

106577. Cognitive Processes

Cognition, motivation and emotion



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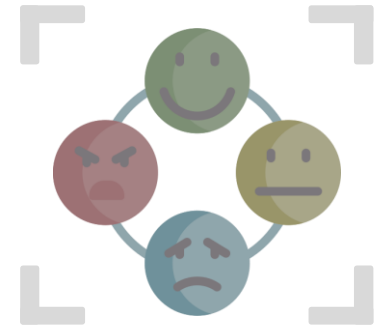
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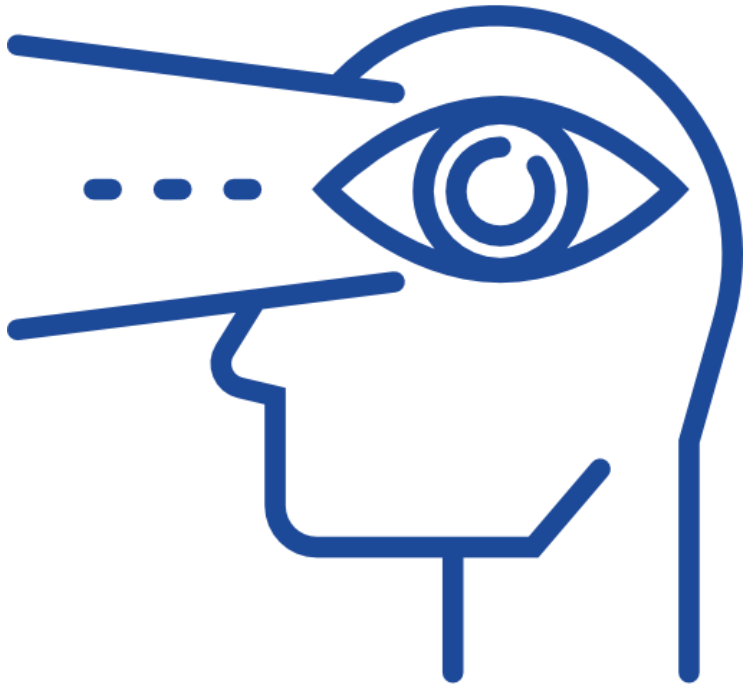
Conscious experience, unitary consciousness





Introduction

Summarizing



PERCEPTION



COGNITION



**MOTIVATION
& EMOTION**

What is motivation

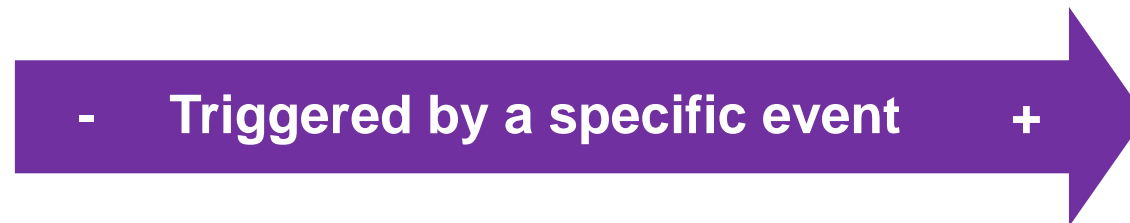
- Definition:
- From latin *movere* referring to moving towards something, motivation means direction and intensity of effort.
 - Direction refers to the disposition of one individual towards a given situation (what attracts us)
 - Intensity refers to the amount of resources that one would invest in a given situation

Emotion – mood - affect

AFFECT

MOOD

EMOTION



Emotion

- **Valence:**

It refers to the value that we give to the emotion based on the stimulation we perceive.

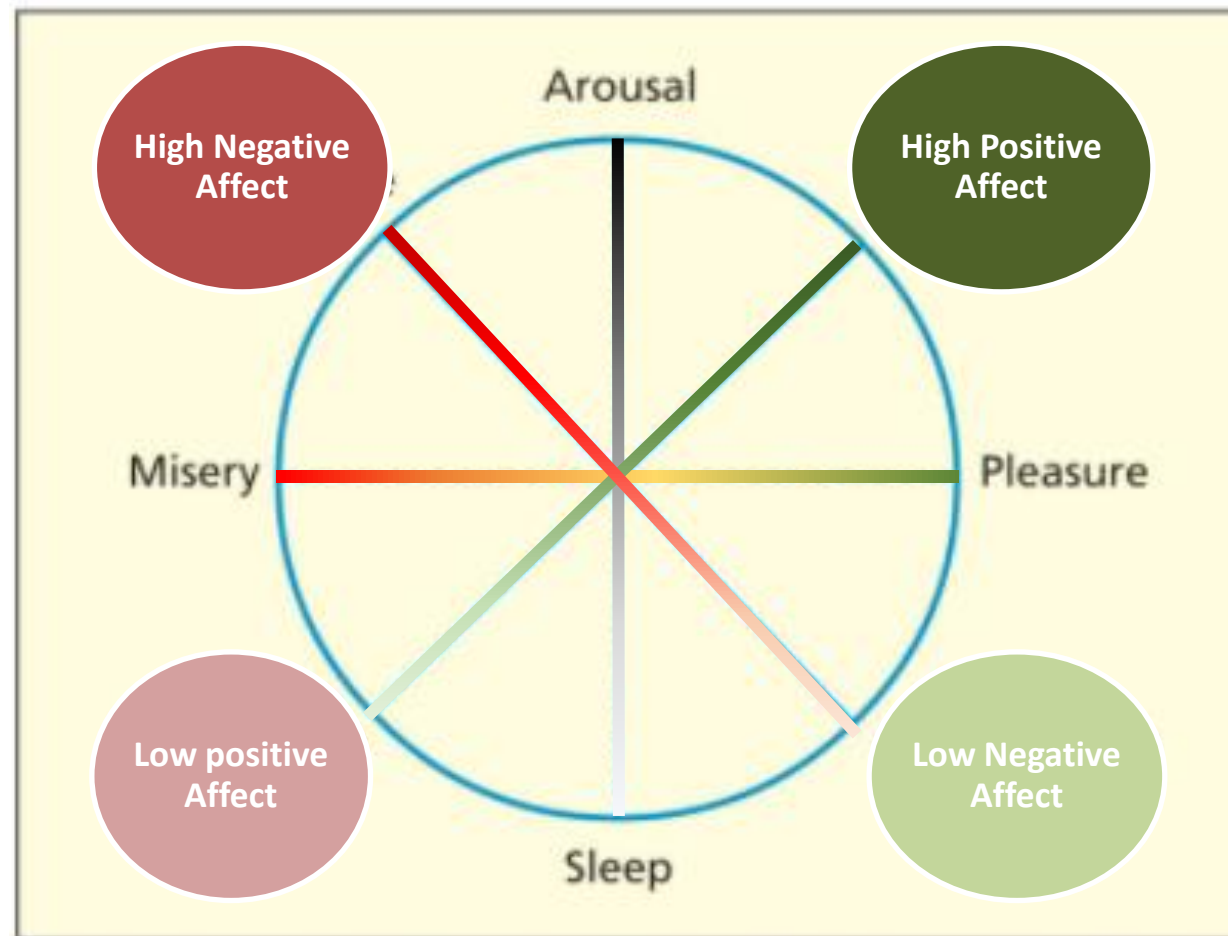
It can be either positive or negative

- **Intensity:**

It refers to the strength or the degree in which we sense that emotion.

It can be lower or higher

Dimensional approach to emotions



Basic Emotions Test

FACE

A



Identify what
emotion you
think it is

FACE

B



Identify what
emotion you
think it is

FACE

C



Identify what
emotion you
think it is

FACE

D



Identify what
emotion you
think it is

FACE

E



Identify what
emotion you
think it is

FACE

F



Identify what
emotion you
think it is

A? C? E?

B? D? F?

Basic Emotions



6 basic emotions

- While the variety of emotional states is huge there are 6 universal emotions.
 1. Sadness
 2. Fear
 3. Surprise
 4. Disgust
 5. Anger
 6. Happiness



Universal Emotions



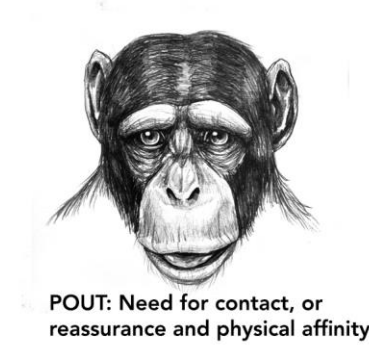
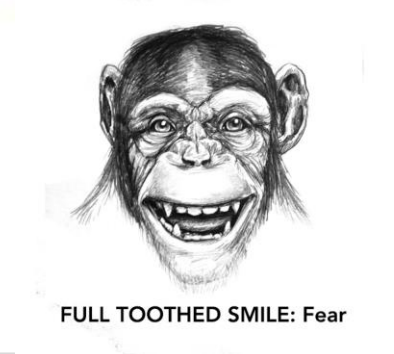
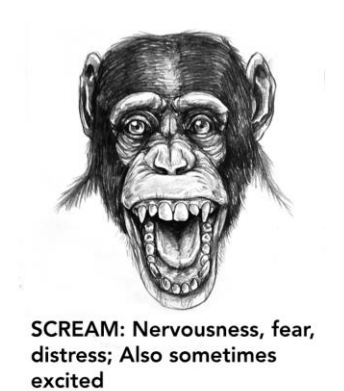
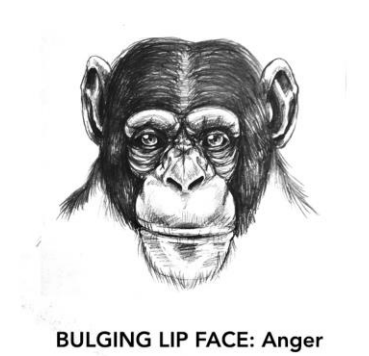
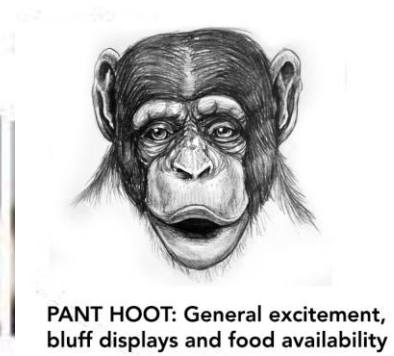
Anger

Disgust

Fear

Happiness

Sadness



Filogenetic function of emotions

- They trigger **motivations**. They serve as a system to incite us to act on certain occasions to act on certain occasions
 - Approach – Avoidance
 - Fight - Flight...
- They generate **survival reactions** (e.g. Alertness reactions, vigilance, blood circulation).
- At the social level, they represent an intra-species communication system.

Taxonomical approach

Lazarus (2000)

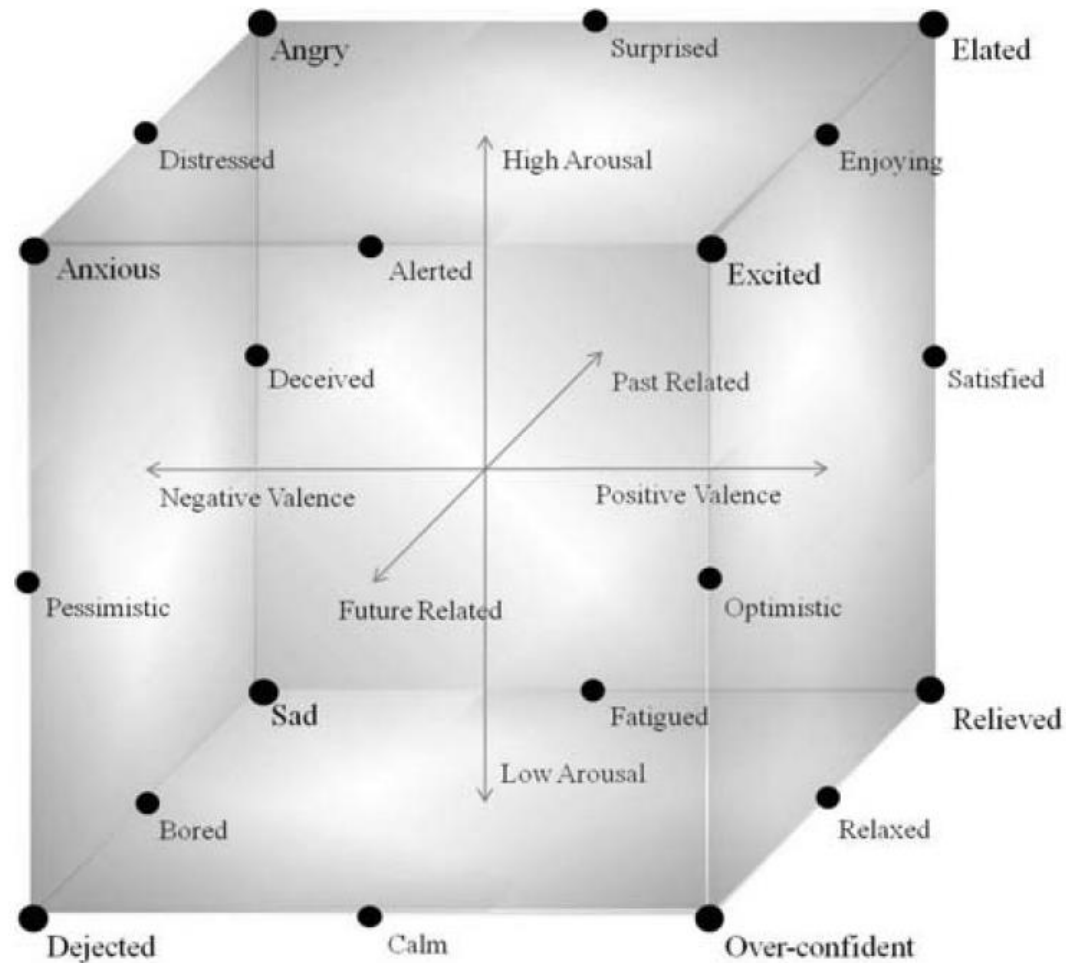
Table 1
The Core Relational Themes of Fifteen Emotions

| Emotion | Core Relational Theme |
|-------------------|---|
| <i>Anger</i> | A demeaning offense against me and mine |
| <i>Anxiety</i> | Facing an uncertain, existential threat |
| <i>Fright</i> | Confronting an immediate, concrete, and overwhelming physical danger |
| <i>Guilt</i> | Having transgressed a moral imperative |
| <i>Shame</i> | Having failed to live up to an ego-ideal |
| <i>Sadness</i> | Having experienced an irrevocable loss |
| <i>Envy</i> | Wanting what someone else has and feeling deprived in its absence |
| <i>Jealousy</i> | Resenting a third party for loss or threat to one's favor or love |
| <i>Happiness</i> | Making reasonable progress toward the attainment of a goal |
| <i>Pride</i> | Enhancement of one's ego-identity by taking credit for a valued achievement, one's own or that of a person or group with which one identifies |
| <i>Relief</i> | A distressing goal-incongruent condition that has changed for the better or gone away |
| <i>Hope</i> | Fearing the worst but yearning for better and believing the wished-for improvement is possible |
| <i>Love</i> | Desiring or participating in affection, usually, but not necessarily, reciprocated |
| <i>Gratitude</i> | Appreciation for an altruistic gift |
| <i>Compassion</i> | Being moved to offer help by another's suffering |

Temporality in human emotions

- **Present:** Referred to events that occur at the moment in which the emotion is triggered.
- **Retrospective:** Referred to events that happened before and we now remember.
 - To respond or integrate passed events
- **Anticipatory:** Referred to events that we foresee may happen in the future.
 - To anticipate to potential aversive or appetitive situations

Example: The tri-dimensional model of emotions



Latinjak et al. (2014)



Emotion and cognition

Warm-up activity

Identifying emotions

Reading the mind in the eyes (reduced)

Baron-Cohen, S; Wheelwright, S; Hill, J; Raste, Y and Plumb, I (1997)

For each of the following photographs, choose the word that best describes the person's thought or feeling.



1: PÍCARO
2: DISGUSTADO
3: SEDUCTORA
5: PREOCUPADO
10: CAUTELOSO
11: ARREPENTIDO
12: ESCÉPTICO
14: ACUSADOR
16: PENSATIVO
18: DECIDIDA
19: INDECISA
20: SIMPÁTICO
23: DESAFIANTE
24: PENSATIVO
26: HOSTIL
28: INTERESADA
29: PENSATIVA
32: SERIO
35: NERVIOSA

1: ROGUE / NAUGHTY
2: DISGUSTED
3: SEDUCTIVE
5: WORRIED
10: CAUTIOUS
11: REPENTANT
12: SKEPTICAL
14: ACCUSER
16: PENSIVE
18: DETERMINED
19: UNDECIDED
20: NICE
23: CHALLENGING
24: PENSIVE
26: HOSTILE
28: INTERESTED
29: PENSIVE
32: SERIOUS
35: NERVOUS

Bottom-up vs Top-Down

- **Bottom up:**
 - Referred to those stimulus-driven emotional reaction. This reactions imply perception and attention processes.
- **Top-Down:**
 - Referred to those situations in which the individual evaluates the situation based on his or her knowledge of previous similar situations.

Bottom-up (Stimulus driven)

- More related to survival
- Innate reactions



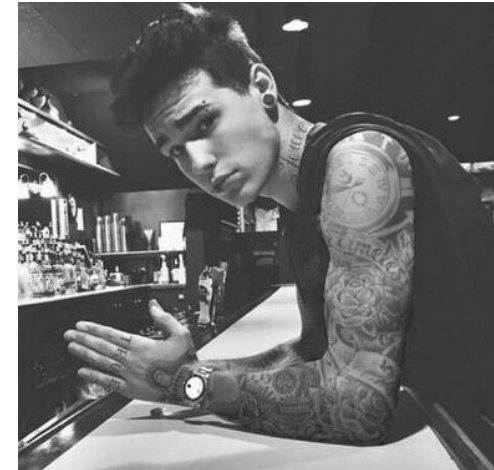
Top-Down (Appraisal)

- Associated to the individual preferences and motivations of the individual
- **Relational meaning:**
 - Is a personal construction of the situation based on own beliefs and personal interpretation of the conditions and how they might influence the individual

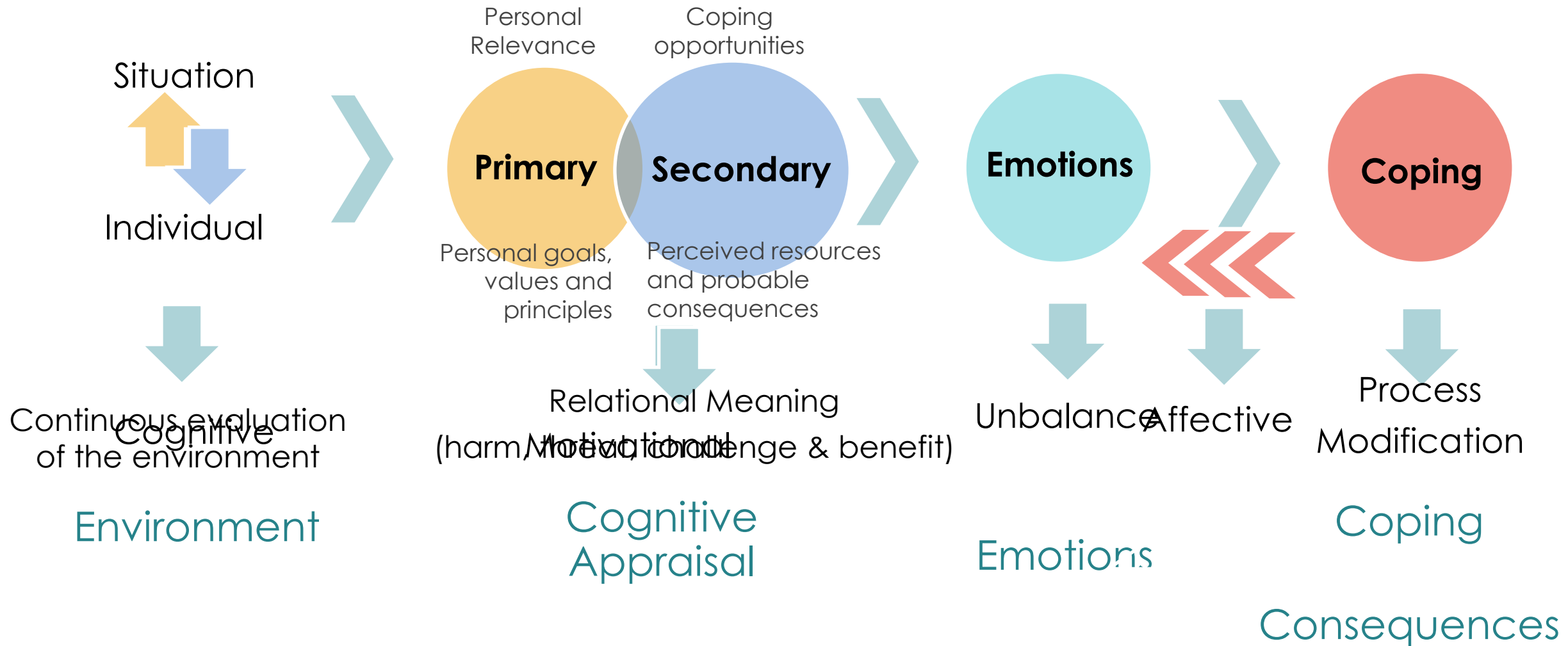


Transactional model of emotions (Lazarus)

- The emotion depends on the goals of the individual
- Emotions appear as a consequence of their potential positive or negative effect on the well-being of the individuals
- This approach considers the transaction between the individual and the environment

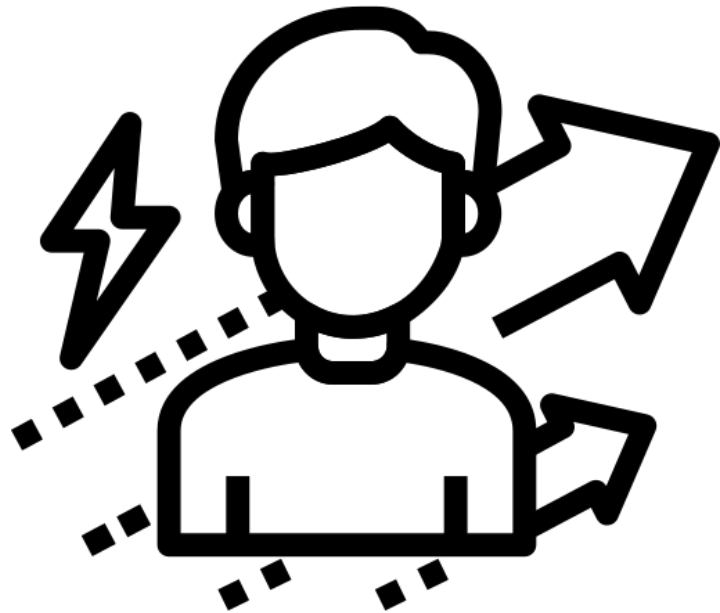


CMRT Model (Lazarus, 1991)



Activity

1. Read the situations and generate a thought that could provoke the emotional consequences on the right
2. Read the thoughts on the paper and try to guess what is the emotional consequence



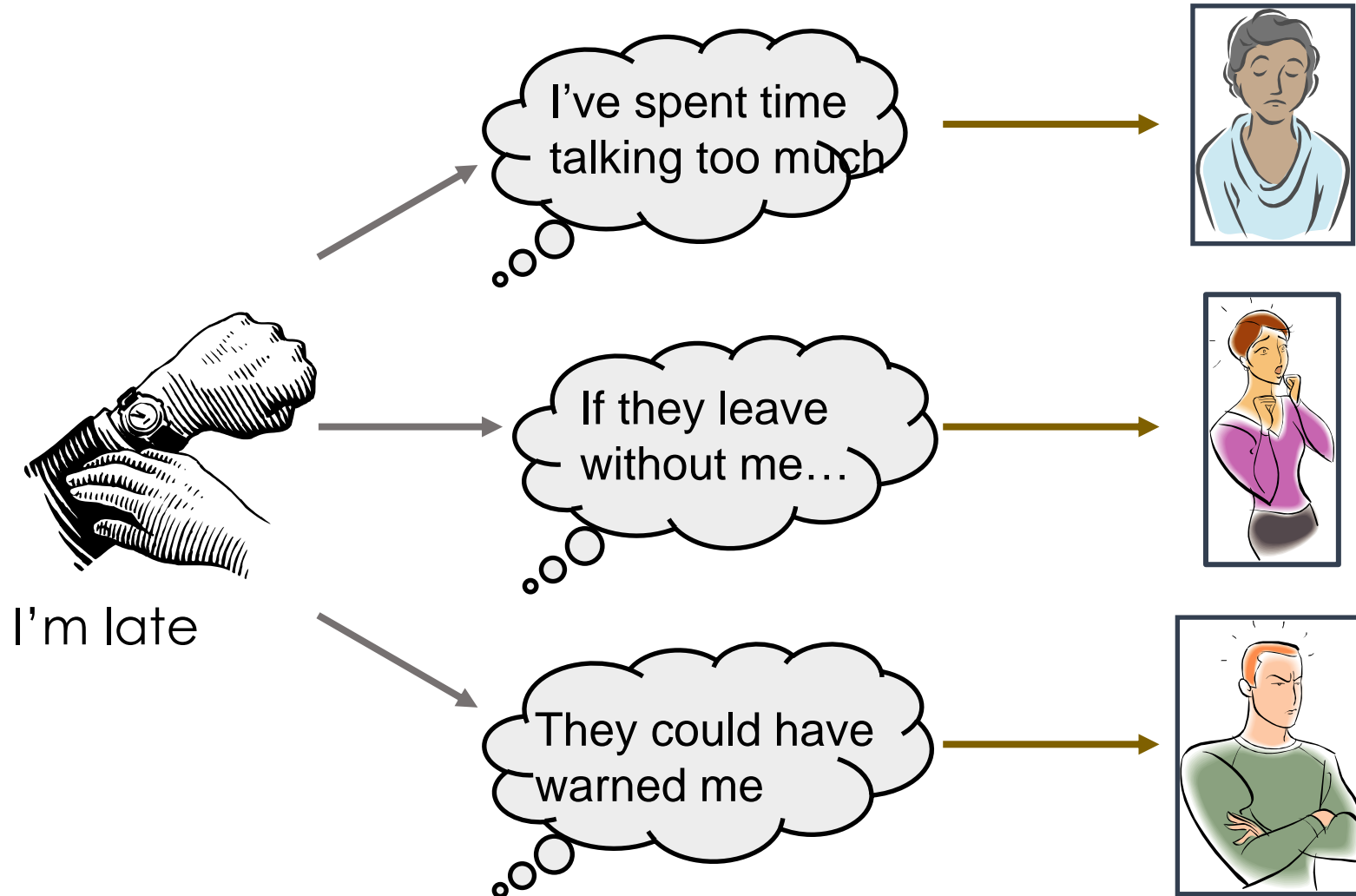
Emotion and cognition

How affect influences cognition?

- Imagine this situation: “Your boss comes to you and explains how you could do something better after seeing your work”



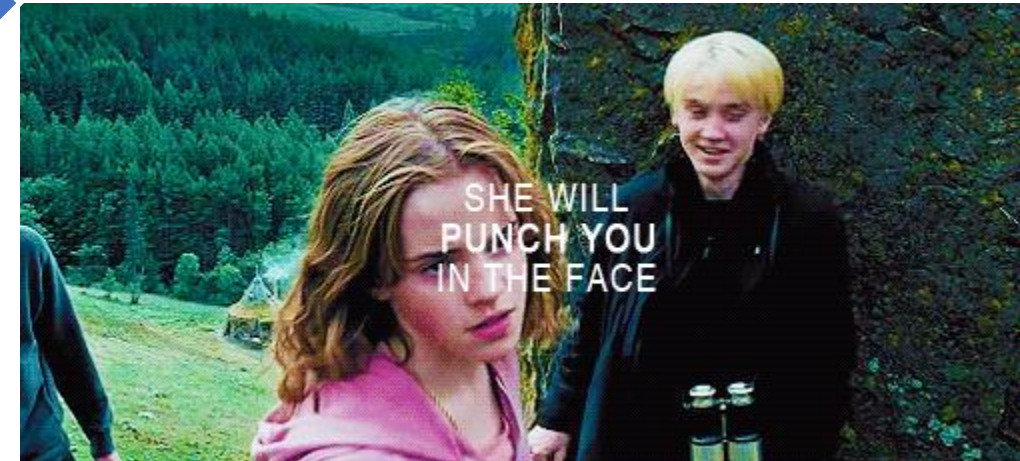
Interpretation influences emotion



Emotion Generation (Appraisal Theory)

- Refers to the conception of emotions as spontaneous and automatic in response to a situation.
- Stimulus – Emotion - Action

Novelty Relevance Goal
Congruence Agency Values
Compatibility Affective
Meaning



Limitations on Appraisal Theory

1. Situational appraisal is not always *crucial* in determining emotional experience → bodily states (e.g., botox)
2. Individuals not always *passively* react emotionally to given situations → emotions are social
3. Clear-cut distinction between cognition and emotion → anxiety
4. Experimental unambiguous situations producing single emotions → Nostalgia
5. Current situation appraisal is incomplete → anger to a specific individual
6. Appraisal is flexible depending on personality or previous experiences

Coping strategies

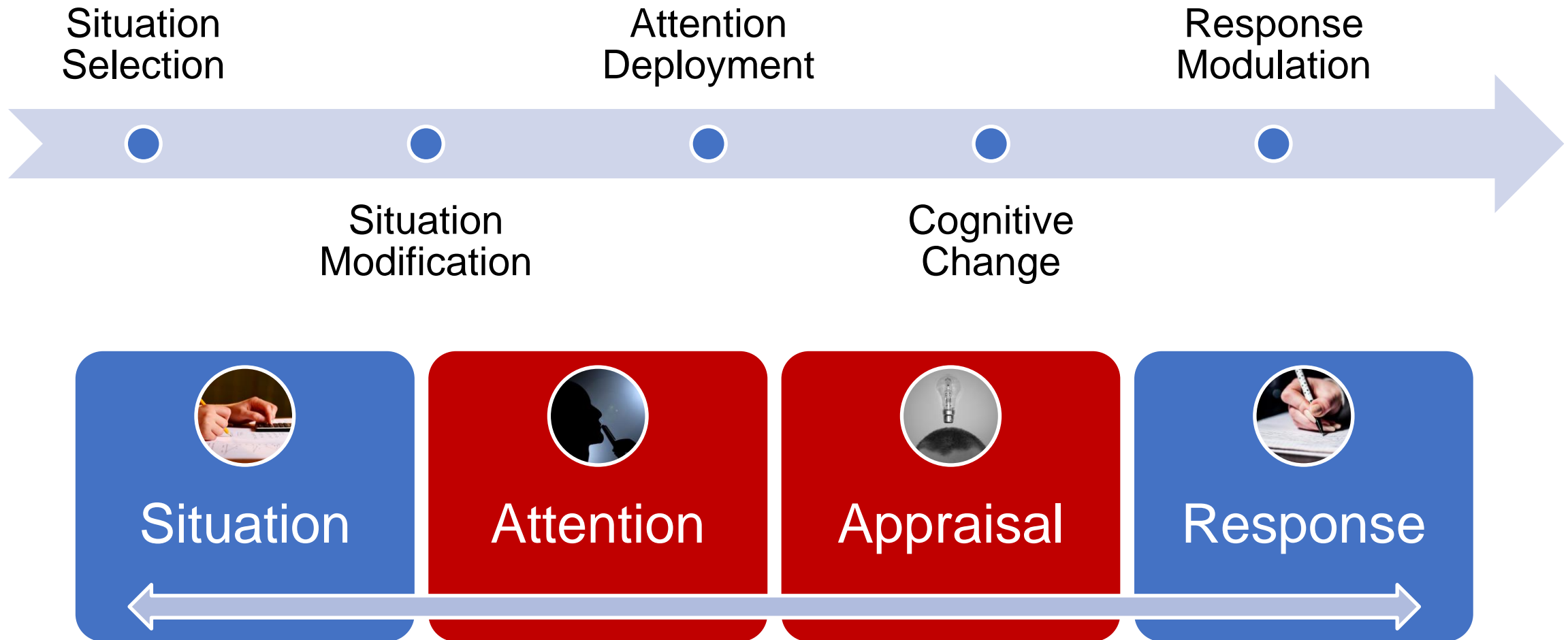
- Cognitive and behavioral efforts...
- ...constantly changing...
- ...used to manage external and internal demands...
- ...which are interpreted as exceeding or surpassing the resources of the individual



Emotion Regulation

- Changing spontaneous emotional states (usually negative) produced in the emotion-generation process
 - **Explicit processes:** Deliberate and effortful
 - **Implicit processes:** Relatively automatic

Process Model of Emotion Regulation



Emotion regulation examples

- **Distraction:**

- Disengagement of attention from emotional processing
- Associated to ***attentional stage***

- **Reappraisal:**

- Elaborating on emotional information and then changing its meaning
- Associated to ***appraisal stage***

Mental disorders associated to Emotion Regulation

- Patients with **anxiety or major depressive disorders** present regularly difficulties associated to Emotion Regulation
 - *Rumination*: Obsessive thinking on emotional issues
 - *Expressive suppression*: Hiding or inhibiting emotional expression
- Four reasons for this:
 1. Difficulties in detecting the emotions that require regulation
 2. Failing in selecting an effective emotion-regulation strategy
 3. Executing the emotion-regulation strategy ineffectively
 4. Failing to monitor the implemented strategy to decide if a different strategy is more adequate

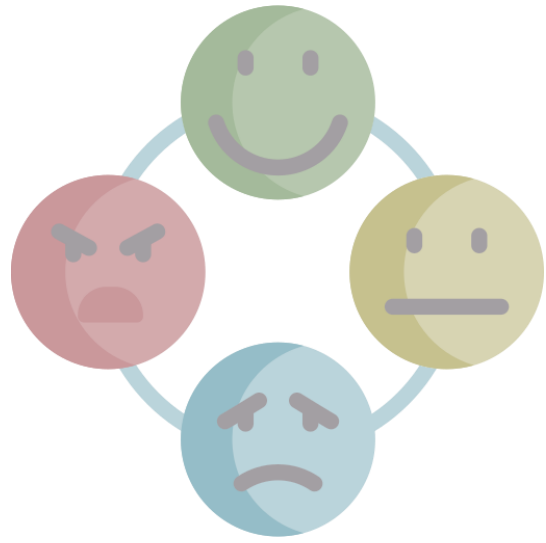
-
- Imagine this situation: “Your boss comes to you and explains how you could do something better after seeing your

Emotions and information processing

- Emotional states have a proven effect on:
 - Attention: Selective Attention
 - Perception: Prioritization (of information)
 - Reasoning: More holistic and creative when positive
 - Memory: Congruence
- This has been evaluated both in experimental situations and with participants with extreme scores on:
 - Trait anxiety → Anxiety / Fear
 - Depression → Sadness
 - Optimism → Positive affect

Emotional induction EXERCISE

- Half of the class, please leave us for the next 10 minutes. (don't worry, the other half will also have 10 minutes for them afterwards)
- Follow the instructions from the lecturer.
- [GROUP 1](#)
- [GROUP 2](#)



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