are certain areas in the brains that provide reward or positive reinforcement (Boeree, 2009). By examining the rats, Olds and Milner tried to determinate whether they would press the lever at different rates by distinguishing and comparing the acquisition and extinction phases. This experiment can be summarised in the following conclusion: If the rats pressed at higher rates during acquisition, the stimulation of the brain area would mirror positive and rewarding sensations. This would indicate that a reinforcement centre exists in rats. On the other hand, if the rats answered at lower rates during stimulation, the electrode was probably affecting a punishment centre in the brain. If the behaviour of the rats did not change according to rates of pressing, the region would not be relevant to reward processing or aversion (Boeree, 2009).

The cingulate gyrus builds a connection between the hippocampus and the prefrontal cortex. It is the main part of the brain that regulates risk understanding. Autobiographic memory as well as some basic survival functions is stored there. It is also important for its strong connection to the stress axis (Beauregard, 2017).

As soon as the stress axis is activated, the whole system is prepared for emergency action. If a possible danger or threat is very strong, any other possible actions are evaluated as being useless. Under these circumstances, brain activity changes automatically to a more primitive pattern, in which old intuitive behaviours dominate. During these moments, a person is likely to be unsure whether any other action would lead to danger or whether the best remaining option should be chosen. In this case, brain activity swaps into the basic brain module, and this area restrains the activity of the anterior cingulated gyrus. (Grinde, 2012).

The Ventral Tegmental Area (VTA) is known for its dopaminergic neurons, which are transmitted from the VTA throughout the brain. Along with other parts of the brain, the VTA builds a reward system that affects reinforcing behaviour. The functions of the VTA are various and not well examined, but they play a major role in motivation, addiction and reward. For example, if a person

takes a drug or is somehow stimulated by some otherwise rewarding stimulus, the level of dopamine rises in the nucleus accumbens. This is considered to be crucial for the reward system. The source of dopamine in the nucleus accumbens is neurons that travel from the VTA to the mesolimbic pathway (Grinde, 2012).

Dopamine also plays an important role in normal cognition, and it is not surprising that the VTA has been mentioned in the pathophysiology of mental disorders other than addiction. It has been proven that dopaminergic neurons in the VTA play a major role, for example, in schizophrenia. Lastly, hyperactivity disorder has been shown to be related to a low dose of dopamine (Grinde, 2012).

## 4. The early era of research on emotions

### 4.1. Socrates and Aristotle

Greek scholars such as Socrates (469-399 BC), Plato (428-348 BC) and Aristotle (384-322 BC) were already analysing the question of emotions. Aristotle applied the term “pathos”, which described the emotions as passive states located in the metaphysical landscape, in contrast to active and passive, form and matter (Phillips & Kringelbach, 2014).

Aristotle observed how emotions altered our judgement, and he was convinced that emotions had a certain function and should not be regarded separately from cognition. The emotions are evaluative, and they are guided by our individual beliefs rather than being passive and beyond our control (Phillips & Kringelbach, 2014).

In the same way, he stated that expectations and past experiences were necessary for an emotional experience. He stressed the fact that emotions could influence decisions and responses, especially in important domains such as politics or justice. He stressed two important aspects: the necessity of cultivating a good character and developing proper emotional experiences (Sullivan, 2007).

Roberts (2003) mentions that Aristotle’s virtues are no single psychological process or mental event, but they rather are complex tendencies toward desires, thoughts, images, actions and emotions (Roberts, 2003). According to Roberts, Aristotle’s pathos includes appetite. He also lists twelve virtues: courage, temperance, pride, magnificence, liberality, good temper, friendliness, wit, truthfulness, honour, friendship and justice (Roberts, 2003).

Socrates described emotional responses as the pleasure and pain of the soul. He described himself as a cognitivist and determined that emotions are caused by cognitive states. “[Socrates speaking] I say that whether you call it fear (phobos) or dread (deos), it is an expectation (prosdokian) of something bad. (Protagoras 358d5-62)” (Brickhouse & Smith, 2015). Later, Socrates concluded that vices are linked to the emotion of fear, as well as to shameful boldness and madness. He also recognized that some emotions are not as responsive to reason as other emotions (Yazici, 2015).

It is important to note that not all Greek thinkers had the same opinion as Aristotle or Socrates. Some of them used very different views on emotions to show a different moral code for living. For example, the Hedonists argued that man could take pleasure wherever possible (eat, drink): in other words, one should enjoy the moment and then one simply can die (Sheldon, 1950).



To compare the Stoics with Aristotle, the Stoics were rather intolerant to “the pathē.” The Stoics’ perception was not about the suppression of emotions. On the contrary, the Stoics believed that the well spent life must result in joy and tranquillity. For the Stoics, virtue was the most important thing in human’s life. Their motto “live according to nature”, provides the opportunity to fit into the universe, including happy and sad periods of human lives with everything else that may occur. As an example, even though a person feels irritated and driven by negative emotions, it is possible to act well and not hurt others (importance of fairness). Their perception of “good feelings” is called “*hai eupatheiai*” in the Greek language and the three mentioned “good feelings” are joy, wishing and caution (Sheldon, 1950).

#### *4.2. Charles Darwin and his contributions to emotions*

Charles Darwin published a famous book called *The Expression of Emotions in Man and Animals* (1872), in which he dealt with evolutionary theory as well as with behavioural genetics. Moreover, he created foundation for the terms “emotions” and “emotional behaviour” (Assher, 2008).

In his book, Darwin reconfirmed the idea that all men are descended from other animals, and they all naturally share similar patterns in the expression of emotions. Equally important, humans share a lot of similarities and some basic features with other mammals. Charles Darwin summarised his observations of different sources including people, missionaries, leading and famous physicians, children and other studies of animals to be able to define the physical expressions of emotions. He compared the emotions to separate discrete entities or modules describing fear, disgust, anger, etc. The research proved that Darwin’s theory was correct (Assher, 2008).

In addition, he described (1872) each emotion with a certain dimension depending on its acceptability or intensity. Facial expressions are among to the most important sources of emotions, even though Charles Darwin mentions other sources such as voice, posture and gesture. The research shows that facial expressions reach a maximum muscular contraction when an emotion is occurring: this apex of contraction normally lasts just a few seconds (Ekman, 2003).

Additionally, Darwin was convinced that expressions of emotions are universal, but gestures are culturally specific. For example, the same hand movement has a different meaning in different countries.

Charles Bell published a book called *The Anatomy and Philosophy of Expression as Connected with the Fine Arts* (1844), which suggested that emotions are a reflection of intellectual and human life. The book was intended as a guidebook to introduce emotions psychologically and emotionally. It was

nicely illustrated with drawings and explanations and it was the main literature for medical students and other researchers at that time (Phillips & Kringelbach, 2014). For example, Bell portrayed 'convulsion' by depicting a muscular man moving one of his arms. However, the main idea was not to focus on convulsion, but on emotion, or how the man experienced this movement. Moreover, Bell portrays it with masterly precision, and thus the emotion seems to occupy the major position in the portrait (Bell, 2015).

Bell also examined the differences between animal and human emotions. According to him, human emotions are complex and multiple: on the other hand, animal emotions are few and generalised. In the same way, he points out, that humans have the capacity of expression and animals do not. As a consequence, humans were always situated on the top of the natural hierarchy and according to this belief there were certain differences in how animals and humans were presented. Human figures were shown having an expressive and gestural quality, whereas animals were shown in more anatomical detail (McDougall, 2013).

Charles Darwin examined the question of why and under which form emotional expressions are created, e.g., why a person smiles when expressing pleasure or why someone shrugs their shoulders when unsure about how to resolve a certain situation. From the observations, he formulated three main conclusions:

- 1., Firstly, many expressions stem from habits, patterns or gestures that we found useful, and therefore they were repeated and later became habits.
- 2., Secondly, tears and crying are said to be examples of what we learned in early childhood.
- 3., Thirdly, tears may be a protective tool for the eyes of a crying baby, or crying may be a means of getting the attention we required in early childhood (McDougall, 2013).

Therefore, he mentions the principle of antithesis. He distinguishes between serviceable and non-serviceable habits. The state of mind may produce a strong habitual response or, on the contrary, it may involuntarily produce an opposite gesture. For example, shrugging of shoulders is an example of such antithesis (passive expression), as opposite to hand-waving, which is expressed with a strong intention to act (McDougall, 2013).

Lastly, when a strong arousal is present, the nervous system is strongly activated, and energy is released (depending on the nervous system wiring). Hyperventilation and sweating are both signs of

the nervous system, but they do not necessarily indicate action or attack (Phillips & Kringelbach, 2014).

Darwin's main concentration remained on emotional expressions, but he left out the function of the emotional expressions.

He made the following observations:

1., Emotions are mostly innate and universal across different cultures and species, supporting the idea that they were inherited from animal ancestors.

2., Some expressions are the remnants of habits, and thus they do not need to have a function. On the other hand, he admits that they may have their importance, especially if they regularly accompany a certain state of mind: at this stage they could be signals (Phillips & Kringelbach, 2014).

## 5. The 20<sup>th</sup> century: A new era for research on emotions

Research on emotions has a long history. It would be imprecise to claim that only the 20<sup>th</sup> century influenced emotional research, because, for example, Charles Darwin had already introduced emotions at the beginning of the 19<sup>th</sup> century by analysing evolutionary theory.

However, the 20<sup>th</sup> century will always remain crucial for psychological research thanks to two great psychologists: Sigmund Freud and Carl Gustav Jung, who created an important milestone on which modern psychology is based.

### *5.1. Sigmund Freud versus the Id, Ego and Superego*

Sigmund Freud, a founder of modern psychology and psychoanalysis, described three structures that constitute our mental life and thus the psyche.

He distinguished among:

1., Id

2., Ego

3., Superego (McLeod, 2016).

1, The id can be described as a primitive and instinctual part of the mind, containing sexual and aggressive drives as well as hidden memories. From another point of view, the id is to be considered the darkest part of our psyche, everything that was given to us from birth namely instincts, including the sexual instinct (Eros), and aggressive instinct (Thanatos) (McLeod, 2016).

Freud was convinced that the id would try to express our basic instincts following the pleasure principle, but avoiding the pain of the unexpressed desire (Phillips & Kringelbach, 2014). It is also important to note that the id remains “infantile” throughout life and its function does not change through time or experience. The id is not affected by the reality of the world and thus it remains somehow hidden, because it operates in the unconscious part of the brain (McLeod, 2016). The id operates by applying the above- mentioned pleasure principle, which should be fulfilled regardless of the consequences. When the demands of the id are met, we briefly experience pleasure, on the other hand, when they are denied we experience tension or unpleasurable moments. The id is involved in the primary process of thinking described as irrational, illogical or fantasy - oriented (Nakonecny, 2017). Emotions are a form of “discharge” and are primarily unconscious, even though

they can reveal a lot of information about our psyche meaning our desires and thoughts (McLeod, 2016).

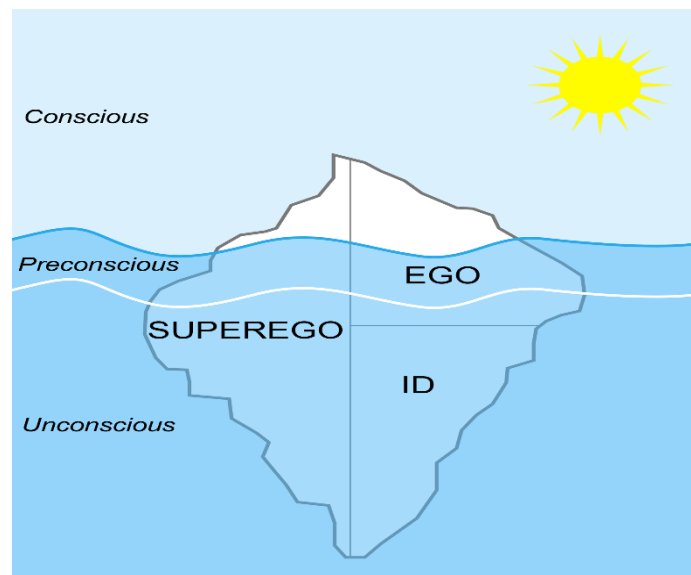


Figure 4: Diagram of Freud's theory (McLeod, 2016)

Moreover, his psychoanalytic theory says that emotions either reveal our basic desires, or are produced by trauma, which can be very disturbing to human existence and explains why one prefers to repress them. But repression can lead to many illnesses or mental disorders. For this reason, he introduced the method of psychoanalysis by bringing the hidden repression back "to the surface" and into consciousness. These blocked emotions can be released by recalling them. When the repressed emotions are expressed and the trauma of the emotional valence stripped, blocked emotions lose their blocked potential, and a person can be cured (Phillips & Kringelbach, 2014).

2., According to Freud and Strachey (2001) the ego contains the id; however, it has been influenced and thus modified by the external world. The ego stays between the unrealistic and the external "real" world and is often described as "reasoning," whereas the id is seen as unreasonable or chaotic. The ego is based on reality principles and is often trying to compromise or postpone satisfaction to avoid negative consequences. The ego also considers etiquette, norms and rules in deciding how to behave (McLeod, 2016).

Similarly, to the id, the ego is looking for satisfaction and trying to avoid pain, however, the ego is involved in evaluating a realistic strategy for obtaining satisfaction. Sigmund Freud compared the id to a horse and the ego to a horse's rider. While the horse provides power and movement, the rider

provides direction and guidance. Without a rider, the horse would go where it wants and do what it likes, so cooperation is essential. The ego does not know the concepts of “right” and “wrong”, and sometimes the ego is weak in comparison to the headstrong id, in this case, the ego gives direction to the id about where to go and claims some credit in the end when satisfaction is achieved. The ego helps to discharge tension created by unfulfilled impulses called “secondary processes”, furthermore, the ego tries to find an object in the real world that matches the mental image created by the id in the primary process. If a plan does not work, then the ego tries again until a solution is found. This is called “reality testing”, and it helps people to control their impulses and maintain self-control. In case the ego fails to adopt reality principles, leading to anxiety, there are certain unconscious defence mechanisms that are deployed to help avoid unpleasant feelings (McLeod, 2016).

3, The superego integrates the values and standards of good behaviour. These rules are approved either by parents or by authority figures. When following these rules, a person experiences feelings of satisfaction, value or pride. The other part of the superego contains values that are viewed negatively by parents or society. If the rules are not obeyed, feelings of guilt, punishment or remorse will arise (McLeod, 2016).

According to Freud, this phase is developed around the age of three in the phallic stage. The objective of the superego is to control the id’s impulses, especially those impulses related to societal “taboos” such as sex or aggression. The superego can also be viewed as the conscience and the ideal self. The conscience will push the ego through feelings of guilt, but there will be no satisfactory result. The ideal self is an imaginary image of a person should be, what he or she should do, how to behave towards to other people, etc. (McLeod, 2016).

It is necessary to remember that all three parts are not separate bodies, but rather cooperate very closely. Freud reminds us that these three aspects have their own competitive forces, and thus a conflict may arise. He calls it “ego strength,” which describes the ego’s ability of being able to work despite the other forces. In this case, it is also referred to as “the ego balance”, because the strength of the ego varies from person to person. If the ego is strong enough, there is an ability to manage tasks under pressure, but if the ego is involved too much or too little, the ego’s strength can become disruptive (Nakonecny, 2017).

In a conclusion, Freud described the healthy personality as a mix of three entities that must be in balance. An imbalanced can lead to mental disorders or illnesses. If the superego dominates, a person can become impulsive or uncontrollable. Such a personality can hardly distinguish between acceptable, legal and illegal behaviours. If the superego dominates even more, a person can become

too moralistic or judgemental. In the same way, such a person may consider another person bad or immoral, and they would hardly accept another person. Excessive superego leads to problems, such people are tied to rules, reality and appropriateness, and they hardly accept any new stimuli from outside (Nakonecny, 2017).

### **5.1.1. Freud's psychosexual stages of development**

Emotions form the human personality and psyche from the very beginning. Freud was aware of this fact, and that is why he described five psychosexual stages of development including pleasure-seeking energies that remain focused on certain erogenous zones. An erogenous zone describes an area on the human body that is very sensitive to stimulation and serves as source of pleasure (Cheery, 2019).

Freud distinguishes among:

- 1., Oral stage
- 2., Anal stage
- 3., Phallic stage
- 4., Latent stage
- 5., Genital stage (Cheery, 2019)

Freud calls this psychosexual energy "the libido", and he described it as a driving force behind behaviour (Cheery, 2019).

Freudian psychoanalytic theory claims that a personality is normally established by the age of five. Of course, events or experiences that occur earlier in life will largely influence the development of our personality. Each stage has its own characteristics and "conflicts," and therefore it is important to analyse how these conflicts are resolved as they will continue to influence a person. Freud suggests that for healthy personal development, all stages must be accomplished successfully. If there are issues that are not resolved during a certain phase, a fixation is going to occur. A fixation can be described as a focus on the earlier psychosexual stage. Until the problem is successfully resolved, a person remains "stuck" in the particular stage. For example, a person who remains "stuck" in the oral stage may be overly-dependent on other people and may look for stimulation in smoking, nail-biting, eating or drinking (Cheery, 2019)

### The Oral Stage (birth to age 1)

The oral stage is described as a mouth stage, because all interactions come through the mouth. There are two important reflexes: sucking and rooting. Oral stimulation is marked by tasting and sucking, because the mouth is crucial for feeding. The child relies too much on a parent or a caretaker, and thus a sense of trust is also developed at this stage. The first conflict is called the “weaning process”, when the child is becoming less independent on his caretaker. According to Freud, if fixation occurred at this stage, a child would have issues with dependency or aggression (Nakonecny, 2016).

### The Anal Stage (from age 1 to age 3)

The anal stage is focused on the libido controlling bladder and bowel moments. One conflict at this stage is “toilet training,” where a child learns how to control his or her human needs. According to Freud, it is very important how parents cope with toilet training. By receiving praise and reward at the appropriate time, a child becomes productive and feels capable. During this stage, it is important to collect positive experiences during this stage concerning toilet training, because they serve as a basis for creativity, productivity and a competent personality (Nakonecny, 2016).

According to Freud, parental responses that are inappropriate may lead to negative outcomes. If the parental approach is too tolerant, a child’s personality will develop into an anal-expulsive personality. Such a child would be messy, destructive or wasteful. On the other hand, if parents are too strict or begin with toilet training too early, a child’s personality will develop into an anal - retentive personality, namely stringent, orderly or rigid (Cheery, 2019)

### The Phallic Stage (from age 3 to age 6)

Freud argues that at this stage the libido is focused on the genitals. At this stage, children normally start to distinguish between males and females. Boys start to see fathers as rivals for their mother’s affection, and they attempt to replace the father (Oedipus complex). Freud also uses a term for the fear of punishment that boys are confronted with (castration anxiety). The same rivalry also occurs with girls. The term used for the same phenomenon in girls is called the “Electra Complex.” Freud also uses the term “penis envy”, and he determined that this dilemma remains unresolved for the entire lifetime of a woman, and women remain ‘blocked’ at this stage. On the other hand, this concept has been rejected by some researchers, like Karen Horney, stating that men have the



dilemma of not being able to give birth to a child, and thus they encounter feelings of “inferiority” (Cheery, 2019).

#### The Latent Stage (from age 6 to puberty)

The latent stage is characterised by superego development and suppression of the id’s energies. It is also the time when children develop social skills, values and relationships with other children and adults. It occurs when children start attending school and being curious. Sexual energy is either repressed or dormant. Even if the energy is not active at first sight, it is active in different ways or forms, for example in social interactions or intellectual pursuits. This stage is also crucial for the development of social and communication skills and self-confidence. Freud believed that at fixation at this stage may result in immaturity and the inability to build relationships with adults (Cheery, 2019).

#### The Genital Stage (Puberty to Death)

The end of puberty raises the activity of the libido. At the end of psychosexual development, an individual is developing a strong sexual energy towards the opposite sex. This stage starts at the end of puberty and lasts throughout life. According to Freud, the ego and superego are fully developed and, are fully functioning at this point. For example, young children are driven by the id, and this is why they require satisfaction of their needs. Teens in the genital stage can balance basic needs against the need to conform to the demands of social norms and reality (Cheery, 2019).

### **5.1.2. Criticism of Freud’s psychosexual stages of development**

Although the theory caused a “revolution” at the beginning of the 19<sup>th</sup> century, it was later considered inconsistent by other researchers. For example, the theory focuses mainly on male development. The main disadvantage remains the fact that the theories are difficult to test scientifically (for example, the libido cannot be measured) (Cheery, 2019).

Another negative point of psychosexual theory is the question of homosexuality, which is completely missing from the theory. Heterosexual preferences represent the normal outcome of personal development, and homosexuality is described as a deviation in the process. It should also be pointed out that Freud’s opinion on homosexuality differed, and he was not convinced that homosexuality would automatically result in pathology. Freud (1935) wrote a letter to a mother who asked Freud to treat her son’s homosexuality, in which he stated the following about homosexuality: ...*“it cannot be*

*classified as an illness; we consider it to be a variation of the sexual function, produced by a certain arresting of sexual development"* (Cheery, 2019).

Freud (1935) wrote a letter to a mother who asked Freud to treat her son’s homosexuality, Freud states about the homosexuality: *"It was certainly not a vice or something to be ashamed of. Freud wrote, "...it cannot be classified as an illness; we consider it to be a variation of the sexual function, produced by a certain arrest of sexual development"* (Cheery, 2019).

## 5.2. Carl Gustav Jung and his Contribution to Emotions

*Jung (1921): "By psyche I understand the totality of all psychic processes, conscious as well as unconscious"* (Mc Leod, 2016).

Carl Jung expended Freud’s psychoanalytical approach, repressed feelings dealing with emotional and mental disturbances, that is why he represents a very important figure with Freud in the emotional research. Carl Jung was Sigmund Freud’s friend and his supporter as both were interested in the field of unconsciousness. He was also a member of the Viennese Psychoanalytic Society, later he became a president of this association (Mc Leod, 2016).

In 1912 Carl Jung gave a lecture during his tour in the USA where he disagreed with the theory of the Oedipus Complex and its influence on the infantile sexuality. This has led to split in the friendships and cooperation between Jung and Freud (Mc Leod, 2016).

Assumption	Jung	Freud
<b>Nature and purpose of the libido.</b>	A generalize source of psychic energy motivating a range of behaviors.	A source of psychic energy specific to sexual gratification.
<b>Nature of the unconscious.</b>	A storehouse of repressed memories specific to the individual and our ancestral past.	A storehouse for unacceptable repressed desires specific to the individual.
<b>Cause of behavior.</b>	Past experiences in addition to future aspiration.	Past experiences, particularly in childhood.

**Figure 5. Differences in theory between Jung and Freud (Mc Leod, 2016).**

Carl Jung was convinced that the psyche is a self-regulating system similar to a body. He suggested that the psyche could be divided into the component parts including complexes and the personified personas (Hopwood, 2017).

The libido was according to Jung not only the sexual energy, but rather the generalised psychic energy. This energy has its very important role and thus it motivates individuals in different ways (spiritually, intellectually and creatively). It is also described as the energy for pleasure and reducing conflicts (McLeod, 2016).

However, the main difference between the Jungian and the Freudian therapy is the collective (transpersonal) unconscious. Jung showed that the human mind has some innate characteristics “imprints” that resulted from evolution. These “predispositions” come from our ancestral past (Hopwood, 2017).

Jung describes the psyche as the map of the various systems and networks that were interacting together, it is composed of the ego, the personal unconsciousness and the collective unconscious. The ego was for Jung a centre of the consciousness where the conscious awareness, our identity and existence have their place. The level of a personal extroversion or introversion is linked to a person's relation towards the external world. There are also very important human functions such as feeling, sensation, intuition and thinking and it depends on a person how many of these facets will develop and for this reason such person will perceive the world differently (Hopwood, 2017).

The origin of the ego is in the self-archetype and it is only a small part of the self. On the top of that, according to Jung, the consciousness is rather selective, and the ego's task is to choose the most relevant information from the environment as well as to choose a direction to take. The rest of information is stored into the unconsciousness and it may occur in our dreams or visions (Hopwood, 2017).

For Jung, the repression was just one part of the unconsciousness rather than the whole part. The unconscious had a big potential, the place where the undeveloped elements meet the consciousness. The personal unconscious, as it has been already mentioned above, contains forgotten information and repressed memories. Jung introduced the term “complexes” describing a complex of thoughts, attitudes, feelings and memories that are focused on a single concept. The more elements are attached to the complex, the larger is the influence on a person (Nakonecny, 2016).

Additionally, Jung introduced “archetypes” that can be described as thoughts and images that are common for many cultures and therefore, they have the universal meaning. The symbols regarding the archetypes vary in different cultures, but they have certain similarities, because they have emerged from the archetypes that are shared by the whole human race. Jung believed that our simple past becomes the basis for the human psyche and influencing the present behaviour (Nakonecny, 2016).

Jung managed to identify many archetypes, but he continued to work just on a few of them. The persona (mask) is the other face not willing to present to the outside world. Man tends to hide real self to present “conformity archetype.” The other persona is called anima or animus, the mirror image of the biological sex, in men it is to be found the unconscious feminine side, in women it is to be found a masculine side. The psyche of women contains masculine aspects (“*animus archetype*”), and the psyche of men involve feminine aspects (“*the anima archetype*”) (Nakonecny, 2016).

The shadow is the next term that is used by Jung. He describes it as the animal part of our personality. It contains both destructive and creative energies. It is a part of the psyche influenced by the collective unconscious. It can be described it as a form of complex the most accessible by the conscious mind. Equally important, Jung was convinced that the shadow has its own very important task in our psyche and thus it plays a balancing role in our psyche.

Jung (1912) says that if someone has enough courage to withdraw all his projections, he or she will encounter a person who is aware of their “thick” shadow. Such a person is overloaded with new problems and conflicts. He represents a serious problem to himself, as such a person cannot decide what to do next for his life. This person knows if something is wrong with the world, but, the problem is in himself. The only way how to conquer it is to deal with his own shadow (Luton, 2018).

He also identified the shadow as a moral problem that challenges the whole ego-personality, nobody can be aware of conscious of the shadow if there is no moral effort to be accomplished. To become aware of the shadow, one must recognize the dark aspects of the personality as present and real. This is the essential condition for any kind of self-knowledge (Luton, 2018).

Jung also argues that man does not want to dive into shadows, hence, a person projects shadows on other people and the qualities that someone finds disturbing in other people are the qualities that a person has in themselves. Finally, the Self, according to Freud, was the wholeness of the psyche including all its potential. The Self is said to drive the process of individuation to reach the fullest potential of an individual (Hopwood, 2017).

## 6. Theories of emotions

The theories mentioned below contain most of thoughts of the schools of thought in the study of the nature of emotions. They create a good overview of the different approaches that are often quoted in the psychological literature.

### *6.1. Evolutionary theory of emotion*

#### **6.1.1. Charles Darwin**

Charles Darwin, a pioneer in the field of the evolutionary theory of emotions, was described in previous chapters. He dealt with an adaptive approach specified by distinctive universal signals common to other primates (e.g., Ekman, 1973, 1992; Ekman & Cordaro, 2011, Buss et al., 2015).

Buss et al. (2015) suggested that the focus was put on the emotions serving a signalling or communicative function, and therefore, Darwin's theory seemed to be "narrow", lacking some important aspects. According to them, many involved emotions have no distinct facial expression (sexual jealousy) or do not serve a signalling function (sexual regret), (Galperin et al., 2013) (Buss et al., 2015).

Firstly, the emotions evolved to fulfil a larger category of adaptive problems. According to Buss et al., the emotions evolved into reproductive processes such as intrasexual mate competition, loss of status, mate retention, mate poaching or hierarchy negotiations (Buss et al., 2015).

Secondly, the emotions may have evolved in a subordinate mechanism responsible for cooperation of attention, perception, memory, categorisation or learning (Buss et al., 2015).

Evolutionary theory has been focused on the emotions shared with other species, which are typical of distinctive signals characterised by the adaptive role (Buss et al., 2015).

William McDougall (1914) distinguished between primary and secondary emotions. The primary emotions (birth) describe fear, anger, tender-emotion, disgust, positive self-feeling, negative self-feeling and wonder. The importance of being "primary" emotions is the fact that each of these emotions is an unavoidable immediate result, and an innate disposition is directed to a particular mode of action (Nakonecny, 2000).

On the other hand, secondary emotions such as admiration, reverence, gratitude, scorn and envy are called the blend or compound emotions, because they occur as "blend" of the primary emotions. In

this case, emotional qualities are experienced when two or more of the great instinctive tendencies are excited at same time (Nakonecny, 2000).

McDougall mentioned sorrow and joy, and he believed that neither of these two was classified with the primary emotions, because they are viewed as a state of emotions that are not to be considered the immediate effect and expression of instinct excitement or disposition.

### **6.1.2. Robert Plutchik**

Robert Plutchik, an American professor and psychologist, introduced psycho-evolutionary theory (1980). He managed to categorise emotions into primary emotions according to the adequate responses to them (Nakonecny, 2000).

Plutchik introduced the “wheel of emotions” (1980), where he described eight basic emotions: joy, trust, fear, surprise, sadness, anticipation, anger and disgust. His wheel describes these eight emotions and also illustrates how the emotions can relate to each other, containing the opposite emotions, as well as the emotions that can be turned into each other (Karimova, 2017).

Emotions with no colour are emotions that are a mix of two primary emotions: they are described as complex and can be observed on the wheel as a combination of two or more distinct feelings (Karimova, 2017).

The dimension of the primary emotion can be characterised by pairs of opposites: the polarity of anger and fear is opposite to the different polarities of attack or flight (Karimova, 2017).

The dimension of the intensity is described by the shade of the colour. The darker the colour is, the more intense the motion is. For example, anger is described by rage at its highest intensity (Karimova, 2017).

There is also another dimension to be considered, namely that there are certain similarities among the emotions. For example, anger and disgust are more similar than anger and surprise. The mix of these two elements, polarity and similarity, create a model, and the circle creates the concepts of a degree of similarity and of opposition (Karimova, 2017).

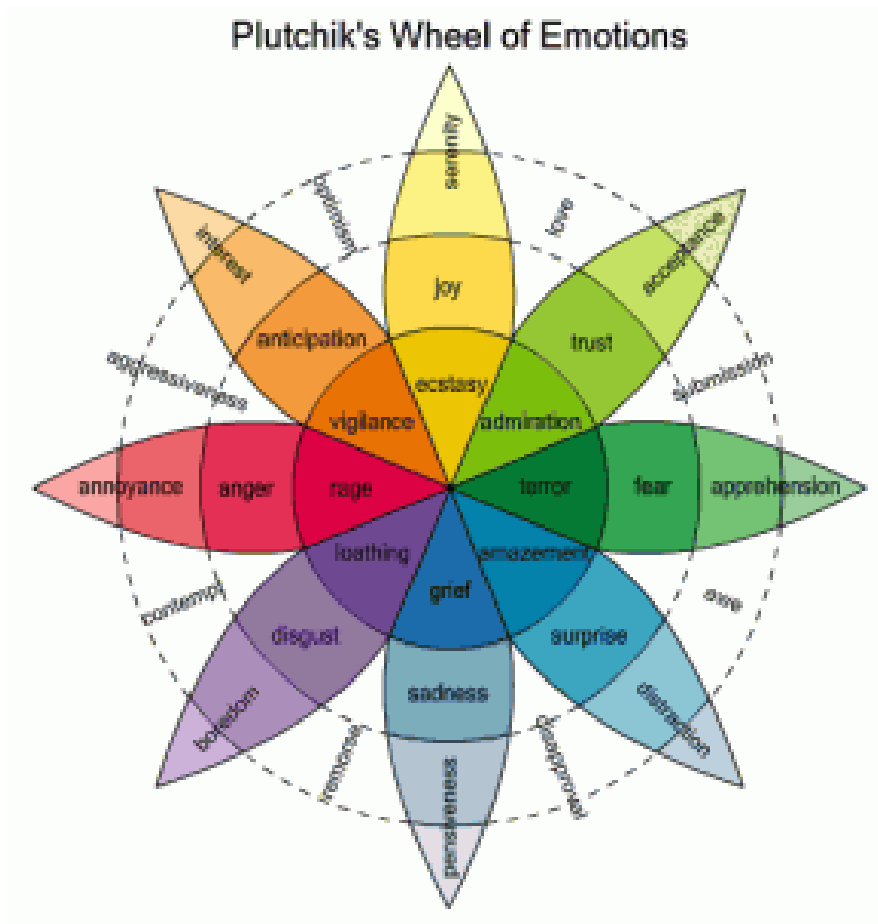


Figure 6: Plutchik's wheel of emotions (Karimova, 2017)

According to Mohamed et al. (2015), emotions on Plutchik's wheel may be combined as follows:

- I. *“Anticipation + Joy = Optimism (with its opposite being disapproval)*
- II. *Joy + Trust = Love (with its opposite being remorse)*
- III. *Trust + Fear = Submission (with its opposite being contempt)*
- IV. *Fear + Surprise = Awe (with its opposite being aggression)*
- V. *Surprise + Sadness = Disapproval (with its opposite being optimism)*
- VI. *Sadness + Disgust = Remorse (with its opposite being love)*
- VII. *Disgust + Anger = Contempt (with its opposite being submission)”*
- VIII. *Anger + Anticipation = Aggressiveness (with its opposite being awe)” (Mohamed et al., 2015).*

Finally, Plutchik uses the term “primary dyad, secondary and tertiary dyad.” The primary dyad describes a mixture of two adjacent primary emotions (anger and joy result in pride): the secondary dyad describes the emotions that are removed from each other on the emotion wheel (anger and acceptance result in dominance). Lastly, the tertiary dyad is the result of a mix of emotions that are

three times removed from each other on the emotion wheel (outrage comes from anger and surprise) (Turner & Stets, 2009).

Robert Plutchik's wheel has been widely used in emotional marketing. The fact, that Plutchik identified nuances among the emotions, and thus put together similar emotions as well as opposite ones, enabled the researcher to better communicate with customers and measure their experience. A similar approach was adopted by Martec, the international strategic and consulting group that remodelled the Plutchik wheel into eight channel groups containing 32 emotions, and thereby introduced the "emotional landscape." This approach helped to better target the audience and communicate with potential customers (Reck, Martec). The importance of Plutchik's wheel can also be demonstrated by the viral marketing and research conducted by Teixeira et al. (2012), which showed how audiences react to positive versus negative emotions in advertising. The research proved that positive emotions are more likely to gain audience interest: furthermore, joy and happiness together are the most used emotions in advertising (38%) (McDuff, 2014).

## *6.2. Physiological theories of emotions*

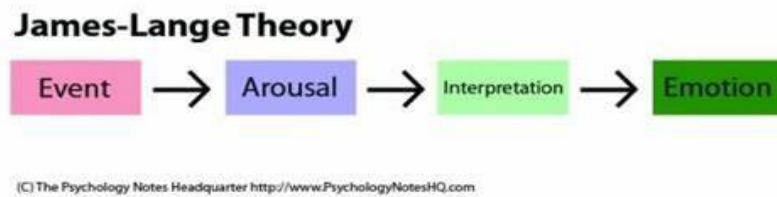
Physiological theory relates emotions to the physiology of the organism. The James-Lange theory (1884) describes emotions as experiencing the physiological states of the organism, whereas the activation theory by Lindsley (1957) deals with research using the electroencephalograms (EEG) and comprehension of various interactions in the cerebral cortex and subcortical structures (Bressler & Kelso, 2001).

The newest neurophysiological theory of emotions (LeDoux, 2000) builds its foundation on the neuroendocrine interactions of the limbic system, working only with cooperation with other parts of the brain (Nakonecny, 2000).

### **6.2.1. The James-Lange theory**

The Danish psychologist Carl Lange and the American psychologist William James (1884) introduced a theory stating that emotions occur as physiological reactions to events.



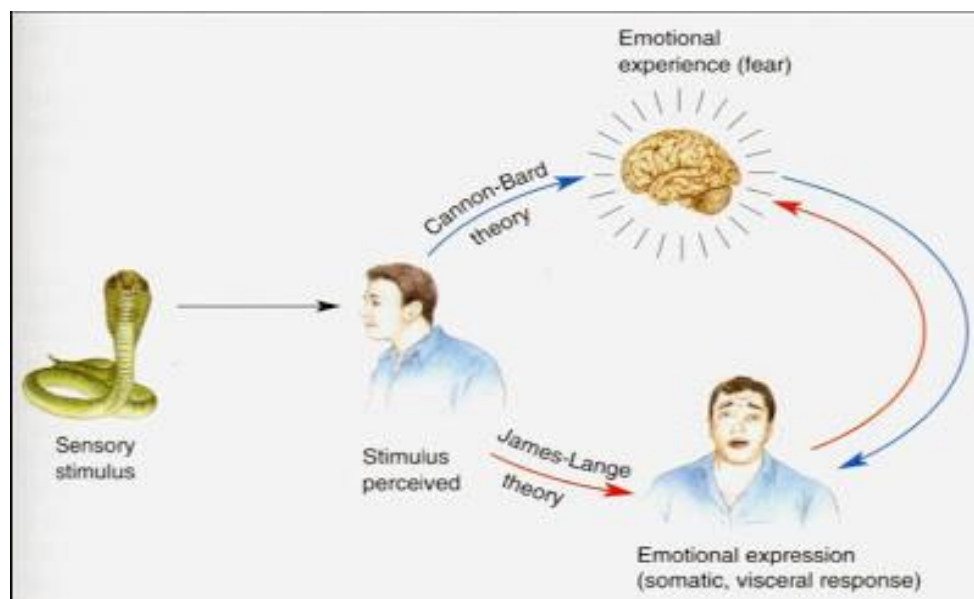


**Figure 7: James-Lange theory (Cherry, 2018)**

They were convinced that once a stimulus is presented the body and organs react automatically, leading to psychological changes: thereby, the mind creates emotions. For example, if one is walking in the park during the night and suddenly sees someone approaching with a knife, one would certainly experience a physiological response of fear: the heart rate and breathing will increase to prepare for fight or flight (Cherry, 2018).

### 6.2.2. The Cannon-Bard theory

The American physiologist Walter Bradford Cannon (1929) pointed out that stimulating events cause feelings and physical reaction. These stimuli both occur and originate in the thalamus. When the provoking event occurs, the thalamus sends information to the amygdala. The information is afterwards sent from the thalamus to the autonomic nervous system, and the skeletal muscles control our physical reactions. In this way, one experiences shaking, sweating or tense muscles (Cherry, 2018)



**Figure 8: James-Lange theory vs. Cannon-Bard theory (Cherry, 2018)**

An example can be an interview taking place tomorrow. If a person thinks about the interview, he or she will feel nervous or worried. At the same time, it is possible to experience physical sensations such as stomach pain, hyperventilation or tense muscles. The theory is also called “thalamic theory of emotions” (Cherry, 2018).

On top of that, Cannon and Bard partly rejected the James-Lange theory because they found that James-Lange theory did not fully match their research. Therefore, Cannon and Bard introduced the following hypotheses (Sincero, 2017):

1. Physiological responses created artificially (injection of adrenalin) do not cause or result in emotions, but rather they result in feelings (feelings of fear).
2. To compare different emotional experiences (different content) to the bodily emotions (the same content)
3. Bodily responses do not automatically follow emotions.
4. There is no alternation of emotional behaviour when the viscera are separated from the central nervous system.
5. Various emotional and non-emotional states stem from similar visceral changes (increased heart rate can be a sign of fear or of a fever).

### *6.3. Two-factor theory of emotions*

Stanley Schachter and Jerome Singer (1962) showed that there had to be a cognitive appraisal that influences the varied state of emotions and the sensation of the bodily arousal. This leads to identification of the strength of the emotional response (Phillips & Kringelbach, 2014).

The theory was tested on a group of students who got an injection of adrenaline (epinephrine) or saline (placebo). As a consequence, there are two factors to be considered. Adrenalin causes changes in our body and, heart rate, along with sweating and increased blood flow. On the other hand, saline (placebo) has no effects on our body (Fescue, 2016)

The theory was tested on 184 male students, who were told that the research would test the effect of the given drug on eyesight. In the second part of the research, the students were divided into three groups:

- 1., Some participants were told nothing about the possible effects
- 2., Some were told misleading information about the side effects (headache or numbness)
- 3., Some were told about the possible effects of the injection (Fescoc, 2016)

Schachter and Singer expected that the participants who were not informed about the injection's effects, as well as those who were not given any information, would find an external explanation for why they felt differently. After being given the injection, the participants were divided into different environments. Some participants waited with a companion (to test the level of euphoria, the person was introduced as a participant in the study, but he or she was a really part of the staff), other participants accompanied (to test the level of anger) by a companion had to fill in a questionnaire containing increasingly personal questions (Reisenzein, 2006).

The study was intended to test the following hypothesis, presented by Schachter and Singer:

1. The participants who were given adrenalin would react:
  - A., If they were given the correct information, they would show a low level of reactions
  - B., If they were misled, they would show a high level of reaction
  - C., If they were not informed at all, they would show a high level of reactions
2. The participants who were given a placebo would show a low level of reaction in both situations." (Nakonecny, 2012).

Unfortunately, the study did not fully confirm the hypothesis. Of the participants who were given the adrenaline injection, those who were misled or unaware of the effect, had a tendency to mimic the behaviour of the person they were waiting with, the participants who were aware of the effects seemed to reverse the emotional pattern of the person they waited with. In consequence of this fact, the study proved that cognitive appraisal and the expectation of a certain situation are very important parts of emotional theory (Phillips & Kringelbach, 2014).

The socio - empirical application of the two -factor theory can be demonstrated using Herzberg's motivation theory, which he introduced in 1959. With his observations, he tried to determine which factors influence worker' satisfaction or dissatisfaction in the work-place. Frederik Herzberg used the

term “hygiene factors”, which summarises his conclusion after interviewing workers (Kunchala, 2017).

As a result, Herzberg lists the four following combinations:

“1., High Hygiene + High Motivation: the best imaginable working conditions, where employees are motivated, and do not express too much criticism.

2., High Hygiene + Low Motivation: employees are not too motivated even though they have just a few complaints.

3., Low Hygiene + High Motivation: employees are motivated, but they complain a lot (a good working environment, but the pay and the work are not up to their expectation).

4., Low Hygiene + Low Motivation: employees complain a lot and they not all of them motivated” (Kunchala, 2017).

It is therefore obvious that all jobs have two significant factors: the work that people are required to do and the work setting (Kunchala, 2017).

According to Herzberg’s hygiene factors include:

- **“Company policies:** *These should be fair and clear to every employee. They must also be equivalent to those of competitors.*
- **Supervision:** *Supervision must be fair and appropriate. The employee should be given as much autonomy as is reasonable.*
- **Relationships:** *There should be no tolerance for bullying or cliques. A healthy, amiable, and appropriate relationship should exist between peers, superiors, and subordinates.*
- **Work conditions:** *Equipment and the working environment should be safe, fit for purpose, and hygienic.*
- **Salary:** *The pay structure should be fair and reasonable. It should also be competitive with other organizations in the same industry.*
- **Status:** *The organization should maintain the status of all employees within the organization. Performing meaningful work can provide a sense of status.*
- **Security:** *It is important that employees feel that their job is secure and they are not under the constant threat of being laid-off “ (Kunchala, 2017).*

Kunchala (2017) lists some limitations of the theory that can be summarised as follows:

- *“The theory only applies to white collar workers.*

- *It doesn't take an individual situation or perception into consideration. We have attempted to address this above by applying the theory at an individual level.*
- *The theory focuses on improving employee satisfaction. That doesn't necessarily translate into increased productivity.*
- *There is no objective way to measure employee satisfaction within the theory.*
- *Two Factor Theory is subject to bias. For example, when an employee is satisfied, they will give themselves credit for that satisfaction. Conversely, when they are dissatisfied, they will blame external factors" (Kunchala, 2017).*

Furthermore, Herzberg made the following recommendations for improving conditions in the workplace:

1., Eliminate job hygiene stressors:

- *"Rectify petty and bureaucratic company policies.*
- *Ensure each team member feels supported without feeling micromanaged. You can do this by using servant leadership or a democratic leadership style.*
- *Ensure the day to day working culture is supportive. No bullying. No cliques. Everyone treated with equal respect.*
- *Ensure that salaries are competitive within the industry. Ensure there are no major salary disparities between employees doing similar jobs."*
- *To increase job satisfaction and status, aim to construct jobs in such a way that each team member finds their job meaningful" (Kunchala, 2017).*

2., Increase job satisfaction:

- *"Job enrichment (to give employees more challenging or complex tasks to perform)*
- *Job enlargement (to give employees a greater variety of tasks to perform)*
- *Employee empowerment (delegating increasing responsibility to each team member)" (Kunchala, 2017).*

The listed examples show how managers should cope with possible difficult situations paying enough attention to hygiene factors and avoid employee dissatisfaction. Furthermore, managers should make sure that work is enough stimulating and rewarding, because just only under these circumstances employees can feel motivated and they achieve great results (Kunchala, 2017).

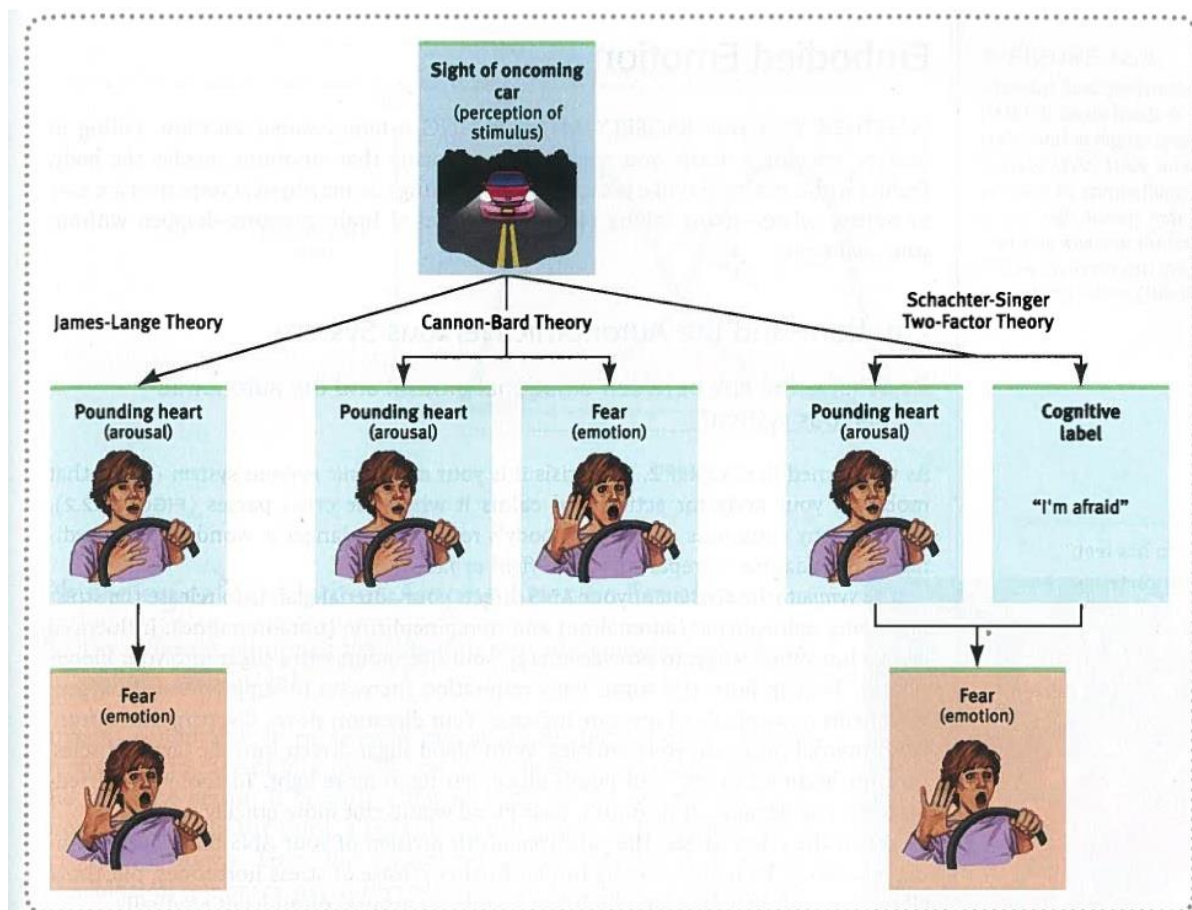


Figure 9: Comparison of three theories responding to a stimulus (Cherry, 2018)

#### 6.4. Behaviouristic theory of emotions

The behaviouristic approach to the emotions was introduced by Watson (1919). This approach deals only with the stimuli for behaviour and states that all behaviour patterns are learned through interaction with the environment (McLeod, 2017).

His most famous experiment (1920) would prove that learning the emotional response to a stimulus does not necessary result in emotions. The study was done on an 11-month-old child called Albert.

He was presented with a white rat each time and when he tried to touch it, the researcher set off a startling noise. At the beginning, little Albert was not at all afraid of the rat, but suddenly the fear started to grow. The fear of the noise became “learned” when he approached the rat, hence, Albert tended to show fear when approaching the animal even if there was no noise. The fear was then transmitted to similar objects such as a ball of wool or a white rabbit (Phillips & Kringelbach, 2014).

Gregory Kimble, the American psychologist, wrote the introduction to Watson’s book *Behaviorism* (1997). In the book Kimble suggested nine hypothetical laws of learning that had been identified by Watson. The first two laws are “frequency” and “recency.” The remaining hypotheses can be summarised as follows:

1. *“Conditioning is a process of stimulus substitution: “The [conditioned stimulus] now becomes a substitute stimulus—it will call out the [response] whenever it stimulates the subject.”*
2. *“The process of conditioning is ubiquitous, “So far as we know we can substitute another stimulus for any stimulus calling out a standard reaction” (p. 22). Thus, learning never produces truly new responses. “The organism starts out life with more unit responses than it needs” (p. 24). The process that appears to establish new responses “concerns itself really with stimulus substitutions and not reaction substitutions (pp. 25-26).”*
3. *“Conditioned responses [may be] temporary and unstable. After periods of no practice they cease to work [but they can] be quickly re-established.”*
4. *“The substituted stimulus can be made [so specific that no] other stimulus of its class will then call out the reflex.” But, in apparent contradiction to this idea, Watson also noted that conditioned responses generalize (transfer) to similar conditioned stimuli.”*
5. *“The magnitude of the response is dependent upon the strength of the [conditioned] stimulus.”*
6. *“There is a marked summation effect. If a dog is conditioned separately to [two stimuli], there is a marked increase in the [strength of the response] if the stimuli are given simultaneously.”*
7. *“Conditioned responses can be ‘extinguished” (pp. 28-29) (Weibell, 2011).”*

The most famous study was done by Ivan Pavlov on dogs. The study was not really based on the study of emotions, but rather on the basic learning skills of animals. Ivan Pavlov came up with the term *conditioned learning*. The study shows that a response (salivating) to an innate stimulus (smell

or sight of food) can develop into a trained or conditioned behaviour if it repeated with another stimulus. Pavlov also confirmed that, for example, an electric shock can be conditioned by using a metronome, and thus he proved that emotional associations were present (Phillips & Kringelbach, 2014).

Behaviouristic theory is widely applied in teaching, where a new approach has been supported: habit formation and errors. Habits can be formed by either stimuli (Watson) or imitation (Skinner) and play an important part in language learning. Skinner proposed that a stimulus is not evident, or is unavailable. The structural linguistics compared the native language and the foreign language. Furthermore, errors were mistaken as a product of non-learning and tended to be corrected. This approach of language learning was linked to the ALM teaching method (audio -lingual method). A teacher's task was to repeat problematic parts of learning and correct mistakes as they happened (Brewer, 2016).

Brewer (2016) gives the following example of teaching:

*“Teacher: I want a hamburger. (holding a picture of a hamburger)*

*Students: I want a hamburger.*

*Teacher: hot dog. (holding a picture of a hot dog)*

*Students: hot dog.*

*Teacher: No! (emphasis) I want a hot dog.*

*Students: I want a hot dog.*

*Teacher: Good job!” (Brewer, 2016)”.*

The movement of behaviourism was influenced in the 1950's by Noam Chomsky, who challenged the movement and moved forward to a new era in language acquisition (Brewer, 2016).

The ALM method uses the following approaches:

- **“Errors are not bad:** error analysis showed that there are multiple reasons for errors (developmental, mistakes, hypothesizing, overgeneralization, etc...) Errors have valuable information encoded in them which can be of great importance to the educator.
- **Reward being correct, but encourage when incorrect:** Almost every teacher of young learners rewards students with words of praise. However, all students respond better when rewarded for doing well regardless of age or level. On the other hand, encouraging students when wrong is far more beneficial to the psyche of the student.



- **Strategies for encouragement**

- *Use a non-judgmental voice- be soft and understanding*
- *Smile while correcting- as if to say, "it's no big deal"*
- *Reassure- "it's ok, you're doing well."*
- *Student upset by a mistake- get an eye level and encourage*
- *Higher level students get upset by mistakes- reassure them that you, the educator, still make mistakes and it is your native language.*
- *Above all, use intrinsic (inner) motivation above extrinsic (outward) motivation" (Brewer, 2016)."*

## 6.5. Multidimensional theories

The earlier-described theories were characterised as emotional theories belonging to a multidimensional scale, but some classifications require the emotions to be on a circular (two-dimensional) rather than just a single linear scale (Phillips & Kringelbach, 2014).

On the other hand, the already existing models of emotional experience stem from research dealing with basic emotions (anger, sadness or happiness). However, when trying to apply these emotions to a group of complex emotions (love, shame), a person encounters the problem of how to characterize these complex forms and how to classify them using a structure of several dimensional framework. (Trnka et al., 2013)

Wilhelm Wundt (1896) pointed out that each emotion is a combination of three independent qualities: pleasant/unpleasant, arousing/subduing and straining/relaxing. In addition, he performed tests in his laboratory in Leipzig, trying to investigate the different connections between feelings and strong-willed actions as well as differences in pulse rate in reaction to suggestions or experiences that evoked emotional responses (Rieber & Robinson, 2001).

As an outcome, he suggested that a stronger and slower pulse meant a feeling of pleasure, while a weaker and faster pulse was associated with displeasure, and a weaker and slower pulse led to tension. A stronger pulse with no change was associated with excitement, while a weaker pulse with no change was associated with composure (Rieber & Robinson, 2001).

James A. Russell (1980) introduced the circumplex model. To draw his model, he did not make any hypothesis concerning which axis should contain which qualities, or in which directions they should be placed, but rather he asked people to rate the similarities between a pair of words. Later, Russell

drew a graph where similar emotions were grouped together, and he discovered that the two axes or dimensions that describe or define emotions the best are the degree of pleasure and the degree of arousal (Phillips & Kringelbach, 2014).

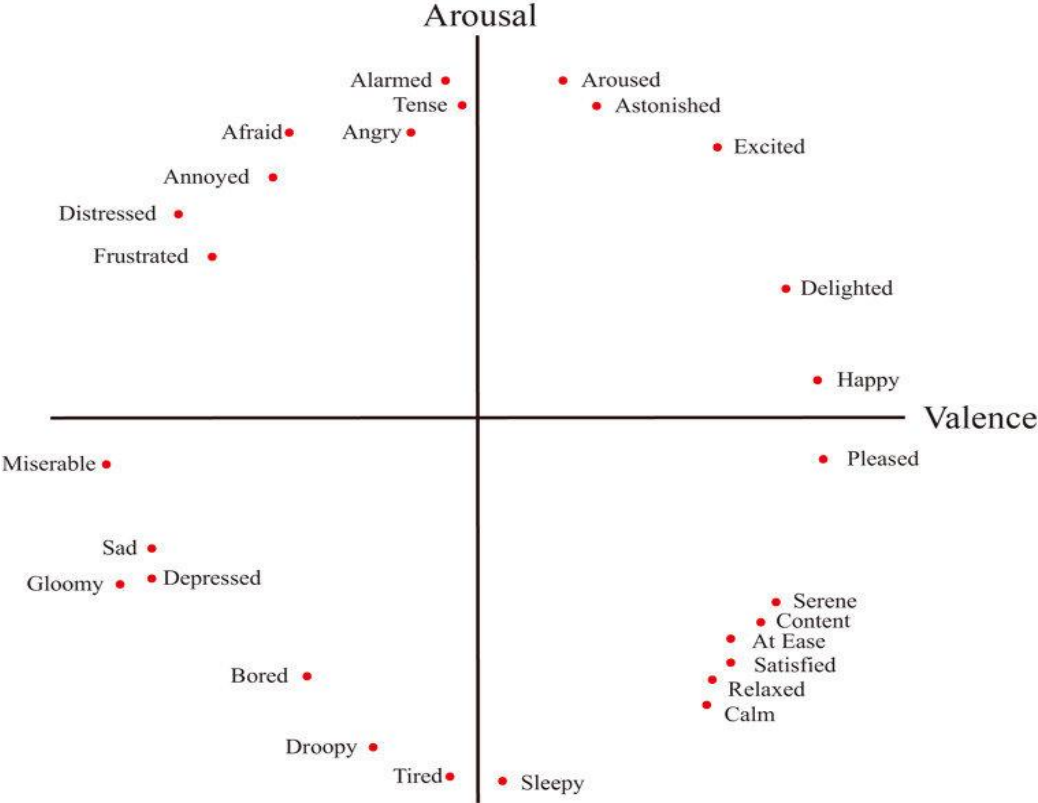


Figure 10: Russell’s circumplex model (Seo, 2019)

In the model, emotions are laid out in a two-dimensional structure. The first axis represents valence and the second axis shows arousal. Valence describes the positive and negative degrees of the emotion, whereas arousal describes the intensity of the emotion (Russell et al., 2011).

Watson and Tellegen (1985) introduced another model that was based on Russell’s model from 1980. They used many axes including positive (arousal) and negative (fear and hostility). The main difference to Russell’s model is that it is possible to experience positive and negative feelings together (such as a high positive activation: drowsy, dull, sluggish, versus a low positive activation: elated, enthusiastic, excited) (Stuchlikova, 2007).

For example, the circumplex model of the emotions (Russell, 1980) was tested in a consumer setting (McDonald et al., 2012). It was tested on magazine subscribers in order to find an emotional

response to the magazine and its packaging. The test proved that the circumplex model is relevant and consistent in the field of customer experience (showing different emotional responses: delight or satisfaction) (McDonald et al., 2012).

Izard (1977) introduced differential emotions theory based on several assumptions. Firstly, ten fundamental emotions are considered necessary to build the human motivational system. Secondly, their function is linked to the survival of human beings and, thirdly, the fundamental emotions interact with others (Huang, 2001). Westbrook & Oliver (1991) used this theory in the examination of post-purchase emotions (Huang, 2001).

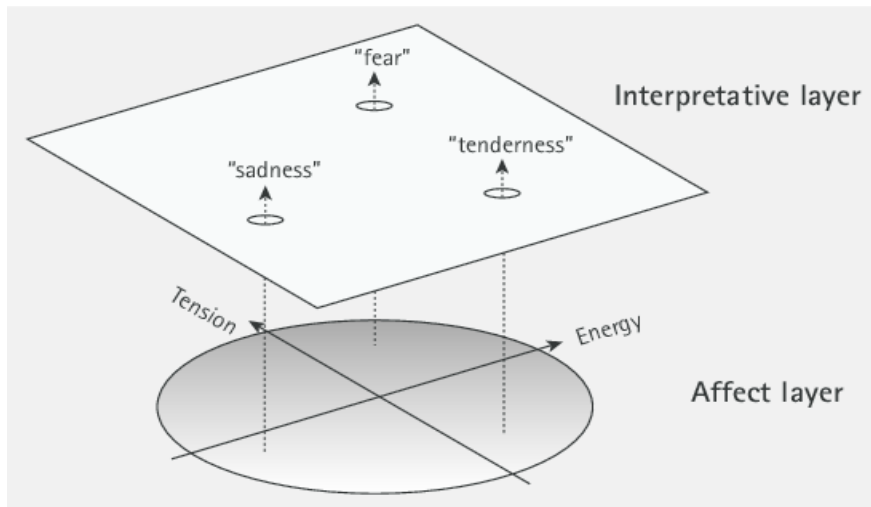
The PAD model of affect was introduced in order to examine emotions during consumption in a retail environment (Donovan & Rossiter, 1982) as well as to capture the emotional component of the consumption experience. The PAD acronym stands for a three-dimensional model (pleasure vs. displeasure, arousal vs. non-arousal, dominance vs. submissiveness). It is important to note that the model characterises all emotional states (moods, emotional states and feelings) (Huang, 2001).

Lastly, PANAS (Positive and Negative Affect Schedule) is based on Watson's research (Watson & Tellegen, 1985), which indicates positive and negative effects as two primary emotional dimensions, what is more, these affects are independent. The model is widely used in many marketing areas such as relation of the product and service satisfaction, post-purchase behaviours and negative affect in advertising (Huang, 2001).

## *6.6. Constructionist theory*

This theory claims that there are no basic emotions having new and unique neural architecture or stereotyped responses: instead, emotions are referred to as cognitive judgments. To be more precise, emotions are built from, or composed of, smaller fundamental psychological and physiological blocks and components. (Phillips & Kringelbach, 2014)

Lisa Feldmann Barrett from Northeastern University explains the constructivist theory (2006) by stating that emotional events such as fear, anger or sadness are not building blocks of emotions, but rather mental events that stem from several different psychological systems. She introduced the conceptual act model (2006), which is described as a constructionist approach, stating that emotions are actually perceptions containing mental contents, and should not be described as processes (they are not modules in the brain, but they correspond to brain states) (Barrett Feldmann, 2018).



**Figure 11: Visualization of the conceptual act model (Barrett, 2006) showing the core affect layer at the bottom, and conscious names as an interpretative layer at the top. (Eerola & Zentner, 2010)**

Older theories such as the theory of Herbert Spencer and William James (1860), also have a link to constructionist theories. Herbert Spencer argued that each emotion has a so-called “specific dedicated circuit’ emerging from a different activity of mental “primitives.” James also showed that emotions stem from more complicated general processes happening in the sensory centres of the brain. (Phillips & Kringelbach, 2014)

Elisabeth Duffy published an article in the *Psychological Review* (1934) where she examined the different theories of the emotions and concluded that none of the proposed theories explains the state or pattern of the organism, as an “emotion” does not represent a “separate and distinguishable condition” (Phillips & Kringelbach, 2014).

According to Duffy, each definition of the emotions under these conditions was successful in describing a difference of degree, but failed to provide an adequate explanation for the phenomenon. Furthermore, there were no criteria for characteristics corresponding to the term “emotion” versus “non-emotion” and there was also no description of the transition between emotion and non-emotion (Gedron et al., 2009).

Finally, she found that every possible element of emotions such as feelings, behaviour or bodily changes could exist in non-emotional states (Phillips & Kringelbach, 2014).

Klaus Scherer introduced the component process model (CPM) in 1987. He claimed that emotions have five components: bodily symptoms, motor expression, cognitive appraisal, motivation and subjective feeling (Phillips & Kringelbach, 2014).

Lastly, psychological constructionist models deal more with the mental processes underlying each emotion. They come from earlier models or ideas, such as elements of motivation, learning with punishment and reward, conscious feelings, interception and, appraisal, as well as models containing basic processes, such as memory, arousal or attention. The constructionist view is generally broader, functional and explains the larger variety of emotions and expressions (Stuchlikova, 2007).

### *6.7. Cognitive appraisal theory*

The “appraisal” of a current event plays a very important role in the emotions and distinguishes emotions from other psychological phenomena (Ekman, 1997). Paul Ekman describes appraisal as a mechanism that selects stimuli (internal and external), creating an occasion for each other. He also states that the speed of response between the interval and stimulus is very short, and thus this mechanism needs to react very quickly. Its task is not just to answer the call of stimuli and, determine whether they respond to emotions, but also to which emotion they respond (Ekman & Davidson, 1994).

However, appraisal is not always automatic. Sometimes it happens that the evaluation of what is happening now takes more time in other words, it is conscious and deliberate. A person can be alerted or aroused, but there is no specific emotion. In this case, cognition plays a very important role in what may arise (Ekman & Davidson, 1994).

Similar conclusions were drawn by Zajonc (1985), Ohman (1986) and others. Robert Zajonc (2000, 2001) demonstrated the conditions under which people have preferences without understanding the reason (Ekman & Davidson, 1994).

In the research, participants were confronted with different stimuli, such as Chinese characters, foreign words, sets of numbers or strange faces. These stimuli were presented very briefly, making it impossible for participants to recognize them consciously. In the next step, the participants were asked how much they liked the different stimuli. Some stimuli were “old” (these had been flashed below the threshold of consciousness) and others were new. In the end, the participants gave a higher grade to the old stimuli. The research proved that they experienced positive emotions without conscious awareness of their origins, so the emotional response could not result from the appraisal process (Gerrig, 2014).

Lazarus (1991) also deals with appraisal theory. He argues that emotional experience cannot be understood by simply understanding what is happening in the person or the brain: the environment is also crucial (Gerrig, 2014). He also states that even though environmental pressures cause stress in people, individuals, and groups, they do not react the same and thus they differ in vulnerability, sensitivity to certain events, reactions and interpretations (Gerrig, 2014).

If we look at a group of people with different characteristics such as anger, depression, anxiety or guilt, they will all react differently to similar (comparable) conditions. Even in the most horrific conditions, such as in Nazi concentration camps, individuals differed in the way they were threatened and, persecuted, logically, the patterns of coping were also different. Therefore, to understand the different types of reactions under comparable conditions, it is necessary to consider the cognitive processes that occur between the encounter and the reaction. Furthermore, one needs to consider the factors that influence the nature of meditation (Lazarus & Folkman, 1984).

Some very interesting research was conducted by an attractive female researcher who interviewed male participants that were supposed to cross one of two bridges in Vancouver, Canada (Dutton & Aron, 1974). One bridge looked safe, whereas the second one was rather wobbly. The researcher asked the men to write a story in which a woman was described. The researcher also invited them to call her if they wished to have more information about the research. The men who crossed the wobbly bridge wrote stories with more sexual imagination, and they called the researcher four times more often than those men who crossed the safe bridge. The research shows that the main arousal for these men was crossing the wobbly bridge. But when the men should have come to a conclusion about the source of their arousal, they concluded that it was caused by the attractive woman: in reality, it was the danger. Briefly, they made an emotional judgement (“I am interested in that woman”). The example illustrates the hypothesis that people appraise environmental cues to be able to interpret their physiological arousal (Gerrig, 2014).

Additionally, Ekman, Levenson, Carstensen and Friesen (1991) describe emotions in terms of their physiology and expression. Modern research shows that the autonomic nervous system (ANS) has distinctive patterns for anger, fear, disgust and sadness (Ekman & Davidson, 1994).

It is said that ANS patterns arise because they serve as the “motor behaviour” that prepare the organism for different actions. Stemmler’s research (1989) proves that ANS patterning is specific to how an emotion is evoked. However, Ekman objects that there is no emotion-specific pattern to, distinguish one emotion from another, for surprise rather than enjoyment, for example. The reason why the CNS is crucial is that distinctive features of each emotion (changes not only in expressions, but also in memories, imagery, direction and expectation) could not occur without the central

nervous system. Paul Ekman also believes that there must be “unique” physiological patterns for each emotion and these CNS patterns should also be specific to those emotions. Moreover, he describes emotion not a single state, but rather a family of related states (Ekman & Davidson, 1994).

According to Ekman & Davidson (1994), each emotion family contains the same characteristics, such as automatic appraisal, brief duration, unbidden occurrence, commonalities in antecedent events, presence in other primates, quick onset and distinctive physiology.

These are characteristics that distinguish one family from another. What is more, interpretations of some emotional experiences do not necessarily require appraisal. The experience of strong arousal without any obvious reason does not result in a neutral, despite what the theory says. It is not necessary to undergo any dangerous situation: one only needs to imagine this situation. As a result, the heart beats quickly, breath becomes quicker and a person starts sweating. This unexplained physical arousal was studied by Marshall, Zimbardo and Maslach (1979), who concluded that such situations are often misunderstood and explained as if there were something wrong with a person, because one automatically resorts to a negative explanation or justifies the situation in a negative context (Gerrig, 2014).

Furthermore, Lazarus’s appraisal theory was used as an experiment in socio-empirical work and was thus a way of predicting emotional and coping responses to hurtful messages (Bippus & Young, 2012). Hurting is unavoidable in interpersonal interactions, and that is why it is interesting to investigate how people cope with this interpersonal emotion. Lazarus stressed that coping is central to the process of emotional arousal and should be considered part of an emotional experience (Bippus & Young, 2012).

Vangelisti et al. (2015) listed several possible causes of hurt feelings including:

- *“Relational Denigration (portraying the relationship as not valuable or important to the person who hurt them).*
- *Humiliation (making respondents feel shame or vulnerability).*
- *Verbal/Nonverbal Aggression (communicating forcefully and hostilely).*
- *Intrinsic Flaw (focusing on immutable personal defects), Shock (seen as surprising).*
- *Conceived Humor (employing malicious humor).*
- *Mistaken Intent (reflecting that the recipient was misunderstood or mischaracterized).*
- *Discouragement (denigrating participants’ efforts or hopes)” (Bippus & Young, 2012).*

The experiment conducted by Vangelisti et al. showed various reactions to feelings of being hurt: from being silent to laughing. The results of the experiment align with Parkinson's study (1997) and show that reactions are influenced by the interpersonal relations between two people and the event or situation that preceded the feeling of being hurt. Finally, the concept of coping is broader than a reaction of an individual to an emotion-evoking moment. This was also explained by Lazarus & Folkmann (1984) who stressed that coping also involves managing psychological stress (Bippus & Young, 2012).



## 7. Revision of the modern psychology and psychiatry according to Stanislav Grof

The last fifty years have brought many new inputs to modern psychiatry and psychology. Research has also brought various “anomalous” phenomena that had been avoiding the attention of psychologists and psychiatrists, or were simply not considered to be important. Many of these observations were so radical that they questioned the basis of the metaphysical assumptions of materialistic science. For this reason, these observations should be reconsidered and classified among the modern psychological and psychiatric methods (Grof, 2000).

### *7.1. Stanislav Grof and research into non-ordinary consciousness*

Stanislav Grof is a psychiatrist with more than fifty years of experience in research dealing with non-ordinary states of consciousness. He was born in the Czech Republic, but has been living for more than forty years in the USA. He is a professor of psychology and psychiatry at some of the most famous American universities (Universities in Baltimore, Maryland, California etc.) (Grof, 2000).

It is important to note that even today, in the 21st century, modern psychiatry does not have any term for the states of conscious that can be beneficial to the psyche, and it wrongly describes them as pathological states. In the end, Grof (1992) introduced a new term, “holotropic”, which is defined as “moving towards wholeness” (from the Greek “holos” meaning “whole”, and “trepein” meaning “moving towards something”) (Grof, 2000).

He is considered as the “father” of holotropic breathwork (1970) and transpersonal psychology (1980), which both deal effectively with many emotional symptoms, traumas, phobias, additions, etc. He is also one to of the most important researchers into states of non-ordinary consciousness of the last sixty years (Grof, 2000).

Stan Grof’s research is focused on healing, transformative and evolutionary potentials within the non-ordinary states of consciousness. Furthermore, Grof suggests that the term “conscious states” is too broad, because it also includes irrelevant parts of the psyche. He says that consciousness can be altered by many other pathological processes such as infections, cerebral traumas, intoxication or degenerative processes in the brain (Grof, 2000). These processes lead to major mental changes in the psyche and can provoke non-ordinary states of consciousness.

Holotropic states can be characterised by the transformation of consciousness, with dramatic changes in all sensory areas (intense and unusual emotions, intense psychosomatic manifestations and unusual forms of behaviour). These changes that a person is undergoing are very profound and can be fundamental for the development of our personality. Grof describes the phenomenon as an experience where a person is simultaneously undergoing two different dimensions of reality. The first is described as the invasion of other dimensions, mystical experiences or other extensions, which can be overwhelming for us. However, people remain focused on reality and do not lose contact with everyday life. The Swiss psychiatrist Eugen Bleuler used the term “double-book keeping (doppelte Buchführung) first mentioned by Sass in 1994 (Grof , 2000).

## *7.2.LSD as a therapeutical tool*

The discovery of LSD (Lysergsäurediäthylamid)in 1943 by the Swiss chemist Albert Hoffmann introduced the Western society to a new philosophical and religious experience. Such experiences were naturally available to the society, but somehow restricted by societal rules. The first issue was that such experiences were not experimentally and systematically consistent; secondly, such experiences were not supported by the Western societal approach on account of the materialistic point of view. The discovery of LSD and other psychedelic substances made it possible to experience these mystical components. Other natural substances, such as psilocybin mushrooms, ayahuasca and peyote cactuses are also among to the natural psychedelics (Sanz et al., 2018).

It should also be noted that the hallucinogenic effects were found accidentally by Albert Hoffmann, when he was accidentally intoxicated by taking a small quantity of the drug, and later decided to test the drug on himself. He suddenly felt dizzy and anxious, and had visual problems and the symptoms of paralysis. That was the beginning of his belief that the substance LSD would have great benefit in psychiatry and neurology, furthermore, LSD and other hallucinogenic substances enable us to better understand the psyche, human nature and the nature of reality (Grof, 1988). Furthermore, LSD is a source of inspiration for many artists.

The first suggestion that LSD could have a therapeutic effect was introduced by Condrau (1949). In the early 1950's a few researchers recommended LSD as an adjunct to psychotherapy, believing that the substance could deepen or intensify the therapeutic process. This approach was introduced, for example, by Abramson (1950) and by Busch and Johnson (1950) in the USA. In Germany, there was Frederking (1953) and in England, there was Whitelaw (1954) (Grof, 1988).

Early summaries of the research were published in many works, and in many countries and researchers tried in many cases to conduct their own research into LSD or test other psychedelics.

The results were overwhelming, and they confirmed the initial beliefs that the substance LSD could deepen the psychotherapeutic process and shorten the time necessary for various treatments, including emotional and psychosomatic disorders. LSD-assisted psychotherapy proved to have a strong potential in which another therapy failed, for example, it was believed that LSD would show great results in narcotic drug addicts, sociopaths, alcoholics, criminal psychopaths, sexual deviants and people suffering from serious personality disorder (Grof, 1988).

Psychedelics boomed in the early 1960's, and were also used as a treatment for patients suffering from terminal cancer and other incurable diseases. It was proven that by using LSD, dying people would be better able to cope with the whole process of dying, by transforming their understanding and accepting the concept of death. In addition, the substance could provide relief from physical pain and emotional suffering (Grof, 2009).

The treatment effects of LSD and other psychedelics have been studied for more than 40 years and hundreds of clinical papers have been published. Research has not been undertaken by trials and errors. The years of testing proved that not all approaches and techniques were strong enough to survive, and thus some were abandoned. Others were developed fully by modifying, refining or assimilating the former methods (Grof, 2009).

One example of an approach that was abandoned, because it did not explain the complexity of the effects of psychedelics, was an attempt to use LSD as an anti-depressant, shock-inducing compound or abreactive agent. Other researchers who continued in psychedelic research concluded that psychedelic substances are more or less unspecific amplifiers, whose therapeutic success depends on different factors that are non-pharmacological in nature (personality structure of the patient, personality of the guide and sitter, therapeutic relationship, nature and degree of specific psychotherapeutic help or physical and interpersonal context of the session) (Grof, 1988).

In short, all psychedelic drugs can activate the psyche and mediate the emergence of the unconscious and super-conscious into consciousness. Whether the process will be therapeutic, disorganizing or destructive depends on various factors that have nothing to do with the pharmacological effects of the compounds. As can be seen, these various factors influence the outcome of the process, which is important to integrate the psychedelic drugs into a psychotherapeutic program if great results are to be achieved. Psycholytic and the psychedelic treatment received the most attention (Grof, 1988).

Psycholytic therapy (Ronald Sandison in the 1960's) suggests a process of releasing tensions or resolving conflicts in the psyche. The theory, which suggests a modification of Freudian therapeutic principles, involves series (15-100) of medium dosages of psychedelics in one- or two-week intervals.

The therapy represents a tool for exploring deep levels of the unconscious. The therapist is present during the session for several hours and gives specific instructions and support. All possible phenomena that could occur during the drug session or in the intervals are approached from the perspective of basic Freudian principles (Grof, 2000).

However, psychedelic therapy differs from the psycholytic approach in that the main objective is different: it thus creates optimal conditions for a subject to have a profound transformative experience of a transcendental nature. In most cases, these transformative processes take the form of the experience of ego death, and a rebirth with feelings of cosmic unity or other transpersonal phenomena. The factors that normally facilitate similar experiences include, for example, higher doses of psychedelics, internalization of the process by the use of eyeshades, stereophonic music played during the session, or an emphasis on spirituality and art (Grof, 1988).

### *7.3. Grof and LSD psychotherapy*

Grof began his research in the late 1950's in Prague, in the former Czechoslovakia. He was a student of Dr. George Roubicek, who had ordered a shipment of LSD from the Sandoz Laboratories in Switzerland after reading about the potential effect of this substance. This was the first time Grof came into contact with LSD. Under Roubicek's supervision, Grof tried LSD for the first time, later describing it as "a powerful mystical experience that radically changed my personal and professional life" (Grof, 1988).

His main area of research concerned how the drug LSD research influences our psyche.

Unfortunately, just as Grof was obtaining great results from this research, it was prohibited by the Communist Party, because it became "too dangerous" for the regime.

The research also influenced Abraham Maslow and Anthony Sutich, who concluded that there must be a spiritual dimension to human existence that had not yet been discovered or researched. Today one refers to transpersonal psychology, which has become a major psychological discipline along with psychoanalysis, behaviourism and humanistic psychology (Grof, 2009).

The outcome of LSD psychotherapy is very well described in Grof's book *LSD in Psychotherapy (1978)*. A subject (= a patient) needs to attend a series of drug-free sessions, when he or she is prepared for a psychedelic experience. The time required for several series varies according to the subject, because there are many different factors involved (the nature of the problem itself, personality of the patient, drug used and other circumstances). This phase of "meeting" is crucial because it builds trust between the therapist and the client. It also enables the therapist to obtain enough information

about the nature of the emotional phenomena, and gather enough therapeutic information about the client. All these elements are crucial for a good outcome of the tested subject (Grof, 2009).

When all these specific criteria are met, the next session should follow with information about the issues and effects of the drug, as well as about the experiences it may induce. At that point, the therapist should explain to the client how the therapy will be conducted, as well as, the rules for the psychedelic session. The psychedelic session itself has to be conducted in a safe, protected and trustworthy environment, where the subject can freely express himself. A bathroom and any similar facilities should be near and accessible during the whole session. Music is a necessary part of the session and should be played in a very high quality. The meal before the session should be light and easy to digest (Grof, 2009).

After being given the drug, the patient remains in the reclining position with closed eyes and a cloth over the eyes. When given a low dosage of psychedelics, it is possible to keep the eyes opened, especially in the case of MDA (3,4-Methylenedioxyamphetamin) or MDMA (3,4-Methylenedioxy-*N*-methylamphetamin). However, Grof reminds us that when higher doses are used, the session is generally more profound and less confusing, meaning the whole integration of experience is better. Generally, all the material that comes from the unconscious has to be faced, fully experienced and integrated (Grof, 2009).

It is necessary to have at least one sitter who is keeping an eye on the client. During the peak hours of the session, there are no interventions normally necessary, assistance is only required when the client is resisting the experience, refuses to wear the headphones or eyeshades, or projects and the acts out. To integrate the experience, an extensive talk is necessarily followed by drawing, painting or the writing of a report (Grof, 2009).

#### *7.4. Grof's cartography of the human psyche*

Grof was greatly influenced by Freud, but the Freudian approach had some gaps that did not meet Grof's expectations, especially in the field of postnatal biography and the psyche. For this reason, he stressed the fact that the cartography of the human psyche must be revised and radically changed (Grof, 2000).

Upon the conclusion of the experiments, Grof introduced two more trans-biographical parts of the psyche: the perinatal, domain related to the trauma of biological birth and the transpersonal domain, related to identification with other people, animals, plants and other aspects of nature (Grof, 2000). The perinatal matrixes are furthermore divided into four parts starting with the stage when the

foetus is still “safely” floating in a mother’s womb to the stage of a final delivery. Each matrix is characterised by different experiences. There are also interesting experiences related to the psyche, including ancestral, racial, phylogenetic and karmic memories, as well as visions of archetypical beings and mythological regions (Grof, 2000).

The biographical aspect of the psyche contains memories from infancy, childhood and later life. Holotropic states prove that repressed emotions do not manifest just in dreams or slips of the tongue, they require the full authenticity of expression, such as body language (postures, gestures, and behaviour), shouting, crying, etc. Equally important, holotropic research shows that these repressed emotions need to be re-experienced. Once re-experienced, they are able to be integrated (for example, people who have experienced drowning, operations, accidents, or dangerous or fatal diseases). Grof stresses that such material comes to the surface without any warning or programming, and has a very strong psycho-traumatic impact on the psyche (Grof, 2000).

### *7.5. COEX systems*

Emotional memories are not isolated in our unconscious as isolated imprints, but rather are stored as a form of the complex dynamic constellations called COEX systems. One refers to the Jungian model of “psychological complexes”, but Grof suggests that these systems go deeper, touching the deepest roots of different forms of transpersonal phenomena, including past-life experiences, Jungian archetypes or identification with animals or plants (Grof, 2000).

Memories of humiliation, degradation, shame, rejection, emotional deprivation, damaged ability to trust someone, profound feelings of guilt, impressions that sex is dangerous, or disgust are typical examples of COEX systems. These experiences have a very large negative impact on our psyche, and thus on personality. On the other hand, it should be pointed out that COEX systems do not always contain negative experiences; this depends on the intensity of the experience and its emotional relevance, which play a key role in deciding whether if the memory will be included in the COEX system. In addition, these complexes decide how one perceives oneself, other people or even the whole world (Grof, 2000).

Furthermore, Grof describes the COEX systems as the income of the psychotherapy with clients suffering from different serious forms of psychopathology where the crucial role plays work with traumatic aspects of the life. In the same way, the spectrum of negative COEX seems to be larger and more variable than the COEX containing the positive aspects. It seems that troubles and misery have different roles and forms in our life whereas the happiness depends on the fulfilling a few basic conditions (Grof, 2000).

He argues that each COEX constellation seems to be anchored in a certain trauma of the birth. Grof reminds us that the experience of the human birth is very rich on emotions, on physical sensations, and it contains elementary principles of COEX systems.

According to Grof (2000), our body, and thus the psyche, both have “inner radar”. During holotropic sessions, suppressed memories are brought to the surface thanks to this inner radar. This content is normally something that is most relevant and the most accessible for the conscious processing at that particular moment (Grof, 2000).

This is a major difference to verbal therapy, where a client is asked to bring a different context that is not necessarily the most important in the given moment, and where the task of a therapist is to find any relevant information and reach a conclusion. Unfortunately, such a conclusion can be naturally influenced by the school or a therapist, and thus it cannot be considered a relevant tool (Grof, 2000).

## *7.6. Basic perinatal matrices (BPMs)*

### **7.6.1. First basic perinatal matrix: BMP I (primal union with the mother)**

This matrix is described as an “amniotic universe”, it is related to the intrauterine existence before birth. The foetus does not distinguish between the inner and outer worlds. In this matrix, one can identify oneself with the entire cosmos, interstellar space or galaxies, as well as with experiences like floating in the sea, identification with different aquatic animals, jelly fish, dolphins, etc. (Grof, 2000).

The positive experiences can also include identification with Mother Nature, and thus, with feelings of safety, beauty and unconditional love, reminiscent of being nourished in the womb. Fruit-bearing orchards, fields of ripe corn, Polynesian islands or agricultural terraces in the Andes are also the typical themes of this matrix (Grof, 2000).

On the other hand, when the womb goes through a period of disturbance, one experiences feelings of facing a dark and ominous threat, and often one feels poisoned: visions of polluted waters or toxic dumps, and frightening demonic entities are very often described in this matrix. This is all linked to the fact that these disturbances in the mother’s body are caused by toxic changes (Grof, 2000).

### **7.6.2. Second perinatal matrix: BMP II. (cosmic engulfment and no exit or hell)**

The second matrix is linked to the beginning of biological birth, when uterine contractions periodically constrict the foetus and the cervix is not yet open. Each contraction causes compression of the uterine arteries, and the foetus is threatened by lack of oxygen (Grof, 2000).

Typical experiences describe the entire world or cosmos being swallowed: typical visions include dragons, whales, leviathans, giant snakes or tarantulas, descending into the depths of the underworld, into the realm of death or hell, visions of claustrophobic nightmares, experiences of emotional and physical pains, senses of helplessness and hopelessness, and identification with prisoners in dungeons, concentration camps, or insane asylums or the agony of Jesus Christ (Grof, 2000).

Grof (2000) states that if a person is influenced by this matrix in life, he or she is “blinded” and such a person is not able to see anything positive in life, including human existence. The connection to divinity seems to be lost and irrelevant (Grof, 2000).

### **7.6.3. Third perinatal matrix: BPM III. (the death-rebirth struggle)**

At this stage the foetus goes through the birth canal after the cervix opens, and the head goes down into the pelvis. There are possible complications, well analysed by Grof (2000), such as: interruption of blood circulation caused by uterine contractions, umbilical cord being squeezed between the head and pelvic opening or even twisted around the neck, the placenta detaching during the delivery process or obstructing the pathway, or the foetus inhaling different forms of biological material on its way through the final stage of the process (Grof, 2000).

The third matrix is a complex and rich pattern full of experiences, such as visions from history, natural or archetypal realms, titanic fights, aggressive, sadomasochistic patterns, experiences of deviant sexuality, demonic episodes, scatological involvement and encounters with fire, energy of overwhelming intensity rushing through the body with explosive discharges, the world of technology, involving enormous energies such as tanks, rockets, spaceships, lasers, electric power plants or even thermonuclear reactors and atomic bombs, or aggressive and sadomasochistic aspects (Grof 2000).

The sexual aspect of the death-rebirth process is according to Grof not so obvious. Grof (2000) claims that the human organism has so-called psychological mechanisms built into the body whose role is to translate human suffering or suffocation into sexual arousal. It is even well-known that men dying of



suffocation on the gallows typically have an erection and even ejaculate. It is interesting to note that at this level of the psyche, sexual arousal is highly connected highly with problematic elements, such as threats, extreme danger, anxiety, aggression, self-destructive impulses, physical pains and different forms of biological material (Grof, 2000).

#### **7.6.4. The fourth perinatal matrix BPM IV (the death-rebirth experience)**

The fourth matrix is described as the stage of delivery, of to the final expulsion from the birth canal. One experiences liberation, and a final emergence into light (Grof, 2000). Self-definition and attitudes to the world in postnatal life are heavily influenced by the constant reminder of vulnerability, inadequacy and weakness that one experienced during birth. The death of ego, anticipating rebirth, is “the end and the death” of our old concepts manifesting in what one should be and what the world should look like. The old concept is emerging into one’s consciousness and thus it loses its emotional charge: this is why it is referred to as “dying” (Grof, 2000).

The process of dying and losing everything that a person has heretofore known, brings feelings of anxiety, because one does not know which content will emerge, and if there is anything there at all. This extreme fear creates enormous resistance to continue and complete the experience (Grof, 2000).

When overcoming this fear and letting things happen without any resistance, one experiences total annihilation on all possible levels: physical destruction, emotional disaster, intellectual and philosophical defeat, ultimate moral failure, and even spiritual damnation (Grof, 2000).

To express this feeling more precisely: everything that is important to our existence or is meaningful in our life seems to be destroyed. Once total annihilation has been expressed, one is introduced to visions of a white or golden light, of a supernatural radiance and beauty that appears to be numinous and divine (Grof, 2000).

As one can observe, this final stage represents liberation after experiencing three difficult stages of “reintegration.” Each matrix is related to different experiences. In some cases, one can observe that a person can even experience one content from different four matrixes, or, a person participating in the holotropic breathing does not experience any content and he or she becomes a passive observer. However, it is not arguable that the psyche allows us to go as deep as one is able to cope with in a particular moment and that is the main difference to the LSD substance.

## 7.7. Transpersonal domain of the psyche

Grof describes the other part of the human psyche, which has been omitted by modern psychiatry. He refers to the term “transpersonal”. The term means literally “reaching beyond the personal” and “transcending the personal” (Grof, 2000).

Grof argues that the ability to see an object was described by Issac Newton, because human perception of the environment is limited by the physiological limitations of human sensory organs, as well as by the physical characteristics of the environment (Grof, 2000). This means that humans cannot see objects separated by a solid wall, ships that are beyond the horizon, or a different part of the sun. Human beings can thus experience events that are happening at the moment by using all the senses. One is able to recall the past and anticipate or imagine future events, however, this differs significantly from an immediate or direct experience of the present moment (Grof, 2000).

On the other hand, transpersonal states of consciousness describe experiences with no limitations. In this stage, the senses are able to experience, with all the sensory qualities, episodes that have happened in the past and those that may occur in the future (Grof, 2000).

The following table shows that transpersonal experiences can be divided into three big groups (Grof, 2000):

*A., “experimental extension within space-time and consensus reality*

*B, experimental extension beyond space-time and consensus reality*

*C, transpersonal experiences of psychoid nature (Grof, 2000).”*

### **Figure 12: List of Transcendental Experiences (Grof, 2000):**

#### “I. Experimental Extension within Space-Time and Consensus Reality

##### *Transcendence of Spatial Boundaries:*

- *Experience of Dual Unity*
- *Identification with Other Persons*
- *Group Identification and Group Consciousness*

- *Identification with Animals*
- *Identification with Plants and Botanical Processes*
- *Oneness with Life and All Creation*
- *Experience of Inorganic Materials and Processes*
- *Planetary Consciousness*
- *Experience of Extra-terrestrial Beings and Worlds*
- *Psychic Phenomena Involving Transcendence of Space*

*Transcendence of Temporal Boundaries:*

- *Embryonal and Foetal Experiences*
- *Ancestral Experiences*
- *Racial and Collective Experiences*
- *Phylogenetic Experiences*
- *Experiences of Planetary Evolution*
- *Cosmogenetic Experiences*
- *Psychic Phenomena Involving Transcendence of Time*

*Experimental Exploration of the Microworld:*

- *Organ and Tissue Collection*
- *Cellular Consciousness*
- *Experience of the DNA*
- *Experiences of the World of Atoms and Subatomic Particles*

## II. Experimental Extension beyond Space – Time and Consensus Reality

- *Spiritistic and Mediumistic Experiences*
- *Energetic Phenomena of the Subtle Body*
- *Experiences of Animal (Power Animal)*
- *Encounters with Spirit Guides and Superhuman Beings*
- *Visit to Parallel Universe and Meetings with Their Inhabitants*
- *Experiences of Mythological and Fairy-tale Sequences*
- *Experiences of Specific Blissful and Wrathful Deities*
- *Experience of Universal Archetypes*
- *Intuitive Understanding of Universal Symbols*
- *Creative Inspiration and the Promethean Impulse*
- *Experience of the Demiurge and Insights into Cosmic Creation*
- *Experience of Cosmic Consciousness*
- *The Supracosmic and Metacosmic Void*

## III. Transpersonal Experiences of Psychoid Nature

*Synchronicities (Interplay between Intrapsychic Experiences and Consensus Reality)*

*Spontaneous Psychoid Events:*

- *Supernatural Physical Feats*
- *Spiritistic Phenomena and Physical Mediumship*
- *Recurrent Spontaneous Psychokinesis (Poltergeist)*
- *UFOs and Alien Abduction Experiences*

*Intentional Psychokinesis:*

- *Ceremonial Magic*

- *Healing and Hexing*
- *Yogic Siddhis*
- *Laboratory Psychokinesis (Grof, 2000)."*

The first category of transpersonal experience describes experiences that step beyond time (transcendence of linear time) and space (spatial boundaries). Spatial experiences are typical of identification with another person, or an entire group of people: a person can even expand to include the feeling of the whole humanity. In a similar way, human experience can expand to identification with plants, animals or a certain form of consciousness (Grof, 2000).

The second category of transpersonal phenomena is even more difficult to imagine. In this stage, people undergoing holotropic sessions describe the extensions of human consciousness into realms and other dimensions that are, for our Western industrial culture, difficult to imagine. It is possible to give examples of visions of identifications with archetypal beings, deities and demons of different cultures, as well as visits to fantastic mythological landscapes. It is also possible to perceive the understanding of universal symbols such as the cross, Nile cross, ankh, swastika, six-pointed star, or pentacle or yin-yang sign (Grof, 2000).

The third category of transpersonal experience includes phenomena that Grof describes as "psychoid" (Grof, 2000). This group describes situations where intrapsychic experiences are associated with events in the external world (experiences such as spiritual healing, ceremonial magic or psychokinesis) (Grof, 2000).

# Results

## Systematic Literature Review

Petticrew & Roberts suggest in their book *Systematic Reviews in the Social Science* (2006) the following steps:

- A., Define the question
- B., Consider drawing together a steering or advisory group
- C., Write a protocol and have it reviewed
- D., Carry out literature search
- E., Screen the references
- F., Asses the remaining studies against the inclusion / exclusion criteria
- G., Data Extraction
- H., Critical Appraisal
- I., Synthesis of the primary studies
- J., Writing up the report” (Petticrew & Roberts, 2006).

My research question was “what are emotions and how does one define/categorise them”?. The main idea was to write the thesis using evolutionary and historical order. In the first step I have listed for all possible relevant sources that had something to do with “emotion”; however primary attention was paid to quality scientific papers and journals. The research thus included different literature (journals, books and Internet articles) that helped me to understand the phenomenon. The literature also served as an inspiration to create the other chapters of the thesis.

The most valuable sources were the following books, which would answer the research question:

Author	Source / Book
Ekman, P., Davidson, R.J. (1994)	The Nature of Emotion: Fundamental Questions
Gerrig, R.J. (2014)	Psychology and Life: Pearson New International Edition
Kringelbach Morten, L.and Phillip, H. (2014)	Emotion: Pleasure and Pain in the Brain

Nakonečný M. (2017)	Emoce
Nakonečný M. (2015)	Obecná Psychologie

All these above-mentioned sources had this in common: they addressed the phenomenon of emotion from different point of views, and they brought other relevant information to the other chapters.

Deciding whether or not a paper was high quality was done according to the quality of the journal, how many times an article was quoted was also taken into consideration. As a result, the most valuable sources that were journals and articles “*science direct*” and “*researchgate*.”

Beedie Ch., Terry P., Lane A.M. (2005)	Distinctions between Emotion and Mood (science direct)
Ekman, P. (2009)	Darwins Contributions to Our Understanding of Emotional Expressions (science direct)
Huang, M.H. (2001)	The Theory of Emotions in Marketing (researchgate)
Plutchik, R. (1970)	Emotions, Evolution, And Adaptive Processes (researchgate)
Oatley, K., Johnson-Laird, P. (2014)	Cognitive Approaches to Emotions (researchgate)

The stage of research extraction excluded sources that had not been updated, and therefore whose information was no longer relevant. The other stage of extraction included papers and sources that contained too broad a range of information, or were not of high quality.

In the final phase of the decision-making process, the choice of theories and chapters to be listed in the thesis was influenced by their appearance in journal papers and psychological books, and also whether they could be applied using different approaches. The final stage thus includes more than twenty journals and almost thirty books that were used as a source for the thesis, which speaks to the quality of the thesis itself.

Furthermore, the theories were constructed according to an evolutionary and historical approach. The other theories were gathered according to a different subject of research (evolution, physical response to the organism, one- and two-dimensional theories, behaviouristic theories, etc.)

Theory name / Researcher	Subject of research
Charles Darwin	Evolutionary perspective (emotions as adaptive purposes, survival).
Plutchik 's theory	Evolutionary perspective (primary, secondary emotions), mix of emotions.
<p>Various theories</p> <p style="text-align: center;">↓</p> <p>James – Lange theory</p> <p>Cannon – Bard theory</p>	<p>Physiological theory (physiological responses to the organism)</p> <p style="text-align: center;">↓</p> <p>Arousal and emotion are experienced at the same time (Cannon – Bard theory) vs. emotion is preceded by arousal (James – Lange theory).</p>
Two – factor theory of emotions (Schachter & Singer)	Emotion is based on a physical arousal and on cognitive appraisal.
Behaviouristic theory of emotions	Behaviour patterns are acquired through interaction with the environment.
<p>Constructionist theory (Feldmann – Barrett's model)</p> <p style="text-align: center;">Various theories</p> <p style="text-align: center;">↓</p> <p>Russel's Circumplex model</p>	<p>Interpretative vs. affect layer (emotions are mental events coming from different psychological systems)</p> <p style="text-align: center;">Multidimensional theories</p> <p style="text-align: center;">↓</p> <p>Two – dimensional model (valence vs. arousal)</p>
Cognitive appraisal theory	How to respond to a stimuli, which emotion correspond to a certain stimuli.



Transpersonal psychology (Grof's uncounscious states of mind)	Blocked uncounscious material, memory or emotion.
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As one can observe, different emotional theories work with different aspects related to the research question. The more recent a theory is, the more elements seem to be employed. However, in all cases one needs to take into consideration the basic elements that created the discipline of psychology such as Darwin's contribution and Freud's and Jung's approaches. None of these theories would exist without their contribution. One needs to decide what one wants to analyse or study, because an attempt to generalise them and apply them for any approach or direction would result in failure.

On the following examples, I will demonstrate how different models can be used in socio-empirical work:

Name of theory	Use
Charles Darwin	Basis for psychology (widely recognized).
Plutchik's wheel of emotions	Basis for emotional marketing.
Multidimensional theory ↓ Russell's circumplex model	Emotional marketing, customer satisfaction.
Two – factor theory (Herzberg's motivation theory)	Working place environment
Behaviouristic theory (Watson & Skinner)	Language learning, language acquisition
Cognitive appraisal theory	Responses to hurtful messages

One could simply state that the other theories not mentioned here are irrelevant or unstable. However, some theories are applied in a particular domain or are widely used in psychological disciplines. It would be false to state that these theories are unstable. To determine whether a theory is stable or not, one needs to carefully consider the field or domain in which the theories are applied. On the one hand, Cannon-Bard's and James-Lange's theories seem to be widely applied in psychology, but this does not exclude the fact that they could also be easily applied using a socio-

empirical approach. Primary attention is paid to the particular aspect of emotion that should be analysed.

On the other hand, Russell's theory and Plutchik's wheel of emotions seem to have a larger use compared to the other theories, and they have served as a basis for emotional marketing. For this reason, one can state that this theory can be considered more stable than the other.

Finally, the question of which classification of the different theories is best used when doing empirical work has been answered in the earlier part. As said, what a researcher needs to analyse depends on his focus, and for his work he needs to choose an adequate theory or combine them. Some of the theories, such as Plutchik's wheel of emotions or Russell's circumplex model serve as a source for many other areas of research in emotion, marketing or psychology itself. These models have been reused and remodelled for different purposes. One can state whether or not a theory is stable by observation, analysis or combining theories together; another aspect that needs to be taken into consideration is how widely the theory can be applied.

## Conclusion

Emotions are an old evaluative tool that is essential for choosing of human paths regarding adaptation to the environment. In the 20th century we came to the point that our culture had succumbed to a false sense of rationality, which could be called an “evolutionary novelty”, and it seemed to offer us better and more powerful decision-making (Stuchlikova, 2007).

Fortunately, at the end of the century, we came to a more realistic point of view. Reason is not as independent or powerful as we wanted it to be, and how it was suggested to us. (Stuchlikova, 2007)

In fact, emotional and cognitive processes have been closely linked to each other since their beginnings: they complement each other to our advantage. In addition, research on emotions is not an easy task and is full of methodological difficulties (Stuchlikova, 2007).

Our reasoning, which we rely on in our daily lives, is not nearly as perfect as it seems. On the contrary, we tend to make heuristic and systematic errors as is convincingly shown by cognitive psychology. Yet in uncertain situations and complicated intricacies regarding personal or social problems, our reasoning is much better and correct than the logic of computers. What gives us an advantage in these situations, is precisely emotions. Emotions help us to quickly evaluate a tremendous amount of information without using formal procedures (Stuchlikova, 2007).

Emotions are a tool of subjective evaluation. They point to our values: the way we evaluate what we do and what is going on within us. Openness to our own experience leads us to change our approach to our values. If we can reflect on our feelings, we can be much more in touch with our authentic values, and distinguish them from values taken in from outside. We become less what we should be (according to those around us), and we gain more courage to be ourselves (Stuchlikova, 2007).

One should avoid dealing with emotions from a black- and- white perspective, and instead describe them from a dualistic point of view. Emotions are not right or wrong: they play an important role in our lives and so we should review them. One should not reject them as intruders and, on the other hand, one should not meaninglessly look up to them with admiration. If one manages to balance between these polarities, it is the best way to have human mental integrity and rationality (Stuchlikova, 2007).

My observations conducted in the chapter “results” proved the fact that various theories of emotion have different aspects and are thus applied in different approaches. One can combine emotions together and get another insight into the phenomenon. There is no risk of getting it wrong, because

emotion is a great field of study that reacts and adapts to human personality, so there will always be a new challenge waiting to be analysed or discovered. The use of theories in marketing, psychology, psychological testing, customer satisfaction, etc., has a long history, and the theories are reviewed, relabelled and remodelled into new human disciplines. Some of them have proved to be rather isolated, for which I use the term 'unstable', others have proved to be more as more dynamic, with a wider use in different domains ('stable'). Deciding which one to apply depends on the research subject and researcher, who needs to decide which one would fit best.

The chapter "limitations" shows how some of the theories of emotion can be limited by their approach or by various factors, and thus are hardly applicable in socio – empirical work. The examples show how the theories can be more or less restricted, and for this reason they remain attached to the research field.

The following chapter "further research" suggests how further research could be conducted, and thus more directed into applications in order to balance the theoretical part of the thesis. However, the domain of emotion is wide open to new challenges, because it still has a lot to offer.

On one hand, emotions are reflected in the socio-empirical field (biology, advertising, marketing, etc.) as demonstrated in previous paragraph. On the other hand, a potential of emotions is much larger and is linked to various domains including psychology and psychotherapy.

For this reason, my intense interest in Jung, Freud and Grof has led me to deal with the topic more intensively and also include a therapeutic part. My decision to describe the parts of the human brain that affect emotions comes from my belief that people have limited knowledge of the functions of the limbic system, even though they heavily influence our mood, decision-making, risk taking, self-awareness, language and problem - solving. It is therefore not just the amygdala that plays an important role, but also the other smaller parts of the brain.

My observations and interest in the unconscious under Dr. Hrabanek's guidance in the international transpersonal centre Holos, in Opava, Czech Republic brought me to Stanislav Grof who is regarded as one of the most influential psychiatrists of the last fifty years. His observations, works, tools and knowledge have enriched psychiatry and brought new era of "enlightenment" into the field. Even if modern psychiatry remains rather sceptical of his approach, however, Grof has proven that the unconscious material coming from his observations is a real problem and thus it must be taken into consideration by modern psychiatry.

Modern science has proven that the theories and discoveries of Freud and Jung have been deservedly regarded as necessary principles of the psychological field. The issues of Jungian

archetypes or the ego, superego and id have been widely discussed in the academic literature. It would be wrong to think that one needs to support mainly Freudian and Jungian approaches and reject the modern approach adopted by psychologists, because then one would face stagnation. It is important to base psychotherapy on Freudian and Jungian approaches and on their contribution, but in the 21<sup>st</sup> century one needs to take into consideration a larger scale of knowledge and include other factors (Curry, 2018).

In a similar way, Stanislav Grof has followed Jungian and Freudian approaches. The topic of consciousness is typical of all three authors, even though they approached it differently. One can state that Grof has partly resolved the dilemma: the unconscious versus consciousness even though there is still a lot to be discovered about the topic. Jung and Grof have more in common than it appears at first sight, because they both followed the capacity of the body to heal itself and somehow move towards wholeness. Jung was also regarded as the first transpersonal psychologist. Moreover, Grof has acknowledged the Jungian perception of archetypes and he introduced perinatal theory, which has been shown to be crucial for building the psyche. This part of human psychology was not omitted by Freud (Curry, 2018).

Furthermore, Freud found the roots of neurosis in unresolved conflicts in early childhood sexuality. Thus, Freudian psychoanalysis is based on the emotional “imprints” from childhood and it offers a solution for healing. The 1970’s were associated with the huge development of pharmaceuticals and moved Freud’s therapy far behind psychologists’ interests. Otto Rank (1884 - 1939), Freud’s close friend, was the first person to stress the importance of the birth experience in the development of a child’s psyche: he referred to birth trauma. Moreover, Arthur Janov (1924 - 2017) elaborated on the topic of the birth experience claiming that “primal pain” can be associated with early childhood experiences. Moreover, he stated that repressed emotional imprints would lead to serious health problems (Curry, 2018).

Modern research shows how important these factors are for our mental life, and there should also be a place for other methods that would support a mechanical inbuilt “scanner” that is able to cure and relieve the psyche without using heavy pharmaceutical doses of Valium. Unfortunately, even today, most psychiatrists adopt a typical approach that had been dormant for the last fifty years, and they have not brought anything new except for modernisation of psychiatric clinics and the introduction of new psychopharmaceuticals.

# Limitations

A principle limitation of the thesis was a topic that was broad and could grasp any aspect of emotion. For this reason, it was important to choose good literature and journals in order not to become overwhelmed or lost in theories. As a result, the main limitation was a very large choice of sources and literature, even more significant, a new trend in the perception of emotion, which results in the publication of many new articles, but very often repeat the same, already published approaches. Thus it is not possible to mention too many theories of emotion, because in that case the thesis would be confusing. What is more, the aim of the thesis was not only to introduce the theories from a psychological point of view, but also to mention their application in socio-empirical work. In the end, the choice of theories and main schools always relies on an author and will always be influenced by his education, interests or field of research.

Another limitation was lack of sources and literature corresponding to the socio-empirical application of theories. There are dozens of books and journals describing theories (origins of theories) and a pure theory, but it was very difficult to find out how one could apply these theories in everyday life. It seems that authors describing the theories use the same approach, but they do not mention how to apply theories in socio - empirical work. When an author comes to the conclusion that theories can somehow be applied, he would describe a theory from just one perspective and thus from the psychological point of view. The sources that really deal with a broader sense of use are in most cases payable sources, but even in these cases they contain too many scientific notions that are incomprehensible to an average reader. As a result, there is a lack of an average comprehensible literature that would summarise emotional theories in socio-empirical work.

A similar problem occurred during the classification of theories. Unfortunately, some theories are more flexible, and some less. The theories are limited by their approaches as it is shown in the following table:

Name of the theory	Limitation
Two – Factor theory (Herzberg’s view of satisfaction and dissatisfaction)	<ul style="list-style-type: none"> <li>• Bias in measuring of satisfaction (worker can find his job satisfactory even if he dislikes his job)</li> <li>• Prejudice from workers</li> </ul>
Two – Factor theory (Herzberg’s view of	<ul style="list-style-type: none"> <li>• The theory overlooks productivity</li> </ul>

satisfaction and dissatisfaction)	
Plutchik's wheel of emotions	<ul style="list-style-type: none"> <li>• It is regarded simplistic (not catching bigger emotional nuances)</li> <li>• Pairing of pride and shame</li> </ul>
Behaviouristic theory	<ul style="list-style-type: none"> <li>• Too deterministic (environmental effects)</li> </ul>
James - Lange theory	<ul style="list-style-type: none"> <li>• What causes changes in the body (emotions)?</li> </ul>

The table of limitation of theories lists just some examples, because all listed theories in the thesis can be somehow limited by various factors. One can observe that limitations have different characters and thus they differ significantly from each other.

Another limitation was a language. Due to a fact that two main books were published in my mother tongue (Czech) I had to translate some paragraphs from Czech into English. It caused some misunderstanding, or the text was difficult to read, for this reason, sources in Czech language were used only in these cases when an equivalent source in English language was available and thus both sources could be compared.

Finally, the theories are not only limited by their approaches, but also by application in socio-empirical work (detailed in the chapter "results"). Some theories can hardly be used in everyday life, and they remain attached to the research field.

## Further research

The thesis describes various emotional theories and thus it would be important to analyse various theories even further in socio-empirical work and make the list of fields in which each theory could be applied. The thesis gives an overview of the most important theories and their application, but it would be even more interesting to compare the theories not only by their names, but also by their approach (behaviouristic, multidimensional, two-factor theory and physiological) and conduct further research according to this division.

The theories would be further tested in just socio-empirical work and one could conclude which ones receive no empirical support. As has been said before, the choice of theories and socio-empirical approach has been applied just for those theories that are described in more details in the thesis; the other theories are either considered not so important, or they just do not provide enough information to be mentioned.

To go more into the empirical approach, the theories would be applied in everyday practise and compared according to surveys or questionnaires. Here the theories would not bear names, but they would be shown in examples (e.g. psychological questionnaires concerning depression). This would enable one to compare more theories using the same or similar examples and conclude which approach, and thus which theory, is best applicable and also more comprehensible for patients under which circumstances.

The other theories could be compared according to application in emotional marketing and followed by a table mentioning their pros and cons.

Finally, the thesis would take a more practical approach and be more beneficial for readers that are interested in application of the theories. As mentioned, there are just a few sources that can provide an overview of the practical part, as most literature deals only with a theory.



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