

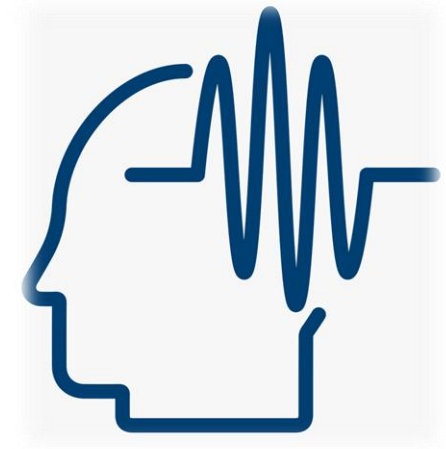
High sensitivity and other temperamental and personality traits

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What is personality?

- Personality can be defined as a consistent patterns of thoughts, feelings, and behaviors characteristic of human beings.
- Disposition to think, feel and act in a certain way in different situations.
- There are many theories that have tried to explore the aspects of personality and their dimensions. One of the most relevant approach is the trait models, that we will consider in this presentation.

What is personality?

- Personality is an abstract construct
- Three types of processes are involved in personality: cognitive, emotional and behavioral
- Personality is the result of both personal dispositions and external influences

What is personality?

- Personality includes two fundamental aspects: stability (static) and variability (flow)



- Personality is unique to each individual and arises as a result of the particular organization of its characteristics and elements

What is personality?

Most researchers agree with the American psychologist Gordon Allport (1966) that personality consists of **traits**: relatively long-lasting predispositions that influence behavior.

Personality traits (such as introversion or aggressiveness) partially explain the stability of our behaviors.

Catell's approach differentiate between:

Surface traits: clusters of overt behavioural responses that perform together.

Traits of origin: more stable variables that may have their origin in heredity or environmental influences.

How do personality traits originate?

Genetic Factors

Common-shared environmental factors

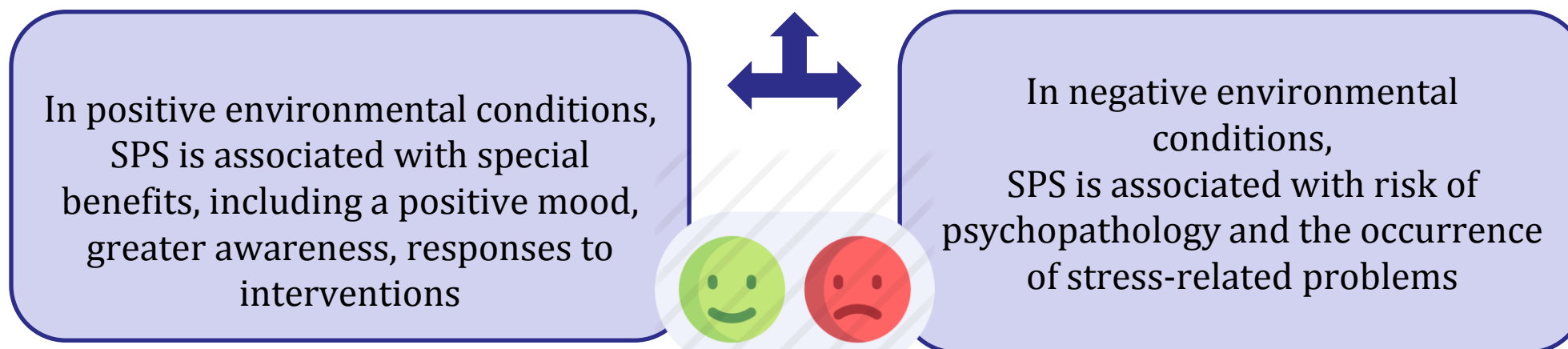
Non-shared environmental factors

Sensory Process Sensitivity (SPS) as a trait

Sensory processing sensitivity (SPS) is a trait which describes interpersonal differences in environmental sensitivity, both positive and negative ones.

SPS is a hereditary temperamental trait.

It was an American psychologist **Elain N. Aron** who drew attention to and popularized the issues of sensory processing sensitivity (SPS) and high sensitivity.



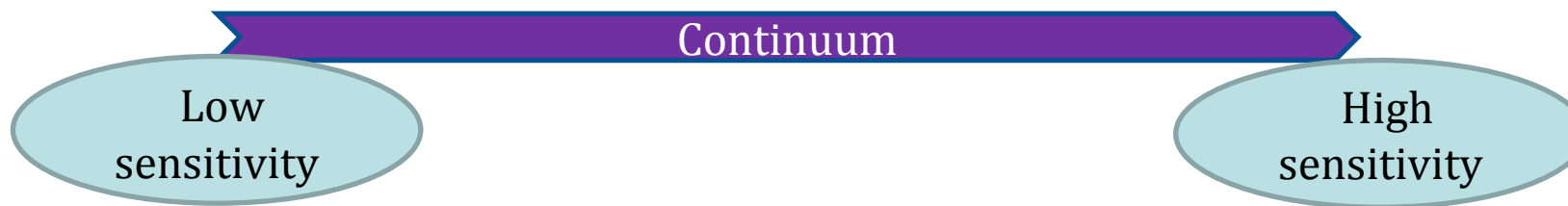
Sensory Process Sensitivity (SPS) as a trait

According to Aron, the number of people with high sensitivity is too high to treat this trait as a disorder, but not large enough for them to be understood and supported by the environment in a manner adequate to their needs.

The high sensitivity is not a disorder.

In the population, differences can be observed on the continuum from low to high sensitivity to the environment.

People differ in their sensitivity to the environment, and only a small part of the population (around 15-20%) is highly sensitive.



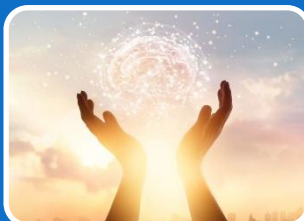
Sensory Process Sensitivity (SPS) as a trait

Unidimensional Construct



Ease of Excitation (EOE)

- Being easily overwhelmed by external and internal stimuli.



Aesthetic Sensitivity (AES)

- Aesthetic awareness or being deeply moved by music and arts.

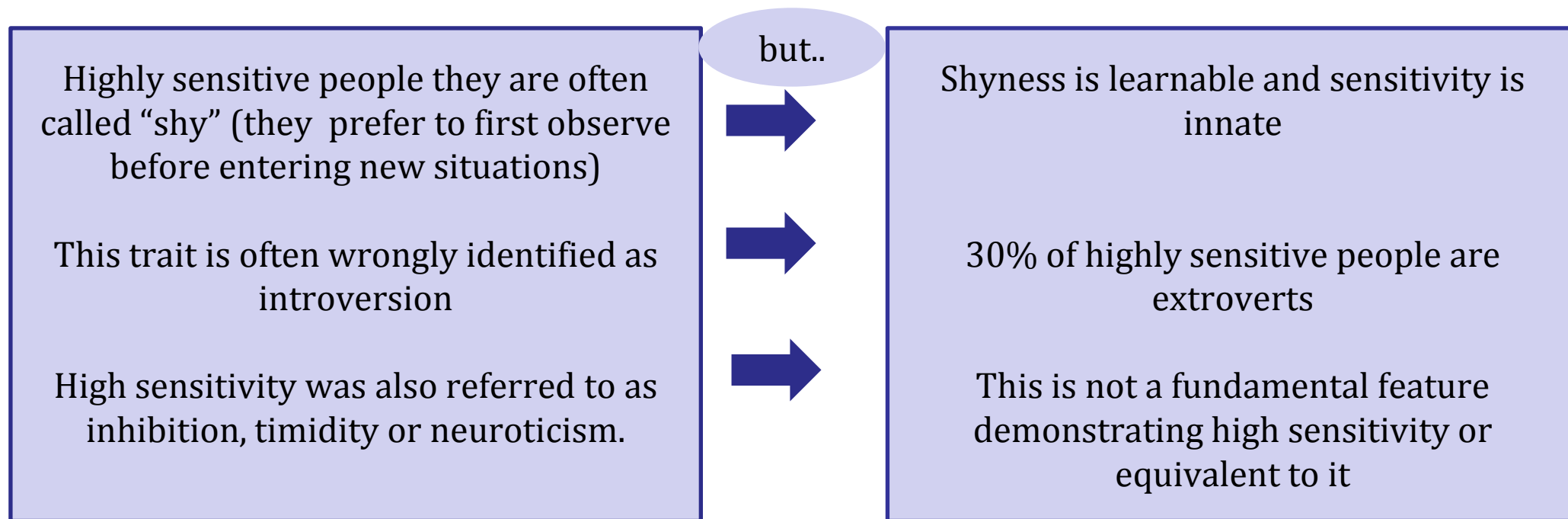


Low Sensory Threshold (LST)

- Unpleasant sensory arousal to external stimuli

Sensory Process Sensitivity (SPS) as a trait

SPS co-occurs with emotional reactivity



Sensory Process Sensitivity (SPS) as a trait

- Aron and Aron (1997) considered that, **although SPS differs from other constructs of temperament and personality, could be significantly related with some of them.**
- Therefore, it is important to investigate about key theoretical constructs that are essential for understanding the role of temperament and personality in SPS.

Eysenck's Personality Model

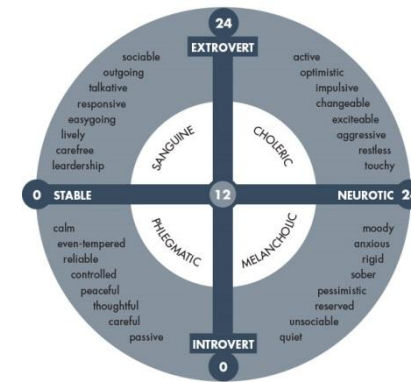
This model identifies three fundamental dimensions of personality that are presented in a hierarchical system.

Characteristics of the dimensions: heritable and with probable psychophysiological basis.

Eysenck attempts to reduce the almost infinite number of events observed in human behavior to a small number of variables using the approach of factor analysis

Biopsychosocial approach (what is the biological basis of the different personality traits?)

EPQ: Eysenck Personality Questionnaire



Eysenck's Personality Model

- Eysenck defines personality as *"a more or less stable and enduring organisation of a person's character, temperament, intellect and physique that determines his or her unique adaptation to the environment"*.
- Personality has a hierarchical structure:
- Specific actions, emotions or cognitions
- Habitual actions, emotions or cognitions
- Traits
- Dimensions: Extraversion, Neuroticism (Emotionality) and Psychoticism (Hardiness).

Eysenck's Personality Model

EXTRAVERSION

- High extraversion values characterise a person who is focused on the outside world, open, spontaneous. The person with low extraversion values would be centred on his or herself, easily withdrawn into him or herself.
- It is the most empirically supported of the three scales.
- Other features: sociable, vital, active, assertive, sensation seeker, carefree, dominant and bold

Eysenck's Personality Model

NEUROTICISM

- Dimension related to the disposition to suffer from anxiety or mood problems. High values on this dimension include characteristics such as being an anxious, depressed, tense, emotional or with low self-esteem.
- High scores are associated with greater emotional instability and with being highly sensitive to emotional stimuli.
- Other features: low self-esteem, tense, irrational, shy, sad, guilty and emotional

Eysenck's Personality Model

PSYCHOTICISM OR HARDNESS

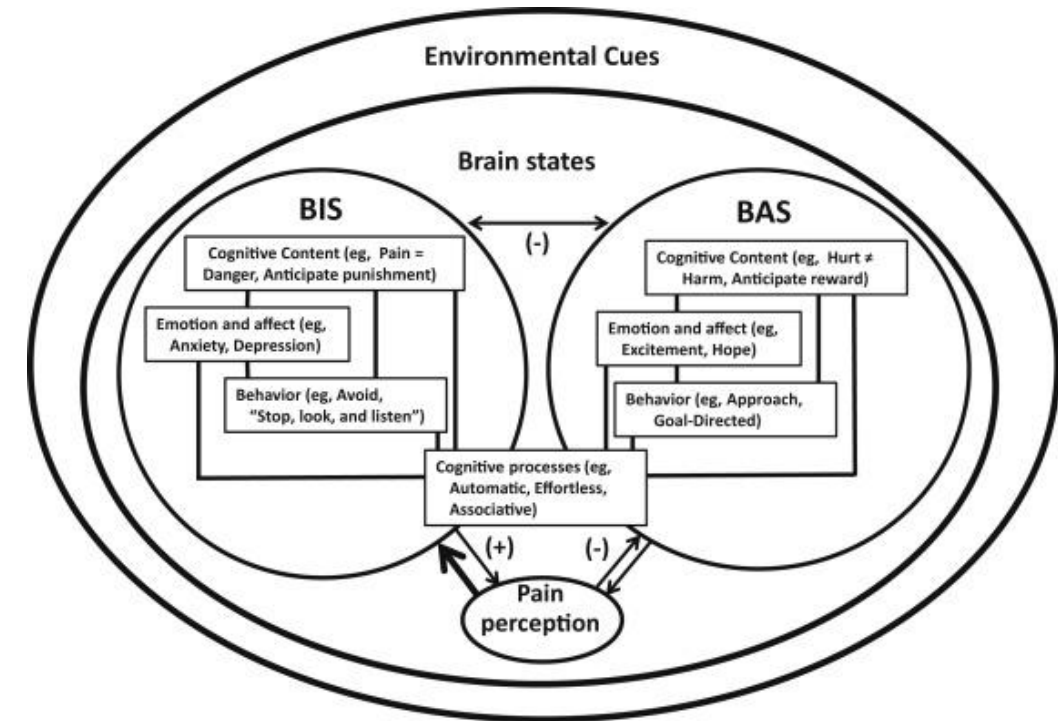
- Dimension closely related to the antisocial aspects of the personality. High values in this dimension would indicate an impulsive person who does not adapt to conventions or social norms.
- High scores are associated with tendencies to be more solitary, with difficulties in adapting, greater insensitivity, and hostility. Some authors indicate that this scale is associated more with aspects unrelated to social behavior than with psychosis.
- Other features: aggressive, cold, egocentric, impersonal, antisocial, creative and impulsive.

Eysenck's Personality Model and SPS

- The first studies carried out by Aron and Aron (1997) identified that SPS was modestly correlated with the dimension of introversion of the EPQ-R.
- Qualitative studies also seems to indicate that not all highly sensitive persons display the profile of being socially introvert.
- It is possible that acting in an introverted manner can be associated with the strategy of social withdrawn for HSP as a way to reduce an uncomfortable level of stimulation.
- They claimed that Eysenck's model which treats all facets of introversion as a consequence of cortical arousability, does not explain high SPS.

Gray's reinforcement theory (BIS/BAS)

- It's a theory of specific biological systems that was later adapted to personality constructs.
- They represent two separate conceptual nervous and motivational systems, that have specific neural substrates and are activated in response to different set of stimuli (Rajchert & Grzegorzewska, 2017).



Gray's reinforcement theory (BIS/BAS)

Behavioral Activation System (BAS)- Appetitive

- Reacts to cues of reward, conditioned positive stimuli but also non-punishment and escape from punishment.
- Initiate approach and incentive-motivated and goal-directed behavior.
- Positive affect and trait impulsivity.

Behavioral Inhibition System (BIS) – Aversive

- Conditioned aversive stimuli denoting punishment, but also new stimuli, fear stimuli, high-intensity stimuli.
- Restrain action that may lead to negative consequences.
- Correlated with negative affect and anxiety.

Gray's reinforcement theory (BIS/BAS)

- BIS has been associated with the trait of Neuroticism, while the BAS was associated with extraversion.
- In a recent meta-analysis **Behavioral Inhibition and Neuroticism** has been associated with SPS in children and adults.
- This pattern is coherent with the idea that individuals that score high in SPS present a more inhibited approach to in response of novel and unfamiliar situations (Aron & Aron, 1997).
- This associations, as the ones stated previously, are small to moderate, which suggest that SPS does not fully overlap with these personality traits.

Gray's reinforcement theory (BIS/BAS)

- Introversion, neuroticism, shyness and high SPS all have their roots in BIS, and because all are characterized by a predisposition to higher arousability and inhibition of approach behavior, these similarities lead many to neglect distinctions among these personality dimensions (Aron & Aron, 1997; Sobocko & Zelenski, 2015).
- BIS has also been strongly correlated with the dimension of ease of excitation, but remarkably less with the other two subscales of SPS. In contrast the ease of excitation and aesthetic sensitivity had a small association with BAS-reward responsiveness.
- It may be considered as a neuropsychological contributor to highly sensitive people's personality.

Costa's and McCrae's five factors

McCrae and Costa's theory arises as a result of the combination of the lexical approach and the factorial study of questionnaires and inventories, as well as by studies that analyze the heritability of traits.

TWO SIDES OF THE SAME COIN

TRAIT	DESCRIPTION
Extraversion	sociable-withdrawn; passionate-cold; affectionate-reserved
Agreeableness	tender-rude; trusting-untrusting; cooperating-individualist
Conscientiousness	organized-disorganized; careful-careless; disciplined-impulsive
Neuroticism	calm-anxious; secure-insecure; self-satisfied-self-pitying
Openness to Experience	imaginative-pragmatic; preference for variety-preference for routine; independent-conformist



Costa's and McCrae's five factors



- Costa and McCrae (1999) understand personality as a **set of basic behavioral tendencies** that influence thoughts, emotions, and actions.
- They are **biological in origin** and develop from childhood to become stable structures in adulthood.
- This model is universal, as it has been found the same structure in several cultures and in different age groups (children, adolescents and adults)

Costa's and McCrae's five factors



This trait includes an appreciation for art, excitement, adventure, unusual ideas, curiosity and variety of experience. Openness reflects the degree of intellectual curiosity, creativity and a preference for novelty and variety.

This trait is characterized by high energy, positive emotions, talkativeness, assertiveness, sociability, and the tendency to seek stimulation in the company of others.

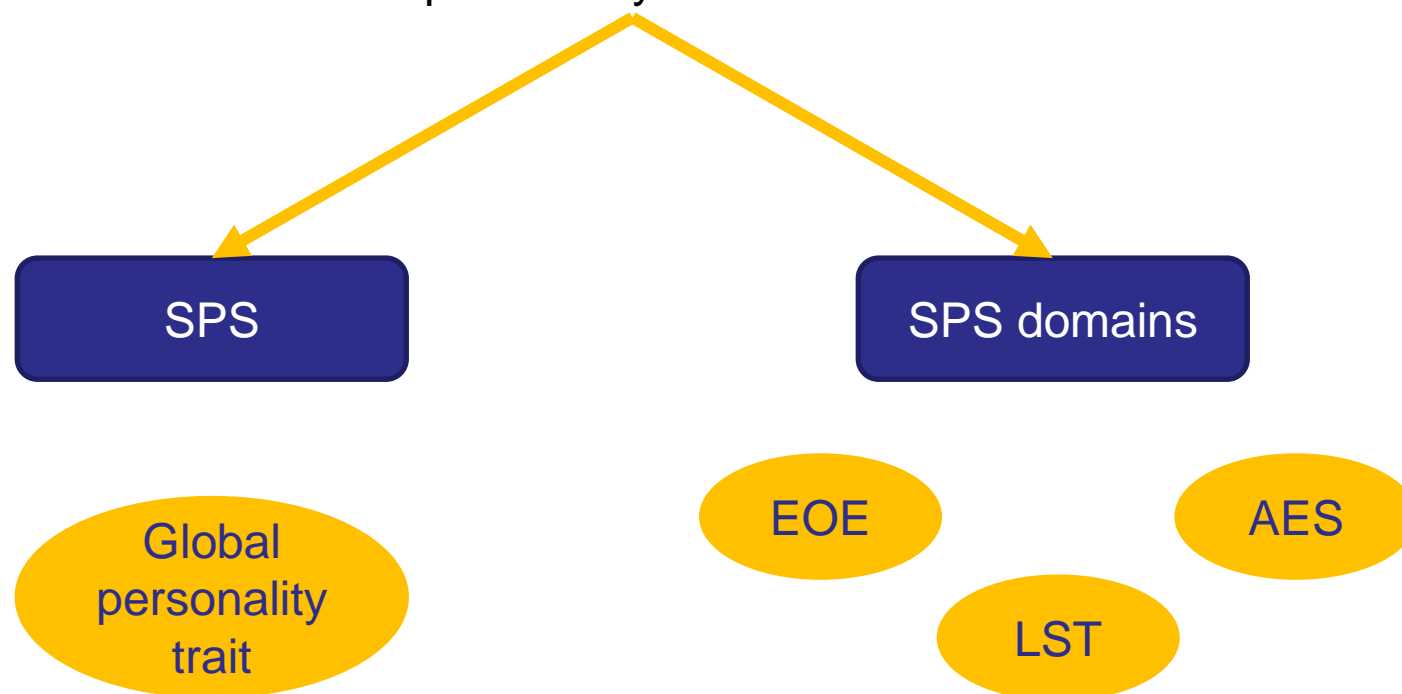
High neuroticism is characterized by the tendency to experience unpleasant emotions, such as anger, anxiety, or depression. People high in neuroticism tend to experience emotional instability.

This trait refers to one's tendency toward self-discipline, competence, thoughtfulness, and achievement-striving (such as goal-directed behavior). Prefer planned rather than spontaneous behavior and are often organized, hardworking.

This trait measures one's tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. It is also a measure of a person's trusting and helpful nature and whether that person is generally well-tempered.

Costa's and McCrae's five factors

What is the relationship between the SPS and the five personality factors?



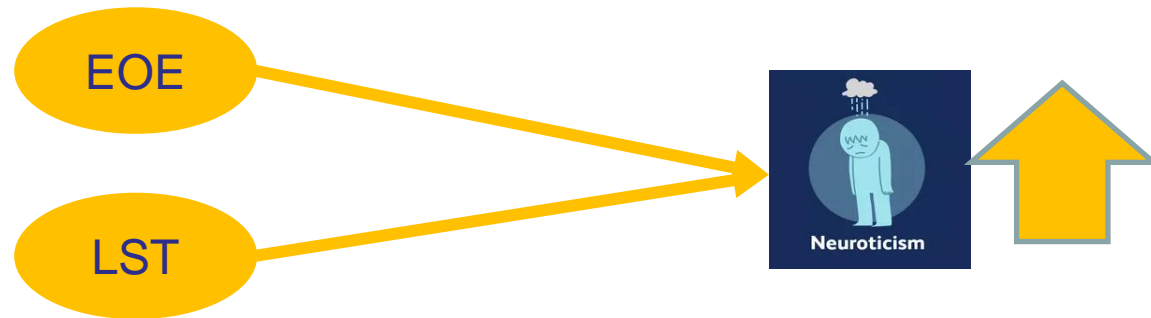
Previous research has related SPS with the 5 personality traits from two perspectives:

1. SPS as a general and global personality trait.
2. Domains of SPS:
 - Ease of Excitation (EOE)
 - Low Sensory Threshold (LST)
 - Aesthetic Sensitivity (AES)

Costa's and McCrae's five factors



SPS as a global personality trait has been related to higher levels of neuroticism



EOE and LST have been related to higher levels of neuroticism, but not AES.

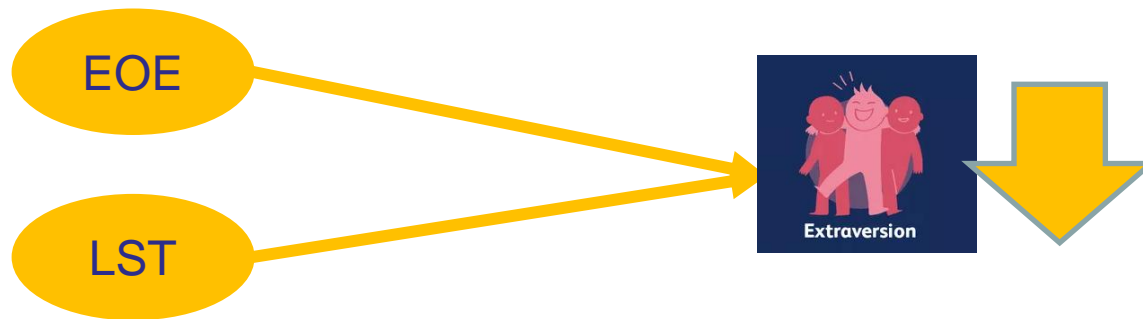
Individuals with high SPS trait could prone to negative affect (neuroticism) compared to other individuals.

However, they also appear to show a stronger emotional response to positive experiences and be more sensitive to the positive experiences from the environment.

Costa's and McCrae's five factors



SPS as a global personality trait has been related to lower levels of extraversion



EOE and LST have been related to lower levels of extraversion.

As highly sensitive individuals are more aware of their surroundings, and are more easily aroused, it would be natural to respond to environmental stimuli in a cautious manner.

Persons who get easily excited act cautiously facing environmental stimuli and tend to avoid sensory stimuli.

Social withdrawal would be a natural strategy for reducing stimulation for highly sensitive people.

This avoidance could in some cases limit their social interactions (Liss et al., 2008).

Costa's and McCrae's five factors



SPS as a global personality trait has been related to higher levels of openness to experience

AES has been related to higher levels of openness.

Persons with high scores in the AES have rich experiences and positive emotions and these are among traits of persons with high scores in the openness to new experience (it can be expected that as aesthetic sensitivity increases, level of openness to new experience increases, too) (Ahadi et al., 2010).

Costa's and McCrae's five factors

- SPS is significantly associated to 3 of the 5 personality factors of Costa's and McCrae's theory: neuroticism, extraversion and openness.
- The three subscales of SPS (EOE, AES and LST) correlate in a unique way with these personality traits.
- SPS has been related to higher levels of **Neuroticism**. EOE and LST have often been reported to be positively associated with this trait, and also with anxiety and depression.
- In general, HSP tend to experience emotions with a higher intensity, both negative and positive.
- Regarding **Extraversion**, HSP may seek solitude (social withdrawal) and stimuli reduction in order to prevent psychological distress caused by being exposed to overwhelming stimulus. However, social withdrawal and solitude may be less culturally accepted.

summary

Costa's and McCrae's five factors

- SPS has also been reported to positively correlate with **Openness**, an association that seems to be mainly driven by the AES factor.
- AES factor share qualities with the openness factor of personality, including openness to aesthetic experiences such as music and art.
- Individuals with a high score on openness are often imaginative, witty and have a strong aesthetic sense.
- **This is a strong potential of HSP**

summary



Rothbart's Temperament Model

This model defines temperament as individual differences in reactivity to the environment and self-regulation that have a constitutional origin and are influenced over time by **heredity, maturation and experience** (Rothbart, 1989).

REACTIVITY



Responses to the environment. Emotional, orienting and motor reactions.

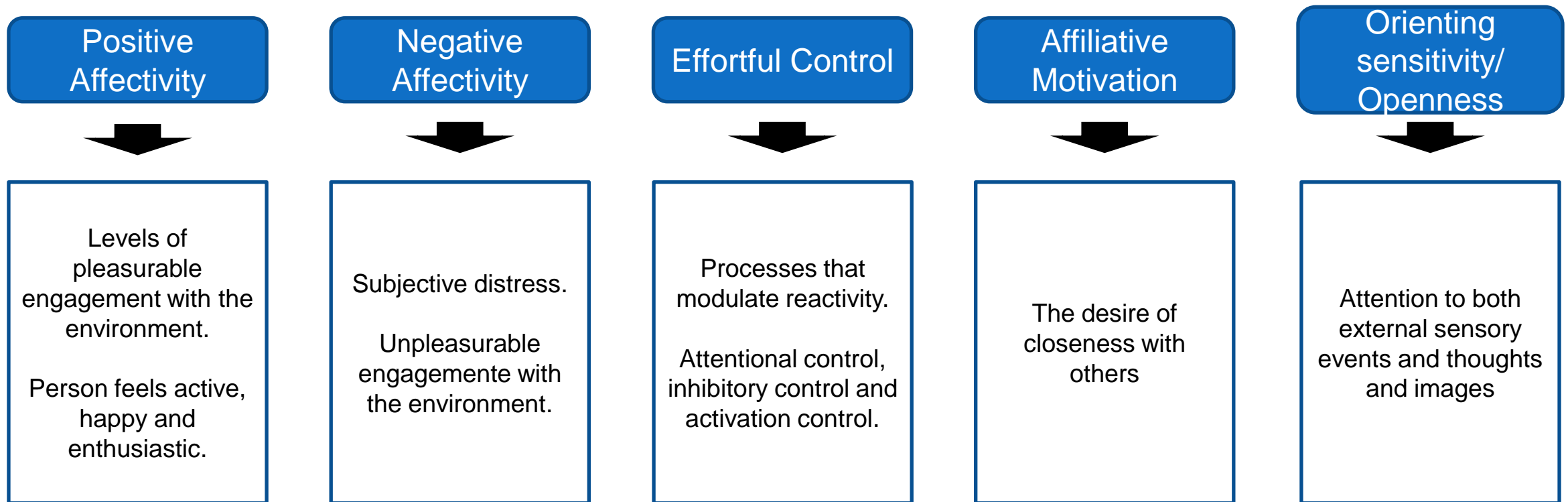
SELF-
REGULATION



Processes to modulate reactivity; executive attention and effortful control.

Rothbart's Temperament Model

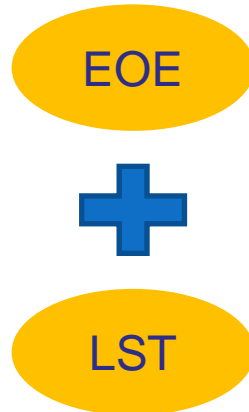
Combination of these variables, and depending on the developmental stage, several broad temperament domains could be established:



Rothbart's Temperament Model

The studies which have analyzed the association between SPS and Rothbart's temperament model, has grouped dimensions of SPS in two factors:

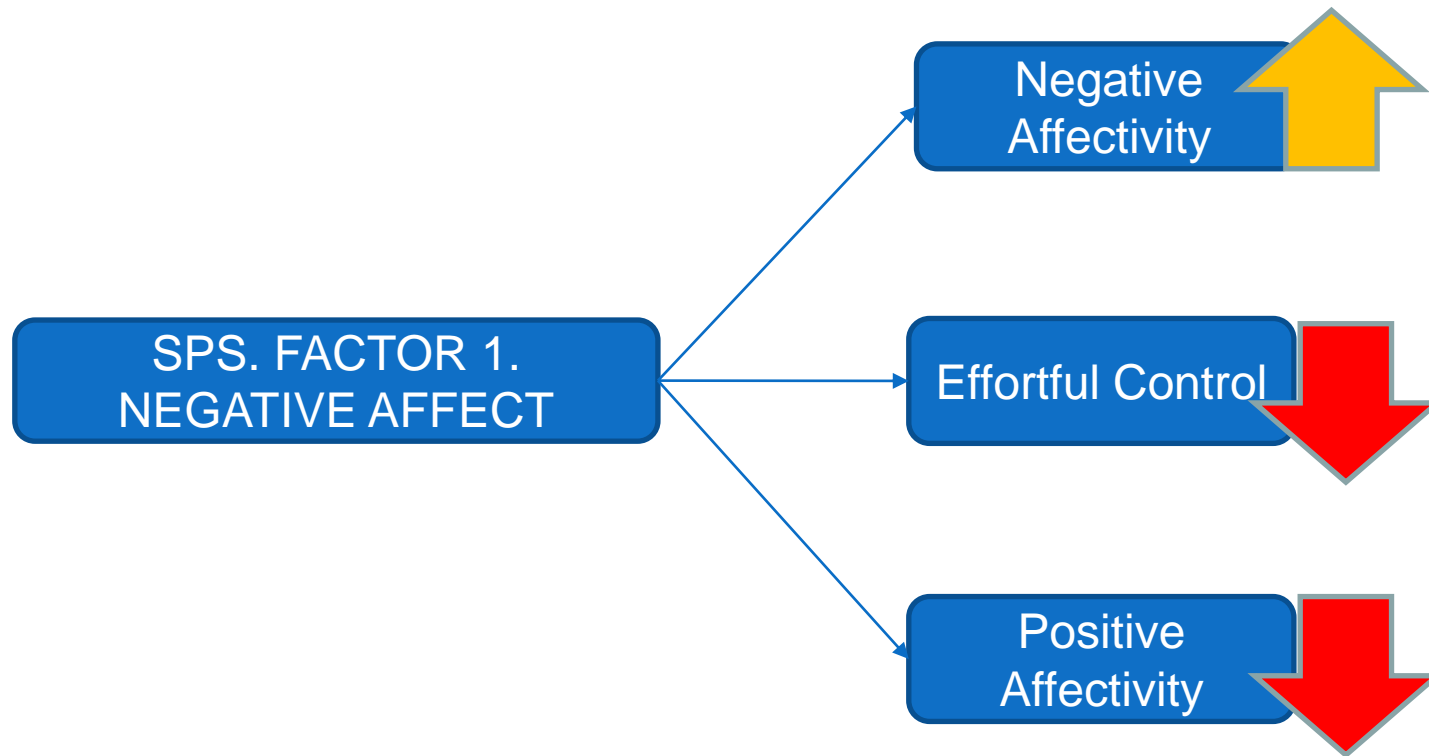
FACTOR 1. NEGATIVE AFFECT



FACTOR 2. OPENNESS

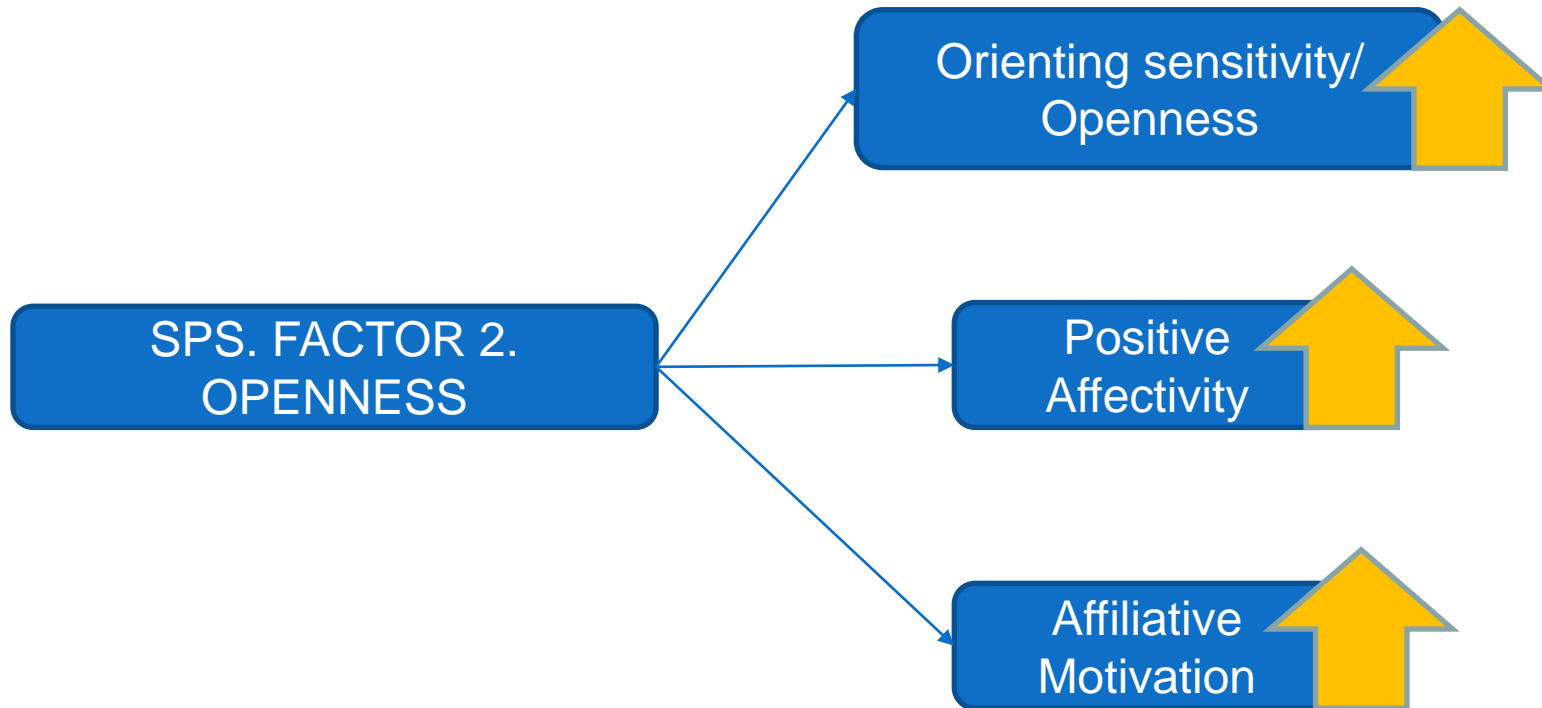


Rothbart's Temperament Model



Weak and moderate associations between negative affect subscale and the measures of lower effortful control and positive affect, and higher negative affectivity.

Rothbart's Temperament Model



The second factor Openness is related to higher orienting sensitivity, positive affectivity and affiliative motivation:

- Greater attention to detail
- Better communication skills
- Higher levels of extraversion
- Positive affectivity
- Affiliativeness
- Openness

Rothbart's Temperament Model

- In this temperament model, similar results were obtained when SPS has been associated with temperament domains.
- LST and EOE, grouped as a negative affectivity, were related to lower positive affect and effortful control.
- AES, defined as an Openness factor, were associated to positive affectivity, affiliation motivation and orienting sensitivity.
- Different HSP profiles could emerge in relation to temperament models: different associations of components of sensory processing sensitivity.
- Main implication: higher orienting sensitivity/openness is significantly related to more creativity (creation, ideation, goal achievement, creativity production)

summary

GENERAL SUMMARY

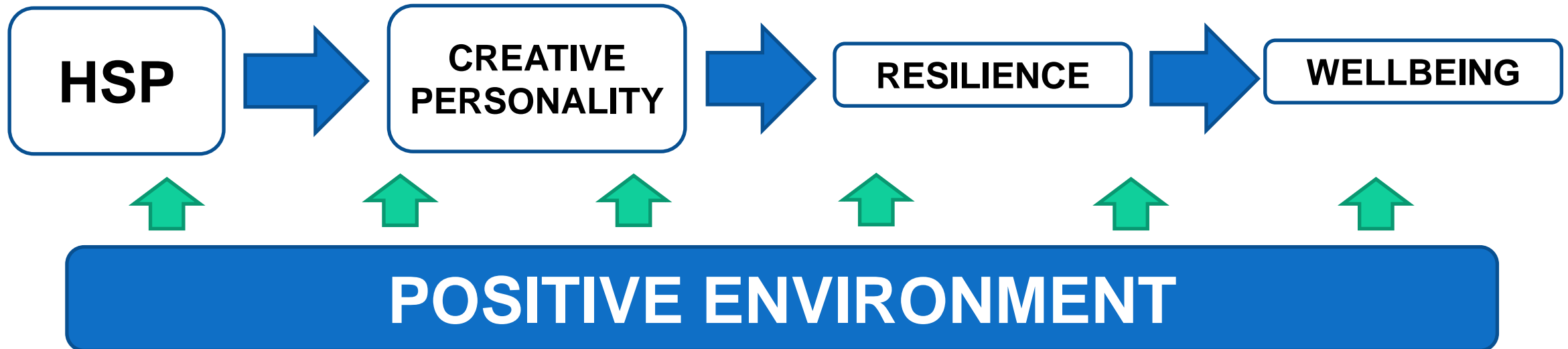
- ✓ It is possible that **acting in an introverted** manner can be associated with the strategy of social withdrawn for HSP as **a way to reduce an uncomfortable level of stimulation.**
- ✓ **This pattern is coherent with the idea that individuals that score high in SPS present a more inhibited approach in response of novel and unfamiliar situations (Aron & Aron, 1997).**
- ✓ SPS as reflecting sensitivity to environmental factors, entails that SPS is not only relevant to understanding a maladaptation personality trait, but also a trait which entails optimal development or even flourishing in positive environments → **more sensitive to positive surroundings.**
- ✓ Although SPS is related to higher levels of Neuroticism, **HSP are more sensitivity to emotions, both positive and negatives.**
- ✓ Hence, HSP benefit more from positive educative psychological interventions and positive home environments in comparison to people with lower levels of SPS.
- ✓ **Sensitive creators** → recent research has linked higher levels of sensitivity, mainly AES, with more creativity. Creativity is associated with higher sensory sensitivity to sensory stimulation.

GENERAL SUMMARY

- ✓ Aesthetic and orienting sensitivities were associated with desirable personality traits, such as Extraversion and Openness, whereas the other factors of the sensitivity were related to more adverse traits.
 - ✓ This fact has been demonstrated when **HSP with higher scores in the AES domain exhibited higher levels of wellbeing.**
 - ✓ It is possible that **people with AES** or orienting sensitivity, which results in an automatic attentional processing of internal and external sensory events, **are not bothered by their oversensitivity.**
 - ✓ **Being especially sensitive** might allow such people to **appreciate and use nuances unnoticed by others.** Consistent with this idea, they reported more positive affect, being less neurotic, more conscientious, and more open to new experiences.
 - ✓ These findings support a claim by Aron and Aron (1997) that **some sensitive people enhance their well-being by using their aesthetic sensitivity to pursue and further develop their interests.**
- ✓ This fact is extremely important for the educative context, considering the importance of building on this strength.

GENERAL SUMMARY

- ✓ Sensitive individuals who tend to experience positive environments gain benefits of higher creativity primarily through mechanisms of (Bridges and Schendan, 2019):
 - ✓ Openness (with resilience)
 - ✓ Disinhibition (neurosensivity via reduced inhibition)
 - ✓ Sensitive orienting to novelty



Thank you very much for your attention

